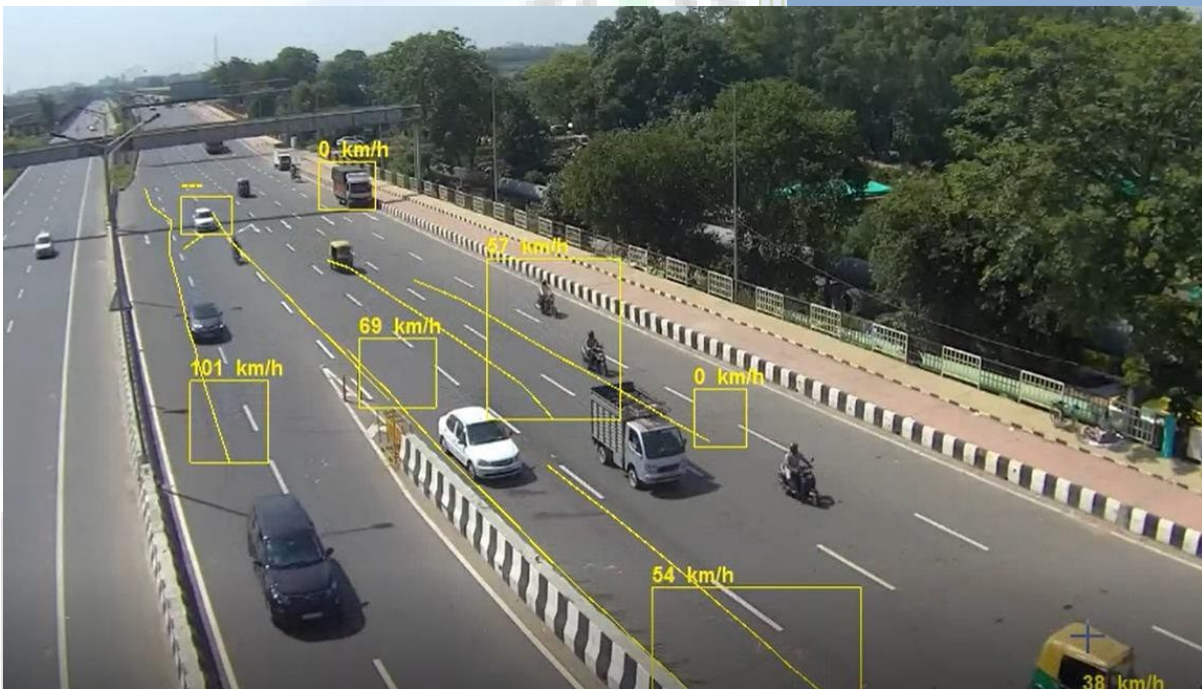


RFP for Selection of Acquirer Bank for Multi Lane Free Flow (MLFF) based Toll collection at Dwarka Expressway

Request for Proposal (RFP)



RFP No. IHMCL/MLFF DWE/2024/XX

**Indian Highways Management
Company Limited**
G-5&6, Sector-10, Dwarka, New Delhi-
110075
01.11.2024

Indian Highways Management Company Limited
G 5&6, Sector 10, Dwarka, New Delhi - 110075

NOTICE INVITING RFP

RFP No. IHMCL/MLFF DWE/2024/XX

Dated: XX/10/2024

- I. Indian Highways Management Company Limited (Hereinafter referred to as “Authority” or “IHMCL”) intends to engage the Acquirer Bank (also referred as “Bank”, “lead Bidder” and “Bidder” in the RFP for Selection of Acquirer Bank for Multi Lane Free Flow (MLFF) based Toll collection at Dwarka Expressway.
- II. The Project shall be a complete turnkey solution with provision of requisite infrastructure and implementation & skilled resources at location for operation and maintenance. The period of engagement shall be three years post Go-Live (extendable to an additional two years). The bidding firm shall be required to implement the solution within 3 months from the date of acceptance of the Work Order.
- III. The prospective bidders are hereby invited to submit their bids comprising Technical and Financial bids through e-tendering mode only. The bid shall be valid for 120 days w.e.f. bid due date. The bids should be submitted online only on e-tender portal (<https://etenders.gov.in>) of Government of India and in the prescribed formats. No change in the formats and / or other mode of bid submission is permissible.
- IV. Bidder should pay Tender Application Fee (non-refundable) of INR 25,000/- (Rupees Twenty-Five Thousand Only) inclusive of GST through online mode to Bank account details. The bidder shall also upload the online payment receipt.
- V. The Indian Highways Management Company Limited now invites bids from eligible bidders for the following project:

