

Invitation for Expression of Interest(Eol)

OFFICE OF THE EXECUTIVE ENGINEER, MECHANICAL DIVISION NO-II,
IRRIGATION & FLOOD CONTROL DEPARTMENT, GOVT. OF DELHI,
E-WING, VIKAS BHAWAN-II, CIVIL LINES, DELHI-110054
E-mail: - ifcmdii@gmail.com, Phone/FAX NO. 011-23814010 (Off.)

Irrigation and Flood Control Department (IFCD), Government of National Capital Territory Delhi, India **invites Expression of Interest (EOI) from eligible National or International Original Equipment Manufacturer (OEM)/Original Equipment Supplier (OES)/Other Authorized Agency**, for identifying potential technological options and explore the suitability/selection of machine/equipment with latest/innovative technology adopted worldwide for effective de-siltation and removal of floating municipal waste/garbage/C&D Waste/hyacinth/cow dung etc from the drain and its proper disposal/reuse.

The Eol Document can be downloaded from the following website(s): <http://govtprocurement.delhi.gov.in> Parties may contract IFCD on telephone at (0091) (11) 23814010 i.e. Executive Engineer (MD-II) the nodal officer.

Applicants are requested to keep on checking website <http://govtprocurement.delhi.gov.in> regularly for any corrigendum which shall not be published in any newspaper.

Last date for submission of Applications in all respect ("Application due date"): 17/11/2022 up to 15:00 Hrs IST.

e-tender portal—<http://govtprocurement.delhi.gov.in>

IFC website: http://web.delhi.gov.in/wps/wcm/connect/doit_irrigation/Irrigation+and+Flood+Control/Home

ABBREVIATIONS

EOI	:	Expression of Interest.
GNCTD	:	Government of National Capital Territory of Delhi.
IFCD	:	Irrigation and Flood Control Department.
EC	:	Evaluation Committee.
OEM	:	Original Equipment Manufacturer.
C&D Waste	:	Construction and Demolition Waste.
DUC	:	Dredger Utility Craft.
GPS	:	Global Positioning System.
MT	:	Metric Tonne.
OES	:	Original Equipment Supplier

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E-mail: - ifcmdii@gmail.com, Phone/FAX NO. 011-23814010 (Off.)**

INVITATION OF EXPRESSION OF INTEREST

Irrigation and Flood Control Department, GNCTD invites sealed or online Expression of Interest (EoI) from reputed, experienced, technically and financially sound National and International companies/OEM/OES/ or its authorized agent/dealer, firms (private/public), Government Organization, JV (hereafter called JV agencies) or Multi-Disciplinary Consortia made up of interested Private/Public firms/Government Organizations, having manufacturing expertise in the field of providing Automated machinery/Equipment for de-siltation, collection of floating urban waste, C&D waste and Disposal of silt & waste from Open/covered Drains, for shortlisting to identify the best suited **machinery with latest/innovative technology available and adopted worldwide for removal of silt/garbage/urban floating waste/C&D waste from the drain and its proper disposal/reuse.**

The EOI Document containing the details of qualification criteria, submission requirement, brief objective & scope of work and evaluation criteria is enclosed

The EOI document is available on the website www.govtprocurement.delhi.gov.in as well as from Official website of Irrigation and Flood Control Department, Govt. of NCT of Delhi.

It is therefore, requested to submit response in sealed envelope to the undersigned latest by 17.11.2022 **(by 15.00 Hrs)**. The other relevant details are as under: -

Place of submission of EoI	Office of Executive Engineer, Mechanical Division -II, Irrigation and Flood Control Department, E-Wing, Vikas Bhawan-II, Civil Lines, Delhi 110054
Last date & time for submission of EoI	17.11.2022 (by 15.00 Hrs)
Time & date of opening of Bids	17.11.2022 (15.30Hrs)
Time, date and venue for pre-bid meeting	04.11.2022(15.00 Hrs), Office of Superintending Engineer, FC-IV, Basai Darapur Office Complex, Opp. ESI Hospital New Delhi-110027
Contact Office	Office of Executive Engineer, Mechanical Division II, Irrigation and Flood Control Department E-Wing, Vikas Bhawan-II, Civil Lines, Delhi 110054

1. BACKGROUND

The IFCD involves in de-silting, cleaning and its allied work of 57 Nos. drains of NCT of Delhi under its jurisdiction .Presently department is carrying out works of de-silting and removal of floating waste/urban waste by conventional methods with the help of 47 nos. departmental machines namely Dragline, Hyd. Excavator, DUC machines, water master, Back Hoe Loader and through contracts as well. Specifications of available machinery in the department are as under:-