State & NH No.	RFP Ref No.	Name of Work
Delhi and Haryana NH - 248BB	IHMCL/MLFF 001/2024/0111	RFP for Selection of Acquirer Bank for Multi Lane Free Flow (MLFF) based Toll collection at Dwarka Expressway

- VI. The complete BID document can be viewed / downloaded from official portal of IHMCL <http://www.ihmcl.co.in> or e-procurement portal of IHMCL <https://etenders.gov.in> from 01.11.2024 to 29.11.2024. Bidder must submit online its technical and financial bid at <https://etenders.gov.in> on or before 29.11.2024 up to 15:00 Hrs. IST. Bids received online shall be opened on 30.11.2024 at 15:30 Hrs. IST.
- VII. Bidding through any other mode shall not be entertained. Please note that the Authority reserves the right to accept or reject the bids without assigning any reason whatsoever.

Officer In-charge:

COO - IHMCL,
Indian Highways Management Company Limited
G-5&6, Sector-10, Dwarka, New Delhi- 110075
Phone – 011- 25074100 Extn – 1804, e-mail: tenders@ihmcl.com

Disclaimer

The information contained in this RFP document (the "RFP document") or subsequently provided to Bidder(s), whether verbally or in documentary or any other form by or on behalf of IHMCL or any of its employees or advisors, is provided to Bidder(s) on the terms and conditions set out in this RFP document and such other terms and conditions subject to which such information is provided.

This RFP document is not an agreement and is neither an offer nor an invitation by IHMCL to the prospective bidders or any other person. The purpose of this RFP document is to provide interested parties with information that may be useful to them in making their technical/ financial offers ("Bid(s)") pursuant to this RFP document. This RFP document includes statements, which reflect various assumptions and assessments arrived at by IHMCL in relation to the Project. Such assumptions, assessments, and statements do not purport to contain all the information that each Bidder may require. This RFP document may not be appropriate for all persons, and it is not possible for IHMCL, its employees, or advisors to consider the investment objectives, financial situation, and particular needs of each party who reads or uses this RFP document.

The assumptions, assessments, statements, and information contained in this RFP document may not be complete, accurate, adequate, or correct. Each bidder should, therefore, conduct its own investigations and analysis and should check the accuracy, adequacy, correctness, reliability, and completeness of the assumptions, assessments, statements, and information contained in this RFP document and obtain independent advice from appropriate sources. Bidders acknowledge that they are responsible for conducting their own independent assessments, analyses, and due diligence to determine the suitability of their proposals and the requirements of the project.

The information provided in this RFP document to the Bidder(s) is on a wide range of matters, some of which may depend upon interpretation of the law. The information given is not intended to be an exhaustive account of statutory requirements and should not be regarded as a complete or authoritative statement of the law. IHMCL accepts no responsibility for the accuracy or otherwise of any interpretation or opinion of the law expressed herein. All information, specifications, requirements, and terms contained in this RFP are subject to change, modification, or withdrawal at the discretion of IHMCL without prior notice.

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

IHMCL also accepts no liability of any nature, whether resulting from negligence or otherwise, howsoever caused, arising from the reliance of any bidder upon the statements contained in this RFP document. IHMCL may, in its absolute discretion, but without being under any obligation to do so, update, amend, or supplement the information, assessment, or assumptions contained in this RFP document.

The issue of this RFP document does not imply that IHMCL is bound to select a bidder or to appoint the successful bidder for the Project and IHMCL reserves the right to reject all or any of the bidders or bids without assigning any reason whatsoever. Further, IHMCL reserves the right to cancel the bidding process, or pursue alternative procurement methods at any stage without incurring any liability to bidders. Bidders agree to indemnify and hold harmless IHMCL, its officers, employees, and agents from any claims, damages, liabilities, or expenses arising out of or related to their participation in the bidding process, submission of proposals, or performance under the contract.

The bidder shall bear all costs associated with or relating to the preparation and submission of their bid including but not limited to preparation, copying, postage, delivery fees, expenses associated with any demonstrations or presentations that may be required by IHMCL or any other costs incurred in connection with or relating to bid. All such costs and expenses will remain with the bidder and IHMCL shall not be liable in any manner whatsoever for the same or for any other costs or other expenses incurred by a bidder in preparation or submission of the bid, regardless of the conduct or outcome of the bidding process.