Description of Machine	Available quantity	Mode of deployment	Bucket Capacity	Maximum digging reach	Average desilting per hrs.
Dragline	19	On the bank	0.57 to 1.91 Cum	30 to 50 ft.	12 to 22 MT
Hydraulic Excavator	10	On the bank	0.44 Cum	50 ft.	15 MT
Amphibious Dredger(water master)	01	Into the drain water	0.44 Cum	28 ft	
Dredger Utility Craft	06	Into the drain water	0.24 Cum	15 ft	
Back Hoe Loader	11	On the bank	0.24 Cum	15 ft	

Presently department adopt a de-silting method wherein machine are deployed at available drain bank (except Water Master & DUC) and excavated harden and lose silt is disposed at bank itself and lifted out after a period, till the excavated earth becomes dry. The disposal of excavated dry earth/silt carried-out by shifting the same to landfill sites via Dumpers. Further removal of floating urban waste is mainly carried out on contract basis by old conventional method since no any specific machines are available at present departmentally.

IFCD has jurisdiction over of 57 Nos. storm water drains in territory having total length of around 400 Km. The size of these drains varying from 1.2 m to 120 m in width and depth 01 to 5.5 m. The major drains are Najafgarh, Supplementary Drain, Ghazipur Drain, Shahdara Outfall, TD-I &II etc. which are in size alike to river having width upto 100m and upto 5m in depth carrying discharge not only of Delhi but also from adjoining state Haryana, Rajasthan and Utter Pradesh.

Although IFCD drains are supposed to carry only storm water but actually all these storm water drains are carrying mixed flow i.e. both sewage, industrial effluent and storm water because of all the residential areas are yet not sewered and all the industries are not equipped with treatment unit. The drain passing through thickly populated areas where MSW as well household garbage also being dumped into the drains. Due to the said reasons the drain regularly being silted up and accumulated with floating materials over water surface. Due to presence of nutrients and minerals in water heavy growth of water hyacinth and water weeds in the drains are being experienced. The other issues regarding non-availability of space in some drains at some locations for deployment of men and machinery. The department also facing challenges of cleaning of drains underneath the bridges. The list of drain with size and hydraulic features are annexed at 'A'.

2. AIMS & OBJECTIVES

IFCD intends to identify suitable machines/equipments for procurement for removal of silt and floating waste from various drains under IFCD GNCTD. Accordingly, it has been decided to obtain the services of OEM/OES/Other Applicants to explore the modern machines for effective de-siltation and removal of floating municipal waste, hyacinth, cow dung etc.

IFCD wants to explore the feasibility/suitability/selection of machines with latest innovative technology for removal of silt/garbage/floating waste etc. (modern machinery) due to the limitations of existing Departmental Machinery on following points/task.

- Reduction in accumulation of the silt in the drains.
- Removal of silt from reaches of drains where due to encroachment or other reason narrow passage exists.
- Removal of silt and urban municipal waste from the beneath of low height Bridges and culverts.
- Removal and collection of cow/ buffalo dung from the certain reach of various drains.
- Unable to de-silt the entire width of the drain due to limited boom length of departmental machines from the drains banks
- For removal of harden/historical silt from the centre/middle portion of the drain to maintain a free flow of drain.
- Removal and Collection of domestic waste/urban municipal waste from the water surface/banks of the drain.
- Removal and collection of huge quantity of hyacinth and other floating weed etc.
- Simultaneous disposal of large quantity of excavated silt at designated landfill site/depressions/low laying areas etc.
- To reduced/prevent municipal waste dumping in drains.
- Removal of C&D waste lying on the banks of various drains
- De-silting/Dredging Machines with high capacity & efficiency, operatable from bank, in water or from both water & land.
- Equipment for online monitoring of status of drains.
- Equipment for online monitoring of the working of machines.
- Machines for dozing & removing earth and garbage from lands.
- Equipment for online monitoring of illegal dumping and encroachment.
- Equipment for faster recording of levels with accuracy.
- Equipment for online monitoring of discharge in drains.
- Equipment for online monitoring of water quality parameters in the drains.
- Equipment for online monitoring of water levels in the drains.
- Machines for drying/processing of silt
- Any other Machines/Equipments as suitable to IFCD requirements for improving monitoring and maintenance mechanism of Department.

3. SCOPE OF WORK

To explore the suitability/selection of modern machine/equipments with latest/innovative technologies available and adopted worldwide for cleaning and maintenance of drains i.e. removal of silt/garbage/urban floating waste/C&D waste from the drains and its proper disposal/reuse as per the regulation of regulating agencies/requirement of ground situation of drains.

The latest feasible machines for I&FC drain should be as under:

- Modern machines based on Robotic Technologies
- Modern Machines with artificial intelligence/machine learning
- Modern Amphibious Dredging and suction technology suitable for site condition.
- Other available state- of- the- art machinery
- Modern machine with weed harvester or trash skimmer.

To explore the state of the art machine/equipments for instant disposal of excavated silt and floating waste.

Assessment of specific use of existing departmental machines and to explore & suggest possibility of application/addition of latest equipment for improving efficiency, function ability and monitoring mechanism in techno-economical manner.

Drains Survey, methodology, assessment of accumulated silt etc. by latest equipment/technology.

4. GENERAL INFORMATION FOR INVITATION OF EXPRESSION OF INTEREST

- i) The Agencies/OEM/OES are required to submit the EoI containing Eligibility criteria and Technical Criteria in sealed envelope clearly marked **“Eligibility Criteria for Shortlisting of OEM/Agency for recommending the best suited machinery with latest/innovative technology available and adopted worldwide for removal of silt/garbage/urban floating waste/C&D waste from the drain and its proper disposal/reuse”**.
- ii) The EoI consisting of Eligibility Criteria and Criteria for shortlisting of applicants along with General Information to agencies can be seen at the website (http://web.delhi.gov.in/wps/wcm/connect/doit_irrigation/Irrigation+and+Flood+Control/Home) of IFCD.
- iii) The EoI offer shall be valid for 180 days from the date of its submission.
- iv) The Agency or one of its authorized representatives, having proper authority on letterhead of the Agency, will be allowed into the premises where Eligible Criteria bid shall be opened.
- v) All the pages of the EoI submitted must be numbered and signed by the authorized signatory.
- vi) Canvassing in connection with the EoI is strictly prohibited and such canvassed EoI submitted by the Agency are liable to be rejected.
- vii) The Agency shall keep necessary books of accounts and other documents for the purpose of the condition as may be necessary and shall allow inspection of the same by a duly authorized representative of the Executive Engineer, MD-II, I&FC Department and further shall furnish such other information / document to the Executive Engineer, MD-II, I&FC Department.
- viii) The I&FC Department reserves the right to reject or accept any or all EoI at any stage without assigning any reason whatsoever. I&FC department also will not provide any explanation to the applicant. The decision of I&FC in this respect shall be final and binding on all applicants.
- ix) EoI which do not fulfill all or any of conditions or are submitted incomplete in any respect are liable to be rejected. Conditional EoI shall not be accepted and will be rejected outright.
- x) In case of any dispute or clarification in EoI, decision of I&FC Department shall be final.
- xi) The Agencies/OEM are required to submit all the necessary documents as mentioned in EoI along with Eligibility Criteria. All the documents required to be submitted in EoI should be in English language only. If same are not available in English, then the concerned agency will be required to get such documents

translated in English and get them legally authenticated, before submitting.

- xii) The Agencies if required shall have to make presentation on the technology before the Evaluation Committee.
- xiii) A Firm shall be allowed for only proposal either individually or as a JV partner in another proposal. If a firm including a JV partner submits or participates in more than one proposal all such proposal shall be disqualified.
- xiv) In case the Agency is JV, the members of the JV shall furnish a Power of Attorney duly attested by Notary designating one of the members, as per the JV agreement, as their Lead Member. The lead member shall be fully responsible for the satisfactory performance of the JV.
- xv) A copy of the JV Agreement registered should be submitted alongwith the bid. The JV agreement entered into the members of the JV should be specific to the project only.
- xvi) All aforesaid form must bear the signature of authorized persons of the firm / company.
- xvii) The applicant shall bear all costs related to the preparation and submission of this EOI. I&FC department shall in no case be liable or responsible for these costs regardless of the conduct and outcome of the selection process.
- xviii) Shortlisted applicants, if required to make further presentations, shall bear all related costs including travel etc.
- xix) Applicants shall submit attested copies of all the credentials and proof of eligibility.
- xx) Applicants may submit their applications with all relevant enclosures in the prescribed format in sealed cover clearly marked (**“EXPRESSION OF INTEREST (EOI) To explore the suitability/selection of machine/equipment with latest/innovative technology available and adopted worldwide for removal of silt/garbage/urban floating waste/C&D waste from the drain and its proper disposal/reuse”**) so as to reach office of the Executive Engineer, Mechanical Division No-II, Irrigation and Flood Control Department, GNCTD, Vikas Bhawan-II, Delhi before the last date and time for submission of EOI.
- xxi) Queries related to this document may be sent to Executive Engineer, Mechanical Division II. No individual answers will be sent but clarifications will be posted on the website of Irrigation & Flood Control Department from time to time. I&FC department shall not be responsible if any such information/clarification is missed out or misinterpreted by the applicant (s).