Document Composition

This RFP Documents comprises for following parts.

Part-I	Instructions to Bidders
Part-II	Formats for Bid Submission
Part-III	Draft Format of Contract Agreement
Section 1.1	Draft Contract Agreement
Section 1.2	General Conditions of Contract
Schedule A	Details of Site
Schedule B	<ul style="list-style-type: none">• Detailed Scope of Work<ul style="list-style-type: none">○ Design & Development of the MLFF System.○ Operation & Maintenance of MLFF System.• Service Level Agreements (SLA)
Schedule C	<ul style="list-style-type: none">• Functional & Technical Specifications• Indicative Minimum Bill of Quantities (BoQ)

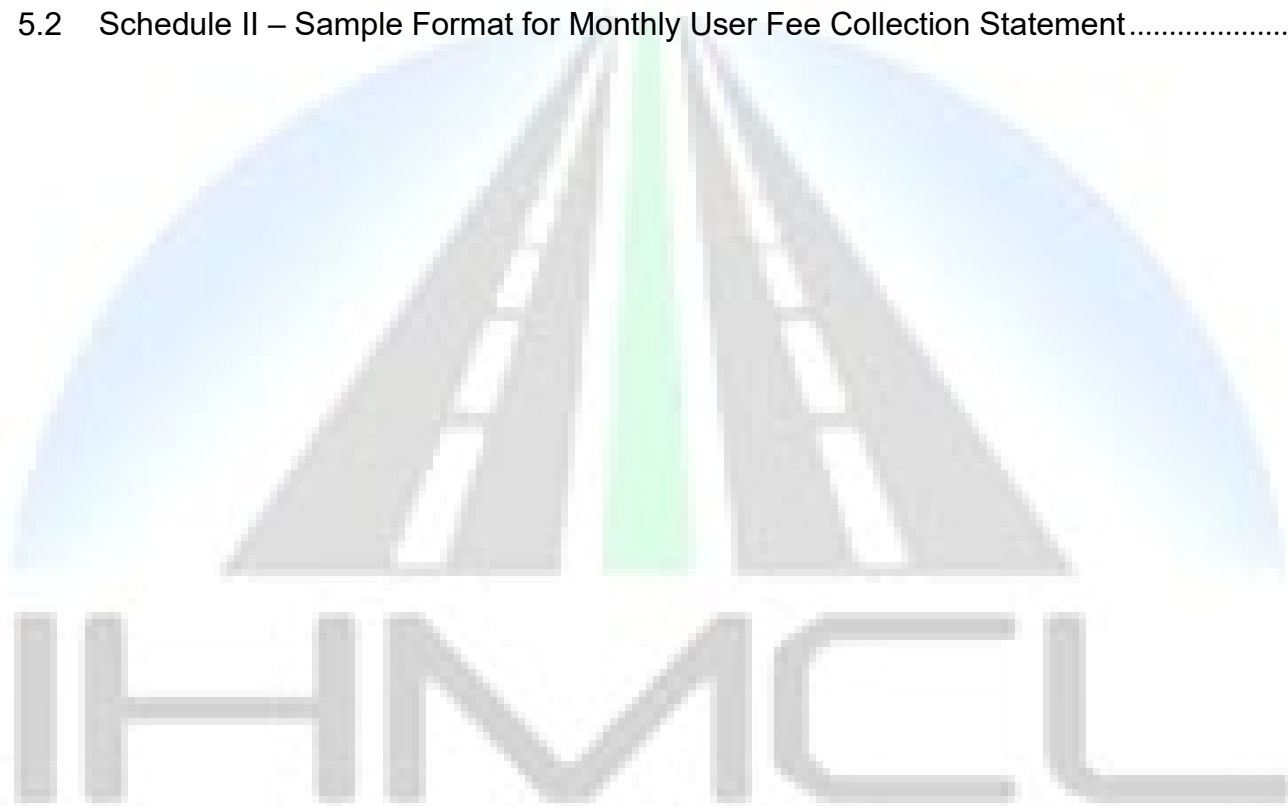
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Definitions