5. IV (JOINT VENTURE) CONDITIONS

- (i) In the case of a JV or Consortium, all members of the group shall be jointly and severally liable for the performance of whole contract.
- (ii) A firm, who intends to participate in the process, if applicable, in its name, can submit the bid either as individual firm or in joint venture/ consortium. However, in joint venture/consortium:
 - a) The members shall jointly fulfil the past experience criteria and requirement of key personnel (for technical evaluation) as mentioned above. Further, each member shall at least qualify one eligibility criteria (financial, past experience and requirement of key personnel).
 - b) One of the partners shall be nominated as being in charge shall be called as Lead Partners, and this authorisation shall be evidenced by submitting a power of attorney (duly notarized) signed by legally authorised signatories of all the joint venture partners;
 - c) The lead member shall fulfil the financial eligibility criteria solely.
 - d) A copy of the Joint Venture Agreement (JVA) entered into by the members shall be submitted along with the bid. The JVA shall include among other things, the joint venture's objectives, percentage participation of each member, the role of each member in the joint venture operation, the commitment of the members to be jointly and severely liable for due performance, recourse/ sanctions with the joint venture in the event of default or withdrawal of any member(s) and without which bids are liable to be rejected.
 - e) In any case, number of JV/Consortium members shall not exceed 3 (three).
- (iii) If the firm claiming Technical Eligibility Criteria for the works has completed any of the works in joint venture with any other company then, along with the experience certificates, the firm shall submit the joint venture agreement for that particular work. Experience certificates not accompanied by joint venture agreement shall not be considered for evaluation. The credit for the firm which has completed a work in joint venture is allocated as follows:
 - b) If the firm has completed the work as a Lead member in the project then the firm can claim credit for the entire scope of work
 - c) If the firm has completed the work as a member in the project then the firm can claim credit for the entire scope of the work in proportion to the stake/percentage participation entered in the JVA.

6. VENUE AND DEADLINE FOR SUBMISSION OF EOI

Proposal, in its complete form in all respects as specified in the EOI, must be submitted to I&FC Department at the address specified herein earlier. In exceptional circumstances and at its discretion, I&FCD may extend the deadline for submission of proposals by issuing an amendment to be made available on the I&FC website, in which case all rights and obligations of I&FCD and the bidders previously subject to the original deadline will thereafter be subject to the deadline as extended.

7. ELIGIBILITY CRITERIA

- *All OEM/OES or their authorized agent are eligible to participate in the EOI process. The submission of EOI does not give applicant any right to supply or call of price bid by IFCD.*
- IFCD intends to explore the suitability of *modern* machine/equipment with latest/innovative technologies available and adopted worldwide for removal of silt/garbage/urban floating waste/C&D waste/hyacinth from the drain and its proper disposal/reuse through reputed Entities/OEM having manufacturing experience and expertise in the field of cleaning/de-silting of Drain/urban waterways/River/other water body and all *other* aspects of Heavy earthmoving machines/Equipments.
- **The New Manufactures who are registered under start-up-Scheme of any Government in India will be exempted from fulfilling the eligibility criteria of turnover and Experience but should possess test certificates for the products manufactured on their name.**
- **The OEM/OES/authorized agents will have to submit one photograph of (6*4) inches for each product they are offering in EOI. One photograph of the manufacturing unit with the name of manufacturing firm.**
- **If any OEM/OES offer visit to their manufacturing/working site at his cost same should be mentioned specifically however any such site visit will not give any guarantee or concurrence for approval or supply order by department.**
- **OEM/OES shall also mention certificate by designated Institute of quality of the equipment. The OEM/OES/authorized agents will have to submit detailed specification for each product along with leaflet of the product. The imported equipments/items which possess valid test certificate issued by designated Institute. The OEM should have after sale service facility for the equipment offered in India.**
- **The interested Manufactures/authorized agent shall submit undertaking as per format.**
- Notwithstanding anything stated elsewhere in these documents, IFCD shall have the right to seek updated information from the Applicants to ensure their continued eligibility. Applicants shall provide evidence of their continued eligibility in a manner that is satisfactory to IFCD. An Applicant may be disqualified if it is determined by IFCD, at any stage of the process, that the Applicant will be unable to

fulfill the requirements or fails to continue to satisfy the Eligibility Criteria. Supplementary information or documentations may be sought from Applicants at any time and it must be provided within a reasonable timeframe as stipulated by IFCD.

- A OEM/OES or Promoter(s) or Director(s) of a Business Entity which has been barred earlier by IFCD/any other entity of GNCTD or blacklisted by any state/Central government department/agency/Autonomous body in India from participating in bidding/tendering process shall not be eligible to submit an application, either individually or as member of a Consortium, if such bar subsists as on the Application due date.
- It will be imperative on each Applicant to fully acquaint himself with the local conditions and factors, which have any effect on the performance of the service and /or the cost.
- Applicants are encouraged to submit their respective Applications after validating information, applicable laws and regulations, and any other matter which are considered relevant by them.
- A conference/meeting of the interested parties shall be convened at designated date, time and place, *if required*. **If any OEM/authorized agent desires to make presentation online or offline, the request for the same shall be made to provide the option and the department will have right to accept or reject such request and if accepted, will provide date and time for the same.**
- During the course of the meeting, the Applicants will be free to seek clarifications and make suggestions for consideration of IFCD. IFCD shall provide clarifications and such further information as it may be, in its discretion, consider appropriate.

8. PROCESS OF SHORTLISTING

- The evaluation of technical offers/proposals of the interested applicants shall be done by Evaluation Committee (EC) of IFCD.
- The EC will evaluate the proposals on the basis of latest available machines with OEM/OES/authorized agent, technical support, technology adopted, past experience, general profile of qualification, experience and number of key staff, overall financial strength of the Applicants in terms of turnover, profit ability and cash flow situation etc. in term of formats provided in **Form -A to D.**
- Evaluation of the technical offers/proposals shall be based on the documents and information provided.
- The Applicants shall furnish all information on past supplies and their satisfactory performance and present contract commitments and work-in-progress in terms of the **Form-D & E.**
- To facilitate evaluation of Applications, IFCD may, at its sole discretion, seek clarifications from any Applicant regarding its Application. Such clarification(s) shall be provided within the time specified by IFCD for this purpose. Any request for clarification(s) in response thereto shall be in writing.
- If an Applicant does not provide clarifications sought within the prescribed time, its Application shall be liable to get rejected.

9. CONFLICT OF INTEREST

Where there is any indication that a conflict of interest exists or may arise, it shall be the responsibility of the Bidder to inform I&FC Department, detailing the conflict in writing as an attachment to this Bid.

I&FC Department will be the final arbiter in cases of potential conflicts of interest. Failure to notify I&FC Department of any potential conflict of interest will invalidate any verbal or written agreement.

A Conflict of Interest is where a person who is involved in the procurement has or may be perceived to have a personal interest in ensuring that a particular Bidder is successful. Actual and potential conflicts of interest must be declared by a person involved in a Bid process.

If any, dispute is arisen the matter shall be referred / dealt in the jurisdiction of Delhi only.

Letter of Transmittal

From:

(Name of Agency)

To,

**The Executive Engineer,
Mechanical Division No-II,
Irrigation and Flood Control Department,
E-Wing, Vikas Bhawan-II,
Civil Lines, Delhi-11005**

Subject: Submission of Expression of Interest for Shortlisting

Name of Work: To explore the suitability/selection of machine/equipment with latest/innovative technology available and adopted worldwide for removal of silt/garbage/urban floating waste/C&D waste from the drain and its proper disposal/reuse.

Sir,

Having examined the details given in EoI for the above work, we hereby submit the EoI and relevant documents.

1. I / we hereby certify that all the statements made and information supplied in the EoI and accompanying statements are true and correct.
2. I / we have furnished all information and details necessary for EoI and have no further pertinent information to supply.
3. I/we submit the requisite certified solvency certificate and authorize the I&FC Department to approach the Bank issuing the solvency certificate to confirm the correctness thereof. I/ we also authorize I&FC Department to approach individual employers, firms and corporation to verify our competency and general reputation.

Name of work:

Certificates:

Enclosures:

Date of Submission:

SEAL

Signature of applicant(s)

FORM -A
(Details of Organization/Firm)

Name of Organization
Address of Registered office with Telephone Number and Email Id
Address of office in National Capital of Region of Delhi
Name & complete address of Nodal/key personnel, with office and residential telephone numbers (including Mobile number and email id) with Power of Attorney authorizing him.
Date of Incorporation
Pan No.
GST No.
Type of Organization (Individual/Partnership/Limited Company or Corporation/Proprietary Firm/Joint Venture others)
History & Background of the applicant
Important Assignment in hand, their type and nature along with their respective financial size.
Whether the firm has been blacklisted by any Central Govt./State Govt./PSU/Govt. Bodies/Autonomous ? If yes, detail thereof.
Whether the applicant, failed to perform on any agreement, or been expelled from any project or agreement or have any agreement terminated for breach by the applicant, during the last five years. (Applicant will submit an undertaking in the form of Affidavit on non-judicial stamp paper in original in this regard)

FORM-B

Financial Strength of the Organization					
S.No.	Financial Year	Whether Profitable (Yes/No)	Annual Net profit (Profit After Tax) (in Crores of Rs.)	Overall annual turnover (in Crores of Rs.)	Average Turnover (in Crores of Rs.)
1	2019-20				
2	2020-21				
3	2021-22				
<p>Notes:</p> <ol style="list-style-type: none">1) Values should be duly certified by statutory body like Chartered Accountant or independent Auditors who are competent to do so as recognized by the State concerned.2) The amount shall be stated in Indian Rupees (INR)					

Signature of the applicant's Full name of applicant
Stamp & Date

Form 'C'

Form of Bankers Certificate (Solvency certificate)

This is to certify that to the best of our knowledge and information, M/s/Sh. _____
_____ (having marginally noted address), a customer of our bank are/is
respectable and can be treated as good for any engagements up to a limit of INR
_____ (INR _____).