Term	Definition
Acquirer Bank	The member bank certified by NPCI as an Acquirer Bank under NETC program.
Applicable Law	Are the laws applicable in India
Authority	Indian Highways Management Company Limited/National Highway Authority of India
Authorized Representative	Authorised Representative of bidder
Bidder	The document uses “Bank”, “Bidder” and “Acquirer Bank” interchangeably. They refer to the Agency qualified as bidder for execution of MLFF solution.
CCH	Central Clearing House (Currently managed by NPCI)
Clean Transactions	Clean Transactions called as Settled Transactions.
Communication network	A wired or wireless facility used to send and receive data between the centralized component and the MLFF Component.
Control Centre (CC)	A dedicated control center for monitoring and management of the entire projects' operations and to undertake manual validations to generate e-Notice
Decision support	Reports, Graphs, Dashboard and Alerts which in help supporting decisions for Multi- Lane Free Flow project
Detector	A device that detects a vehicle passing through a gantry system.
FASTag	Passive RFID tag issued by bank for a specific vehicle for toll collection
Issuer Bank	The bank who has issued the FASTag
Lane	A lane is part of a roadway (carriageway) that is designated for use by a single file of vehicles, to control and guide drivers
MLFF Components	The components used to implement the MLFF Solution
Network control software	Application software that generates, monitors, and manages the transaction for all intersections under the MLFF.
NPCI	National Payments Corporation of India (NPCI), an umbrella organisation for operating retail payments and settlement systems in India, is an initiative of Reserve Bank of India (RBI) and Indian Banks' Association (IBA) under the provisions of the Payment and Settlement Systems Act, 2007
Sub-Contractor/ SI	The document uses “Sub-Contractor”, “System Integrator” and “SI” interchangeably. They refer to the Agency engaged by Acquirer Bank for implementation and maintenance of MLFF solution.
Tollable traffic	Tollable Traffic means all vehicles for which User Fee is applicable under NH Fee (Determination of rates and Collection) Rules 2008 and its amendment from time to time. This does not include exempted vehicles.
Trunking	End to End from the initial design and planning to the final construction and commissioning.
Un-settled Transactions	Failed transactions / blacklisting / in-sufficient balance is called as Unsettled Transactions.

Vehicle Classification	Differentiate between different vehicle types as per NH fee (Determination of rates and Collection) Rules 2008 (and its amendment from time to time) and NHAI/MoRTH/IHMCL/NETC guidelines.
Working Days	Working days refer to the days of the week when businesses and organizations operate, and employees are expected to work. Typically, these days are Monday through Friday and exclude weekends (Saturday and Sunday) and public holidays



Abbreviations

#	Abbreviations	Full Form
1	ANPR	Automatic Number Plate Recognition
2	BoQ	Bill of Quantities
3	CCH	Central Clearing House
4	CMOS	Complementary Metal Oxide Semiconductor
5	FAT	Factory Acceptance Test
6	FS	Functional Specification
7	Goi	Govt. of India
8	IHMCL	Indian Highways Management Company Limited
9	ITMS	Intelligent Traffic Management System
10	ITS	Intelligent Transport System
11	MLFF	Multi Lane Free Flow
12	MoRTH	Ministry of Road Transport and Highways
13	NHAI	National Highways Authority of India
14	NPCI	National Payment Corporation of India
15	PG	Procedural Guidelines
16	RFID	Radio Frequency Identification
17	SAT	Site Acceptance Test
18	SI	System Integrator
19	STQC	Standardization Testing and Quality Certification
20	TS	Technical Specifications
21	UAT	User Acceptance Testing

A large, semi-circular graphic in the background depicts a perspective view of a multi-lane highway. The road has a central green lane and two grey lanes on either side, all with white dashed lane markings. The entire graphic is set within a light blue, semi-circular frame.

PART - I

INTRODUCTION

IHMCL

1. INTRODUCTION

1.1. BACKGROUND

- a) Indian Highways Management Company Limited (Hereinafter referred to as “Authority” or “IHMCL”) intends to engage the Acquirer Bank for Multi Lane Free Flow (MLFF) based Toll collection at Dwarka Expressway (At Km/Ch: 09+050 of NH-248 BB).
- b) The Project shall include implementation of a comprehensive MLFF based tolling system and its Operation and maintenance on Dwarka Expressway.