(Signature) For the Bank

note:

1. Banker's certificates should be on letter head of the Bank, sealed in cover addressed to Executive Engineer, Mechanical Division II, I&FC Department.
2. In case of partnership firm, certificate should include name of all partners as recorded with the Bank.

FORM-D (i)

Experience in Related Fields						
Overview of the past experience of the Organization						
S.No	Items	Number of Year of relevant experience of the Firm	Number of Assignments during last 5 years	Order Value of each assignment in Lakhs of Rs. (Enclose copy of each order)	Mention the name of Client/ Organization & Address (Enclosed completion certificates)	Status of the Project
1	Experience of Assignments of similar nature					
		<p>Decision of Evaluating Committee in ascertaining "similar nature" and "similar assignment" will be final.</p> <p style="text-align: right;">Signature of the applicant Full name of applicant Stamp & Date</p>				

FORM-D (ii)

S.No.	Name of Relevant/similar work	Short Write up on the Scope of the Project/Work
		The applicant's involvement in the same.
		Particulars on challenges in the assignments accomplished by the applicant, with Supporting details.
		Time actually consumed in performing the assignment.
		Whether the project is currently working at satisfactory level with latest photograph of the works.
		Certificate of satisfactory completion from the clients, letters of appreciation, indicating therein duration of time period as indicated in the letter for award of work issued by person having Rank of Executive Engineer/ Project Manager/Business Head or above should be enclosed

Note: - For additional Similar/relevant Work, use same format.

FORM-D (iii)**MACHINE AND EQUIPMENTS**

Sr.No	Description of offered machine	Specifications	Operational Methodology	Technology adopted	Suitability/ feasibility as per IFCD requirement	Details of Past/present performance of the machine
1						
2						

FORM-D (iv)**Technical Support**

Sr. No.	Scope/Requirement	Description	Vendor Data/Details/Description
1.	Service Requirement	To explore the suitability/selection of machine/equipment with latest/innovative technology available and adopted worldwide for removal of silt/garbage/urban floating waste/C&D waste from the drain and its proper disposal/reuse.	Offered Machines/Mechanism:-
2.	Area of operations	On water/on bank	
3.	Machines Regulations		
4	Estimated Time to Commencement of Delivery	From date of order placement	
5.	Expected Production/ Delivery Rate	In months	
6	Relevant Technical Data		
	Category	Removal of silt Removal of floating material/hyacinth Removal C&D waste Disposal of silt and waste	Offered category:-
	Technology	Adopted Technology type	
	Types of Fuel		
	Capacity	MT per hour	
	Operating condition		
	Maintenance	Infrastructure Requirement for Maintenance	
	Safety	Safety system	
	Monitoring	System such as CCTV/GPS etc.	
	Weight	Gross Machine Weight	
7	Service Network, After sales services process Details Area Requirements.		
8	Estimated Life along with details of relevant standard operating conditions		

9	Estimated Cost of operations alongwith details of various inputs		
10	Production Facility Location		
11	Whether willing to enter into long term maintenance agreement		
12	Whether willing to enter into suitable operations agreement		
13	Name Contract No. and address of Authorised Agents/dealers in India		
14	Details of Clients to whom machine has been provided with tendered cost and year.		

FORM -E

Declaration

We hereby confirm that we are interested in competing for the Services for recommending the best suited **machinery with latest/innovative technology available and adopted worldwide for removal of silt/garbage/urban floating waste/C&D waste from the drain and its proper disposal/reuse.**

All the information provided here with is genuine and accurate.

Authorized Person's Signature.

Name and Designation:

Date of Signature:

Note: The declaration is to be furnished on the letter head of the organization.

ANNEXURE – A

DETAILS OF DRAINS OF I&FC DEPARTMENT						
Name of Drain	Length of Drain (in KMs)	Discharge in cusecs	Reach wise total land width (in mtr.) / Right of way	Reach wise top drain width (in mtr.) including water way	Depth of drain (in mtr.)	Balance land width (in mtr.)
Jahangir Puri Outfall drain	5.47	1700			1.80	
RD 0m to RD 1700m			75.00	54.00		21.00
RD 1700m to RD 3000m			66.00	48.00		18.00
RD 3000m to RD 4000m			31.00	27.00		4.00
RD 4000m to RD 4800m			35.00	33.00		3.00
RD 4800m to RD 5470m			54.00	43.00		12.00
Trunk Drain No.I ,						
RD 0m to RD 3200m	3.20	3037	54.86	38.00	2.67	16.86
RD 3200m to 5260m	2.06		22.86	20.00		2.86
RD 5260m to 6690m	1.43		45.00	33.00	4.00	12.00
RD 6690m to 10330m	3.64		45.00	25.00	4.50	20.00
RD 10330m to 13387m	3.06		37.00	15.00	4.50	22.00
Trunk Drain No. II						
RD-4550m to RD-3900m	4.55	1766	15.24	15.24	2.60	0.00
RD-3900m to RD-3230m			32.74	20.05		12.69
RD-3230m to RD-1980m			45.24	20.55		24.69
RD-1980m to RD-0m			54.86	22.80		32.06