Brief particulars of the Project are as follows:

State	NH No.	RFP Ref No.	Name of Assignment	EMD	Implementation Period	Period
Delhi and Haryana	NH-248 BB	IHMCL/MLFF 001/2024/0111	Selection of Acquirer Bank for Multi Lane Free Flow (MLFF) based Toll collection at Dwarka Expressway	INR 30 Lakhs	3 Months	03 Months (development period) and 36 Months as O&M period (After successful completion/commissioning of the MLFF based tolling System) extendable to additional 24 months

- c) The selected Bidder shall be responsible for Implementation of Multi Lane Free Flow (MLFF) based Tolling System at Dwarka Expressway Section of NH-248BB in accordance with the provisions of a contract (the “Contract”) to be entered into between the Bank and the Authority in the form provided by the Authority as part of the Bidding Documents pursuant hereto.
- d) The Agreement sets forth the detailed terms and conditions for award of the project to the Bank, including the scope of the Bank’s services and obligations enclosed as part of this document.
- e) The Authority shall receive BIDs pursuant to this RFP in accordance with the terms set forth in this RFP, and all BIDs shall be prepared and submitted in accordance with such terms on or before the BID due date specified in Clause 2 for submission of BIDs (the “BID Due Date”).

1.2. FACT SHEET

#	EVENT(S)	DATE (Unless otherwise notified separately)
1.	Invitation of RFP (NIT)	01/11/2024
2.	Last date of receiving queries	11./11/2024 till 05:00 pm
3.	Pre-Bid meeting at specified venue	21/11/2024 at 11:00 am
4.	Last date/ time for online submission of bids (i.e., Bid due date)	Before 15:00 Hrs. 29/11/2024
4.	Opening of <i>Technical bids</i>	15:30 Hrs. 30/11/2024
5.	Opening of Financial bids	To be intimated to shortlisted/ technically qualified. bidders separately
6	Period of the Project	3 Months (Development and Implementation Phase) and 03 Years (Operation & Maintenance)
7	Extendable period	1 year + 1 Year (Total 2 years)
8	Tender Application Fee	Rs. 25,000/- (Paid online)
9	Earnest Money Deposit (EMD)	Rs. 30,00,000/- in BG as per format described in the RFP.
10.	Contact person details	COO - IHMCL, Indian Highways Management Company Limited G-5&6, Sector-10, Dwarka, New Delhi- 110075 Phone – 011- 25074100 Extn – 1804, e-mail: tenders@ihmcl.com

2. GENERAL TERMS OF BIDDING

2.1. TENDER FEE

The bidder should pay Tender Application Fee (non-refundable) INR 25,000/- (Rupees Twenty-Five Thousand only) through online mode. The Bidder shall also upload the online payment receipt.

Details of designated bank account are as under:

#	Particulars	Details
1.	Name of Beneficiary	Indian Highways Management Company Limited
2.	Name of Bank	Canara Bank
3.	Account No.	8598201006217
4.	IFSC Code	CNRB0008598

2.2. BID SECURITY

- a) The bidder shall furnish as part of its Bid, a Bid Security amounting to Rs 54,00,000/- (Rs Fifty-Four Lakh Only). The Bid Security shall be in the form of Bank Guarantee (in format mentioned in this RFP) in favor of Indian Highways Management Company Limited, New Delhi from any of the following banks: -
 1. State Bank of India or its subsidiaries,
 2. Any Indian Nationalised Bank
 3. Any Scheduled Commercial Bank approved by RBI having a net worth of not less than Rs. 500 Cr as per the latest Annual Report of the Bank. In the case of a Foreign Bank (issued by a branch in India), the net worth in respect of the Indian operations shall only be considered.
- b) Any bid not accompanied by a Bid Security and Tender Application Fee in the prescribed manner shall be summarily rejected.
- c) The Bid Security of the unsuccessful bidders will be returned as promptly as possible after the expiration of the period of bid validity or Award of Work, whichever is later.
- d) The Bid Security of the selected bidder shall be retained till it has provided a Performance Security under the Contract Agreement