Shahdara Outfall Drain	5.90	5562	135.00	58.764	3.26	76.236
RD-5900m to RD-0m						
Ghazipur Drain	6.15	5143			3.11	
RD-0m to RD-2135m			104.00	54.44		49.56
RD-2135m to RD-3505m			104.00	53.83		50.17
RD-3505m to RD-5090m			104.00	52.59		51.41
RD-5090m to RD-6157m			85.00	47.73		37.27
Shahdara Link Drain						
RD 4545m to RD-3500m	4.56	1159	45.15	22.25	2.135	22.90
RD 3500m toRD-3065m			53.50	22.25		31.25
RD 3065m to RD-2565m			44.50	22.25		22.25
RD 2565m to RD-2150m			36.45	22.25		14.20
RD 2150m to RD 1330m			43.45	22.25		21.20
RD 1330m to RD-930m			43.45	22.25		21.20
RD 930m to RD-330m (Covered Portion)			43.00	15.45		27.55
RD 330m to RD 130m			43.45	22.25		21.20
Karawal Nagar Drain	2.48	498	38.96	14.00	4.00	24.96
Biharipur Drain						
RD 0m to RD 650m	0.65	33	4.50	2.00	1.50	2.50
RD 650m to RD 1000m	0.35		8.00	2.00	1.50	6.00
Bund Drain	3.45	212	7.50	3.70	2.00	3.80

Escape Drain No. I	2.98	283				
RD 0m to 980m	0.98		25.90	8.00	4.00	
RD 980m to 1650m	0.67		23.00	6.00	3.00	17.90
RD 1650m to 2650m	1.00		18.23	6.00	2.50	17.00
RD 2650m to 2980m	0.33		17.00	2.80	2.00	12.23
Escape Drain No. II	0.45	35	30.00	10.00	3.00	20.00
Relief Drain	2.18	4				
RD 0m to 695m	0.70		27.00	13.00	2.00	14.00
RD 695m to 965m	0.27		Not visible marsh land			
RD 965m to 1860m	0.90		8.00	2.60	1.20	5.40
RD 1860m to 2180m	0.32		15.00	5.00	1.50	10.00
Drain No.06						
RD 0m to 2650m	14.73	462	45.00	22.05 to 26.95	4.10	17.40 to 27.95
RD 2650m to 6600m			44.00	26.60 to 28.70		15.30 to 17.40
RD 6600m to 12500m			40.00	19.20 to 26.45		13.55 to 20.80
RD 12500m to 14725m			28.00	12.50		15.50
Burari Creek	8.86	74	20	10 to 12	2.10	10 to 8
Burari Drain	6.04	25	3.50 to 6.00	3.50 to 6.00	0.60	Nil
New Drain	5.40	1180	61.00	48.00	5.20	13.00
Jagatpur Link Drain (Link Drain No. II)	2.46	10	4.00	2.50	2.50	1.50
Toe Drain	4.00	18	1.50	1.50	1.20	Nil
BAWANA ESCAPE DRAIN	19.79	681	40.50	19.425	1.50 to 4.80	21.0475

Bankner Link Drain	5.43	118	14.10	11.25	1.00	2.85
Khera Khurd Drain	5.20	71	6.75	3.40	0.80	3.35
Ghoga Link Drain	5.12	58	5.00	5.00	0.80	0.00
Naya Bas Link Drain	3.00	32	8.50	7.00	0.45 - 0.50	1.50
Sanoth Link Drain	3.35	41	10.80	9.00	1.40	1.80
Alipur Link Drain	0.88	31	30.00	3.50	2.50	26.50
Tikri Khurd Link Drain	1.94	11	The drain existing in the NH-1 Land	3.50	0.80	-
Khera Kalan Drain (Link)	0.86	1.14	7.54	3.00	2.00	4.54
Bawana Drain RD 9561M to RD 11391M	1.830	100	2.45	2.45	2.80	2.45
Nangloi Drain CD-VII-2100m	2.10	111	17.50	9.16	2.00	8.34
MungeshPur Drain RD 15850 m to RD 37550 m	21.65	1820	32.69 to 10.00	8.54 to 18.76	1 to 1.50	24.15 to 1.46
Bazitpur Drain RD 0 m to RD 8049 m	8.05	85	8.60 to 12.00	4.47	1.00	5.83
Bawana Drain RD 0 m to RD 9561 m	10.83	100	5.30 to 12.00	4.75	0.75	0.55 to 7.25
Ladpur Link Drain RD 0 to RD 2300m	2.30	20	11.00	2.92	0.30	8.08
Katewara Link Drain RD 0 m to RD 1330 m	1.33	8	2.50	0.60	0.80	1.90
Jatkhor Link Drain RD 0 m to RD 3760 m	3.76	17.50	2.75 to 3.50	1.834 to 2.587	0.30	0.163 to 1.66
Nangal Thakran Link Drain RD 0 m to RD 900 m	0.90	6	3.64	2.14	Dry	1.50
Madanpur Drain RD 4100 m to RD 8229 m	4.13	190	12.50	9.02	1.00	3.48
KirariSuleman RD 4150 to RD 7850m	3.70	110	7.50 to 15	6.98	2.02	0.52 to 8.02
Sultanpur Drain RD 0 m to RD 9200m	9.20	60	4.20 to 12.60	4.57	0.75	8.03
Rasulpur Link Drain RD 0 m to RD 750 m	0.75	5	6.80	3.214	0.30	3.61
Madanpur Drain (RD 0m to RD 4100m)	4.10	190	14.50	11.50	1.00	3.00
Kirari Suleman Nagar Drain (RD 0m to RD 4100m)	4.10	110	15.00 to 24.00	9.00 to 11.00 & 5.30 RCC Trough Section		6.00 to 13.00 & 9.70 to 19.70
(RD 0m to RD 1722m)	1.72				1.40	
(RD 1722to RD 3700m)	1.98				1.80	
(RD 3700m to RD 4100m)	0.40				1.40	

Mundka Peripheral Drain (RD 0m to RD 2345m)	2.35	13	2.50	2.00	1.50	0.50
Ranhola Pond Drain (RD 0m to RD 1160m)	1.16	10	1.20	1.20	1.20	-
Supplementary Drain RD 16436 m to RD 22471 m	6.04	5000	55.00	50.00	3.66	5
Najafgarh Drain, RD 45316 m to RD 57140m	11.82	10000	70.00	45.00	5.50	25.00
Supplementary drain RD 0 to RD 16436m	16.44	5000	113 to 152.40	61.40	3.66	51.6 to 91.00
RD 22471m to RD 25075m	2.604		68.30	46.27	3.66	22.03
RD 25075m to RD 26060m	0.985		103.00	48.72		54.28
RD 26060m to RD 28080m	2.020		125.00	48.72		
RD 28080m to RD 31300m	3.220		84.67	48.72		
RD 31300m to RD 34500m	3.200		118.00	48.72		
Najafgarh Drain,	45.31	10000				
RD. 0m to 17905m			200 to 325	110 to 126.68 including Jheel Portion	4.90	
RD.17905m to 20180m			150 to 200	120.00		
RD.20180m to 22435m			250 to 300			
RD.22435m to 28180m			200 to 250			
RD.28180m to 30180m			250 to 300			
RD.30180m to 31880m			180 to 250	98.00		
RD.31880m to 34350m			150 to 175			
RD.34350m to 37180m			150 to 200			
RD.37180m to 38960m			200 to 225			
RD.38960m to 40680m			180 to 200			
RD.40680m to 42930m			180 to 220			
RD.42930m to 44800m			250 to 300			
RD.44800m to 45316m			200 to 250			

Palam Drain	4.20		37.00	18 to 10.34	2.50	22.83
Palam Link Drain	1.47	3037	10.00 (Approx.)	4.50 to 2.25	1.30	6.62
Najaf Garh Pond Drain	1.95	31	17.00 (Approx.)	4.50	0.95	12.50
Nasirpur Link Drain	2.90	1020	12.00 (Approx.)	6.50	2.10	5.50
Bijwasan Drain	4.20	170	20 to 30	4.00	0.91	21.00
Pankha Road Drain	3.60	1000	19.60 to 24	8.00	2.30	13.80
Shahbad Mohammad pur Drain	0.23	155	14.50	2.35	1.22	12.15
Mundhela Drain	6.95	60	16.50	5.00	1.52	11.50
Ali Drain	2.78	2500	40.45	35.00	4.00	5.00
Asola Drain	3.39	235	5.00	2 to 5	3.00	2 to 5
Molar Bund Extension Drain	1.38	60	2.25	2.25	1.50 to 2.25	Nil
Sarita Vihar Drain	1.30	2070	20.00	15.00	2.50	5.00
MungeshPur Drain						
0m to 1575m	10.36	1820	137	29.02	3.32	107.98
1575m to RD. 6600m			54	29.02		24.98
RD.6600 m to 10362M			66	29.02		36.98
BhupaniaChu dania Drain (including Haryana portion)						
RD. 0m to 2736m	8.55	1430	90	22	3.05	68
RD.6280m to 8550M			65	22		43
RD.2736m to 6280M (Haryana State)			22	-		
Mudhela Drain RD 6950 to 12550m	5.60	60	17.6	6.57	0.91	11.3
Nangli Sakra wati Link Drain , RD-0m to 385m, RD- 1712m to 2262m	0.93	24	1.80 to 1.20	1.80 to 1.20	1.50	00