2.3. INVOCATION OF BID SECURITY

- a) The Bid Security shall be forfeited by IHMCL as damages payable to IHMCL for, inter-alia, time, cost and effort of IHMCL without prejudice to any other right or remedy that may be available to IHMCL under the provisions in the RFP and/or under the Contract Agreement, or otherwise, under the following circumstances:
- If a Bidder engages in a corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice; or
 - If the Bid is withdrawn during the intervening period between the bid due date and the expiration of the Bid Validity; or
 - If the bidder tries to influence the evaluation process; or
 - If a Bidder having been notified Successful Bidder by IHMCL with the issuance of Letter of Award (LOA) during the bid validity period:
 - Fails or refuses to furnish the Performance Security, in accordance with the conditions of RFP; or
 - Fails or refuses to execute/sign the Contract within the stipulated time frame.
- b) No Bidder shall submit more than one Bid for the Project. **JV/Consortium are not allowed to bid.**
- c) Any condition or qualification or any other stipulation contained in the Bid shall render the Bid liable to rejection as a non-responsive Bid.
- d) The Bidding documents including this RFP and all attached documents, provided by the Authority are and shall remain or become the property of the Authority and are transmitted to the Bidders solely for the purpose of preparation and submission of a Bid in accordance herewith. Bidders are to treat all information as strictly confidential and shall not use it for any purpose other than for preparation and submission of their Bid. The provisions of this Clause shall also apply mutatis mutandis to Bids and all other documents submitted by the Bidders, and the Authority will not return to the Bidders any Bid, document or any information provided along therewith.
- e) Notwithstanding anything to the contrary contained herein, if the Bid Due Date falls within three months of the closing of the latest financial year of a Bidder, it may ignore such financial year for the purposes of its Bid and furnish all its information and certification with reference to the 3 (three) years, preceding its latest financial year. For the avoidance of doubt, the financial year shall, for the purposes of this Bid hereunder, mean the accounting year followed by the Bidder during its normal business.

3. ELIGIBILITY AND PRE-QUALIFICATION CRITERIA

3.1. PRE-QUALIFICATION CRITERIA

The Bidders are required to fulfil the following Pre-Qualification Criteria:

#	Eligibility Conditions/Conditions	Supporting Document to be provided
PQ 1 – Entity	The bidder must be a certified Acquirer Bank under NETC program. The certification should be valid as on the bid due date. Consortiums or Joint Ventures are not allowed.	a) Undertaking signed by Authorized Signatory of the Bidder on its letterhead. AND b) Copy of valid certification by NPCI or any supporting document by NPCI.
PQ- 2 – Eligibility of Sub-Contractor (SI)	The bidder may sub-contract the system implementation work to a Sub-Contractor (SI), subject to condition that the Sub-Contractor (SI) should be incorporated in India under the Companies Act, 1956/2013 or the Limited Liability Partnerships Act, 2008 or any equivalent foreign act.	a) Copy of Certificate of Incorporation / Registration under Companies Act, 1956/2013 or any equivalent foreign act, or as applicable. b) Notarized MOU Agreement between bidder and Sub-Contractor (SI) including roles and responsibilities of Sub-contractor to be included along with technical bid.
PQ- 3 – Relevant Work Experience of Sub-Contractor (SI)	The Sub-Contractor (SI) should have successfully implemented Multi Lane Free Flow tolling systems in at least 200 kilometers (cumulative) toll roads, either in India or abroad, in 10 years preceding the Bid due date. Additionally, the project should have been in operational phase for at least 2 years.	a) Work order(s)/ Contract Agreement(s) clearly highlighting the relevant scope of work, contract value, year of execution. AND b) Completion Certificate issued & signed by the competent authority of the client on the entity's letterhead. OR, Self-certificate from the bidder and sub-contractor signed by authorized signatory for this bid holding written special power of attorney on stamp paper along with the official contact details of the competent authority of the client for completion of the work. In case the Work Order and/or Completion Certificate is in any other language than English, the bidder shall submit translated copy in English duly certified by the Embassy. IHMCL reserves the right to verify the Project details with the client/authority at any time of the project.
PQ-4 - Undertaking for non-blacklisting	The bidder and Sub-Contractor (SI) should not be blacklisted or debarred by any government department/ agency/PSU for material non-performance or contractual non-	a) Undertaking signed by Authorized Signatory of the Bidder on its letterhead.

#	Eligibility Conditions/Conditions	Supporting Document to be provided
	compliance in India or abroad in the last 3 years as on bid due date.	b) Undertaking signed by Authorized Signatory of the Sub-contractor on its letterhead.

Note: For any incomplete document provided by the bidder, IHMCL reserves the right to disqualify the bidder as non-responsive, without asking for any clarification.

3.1.1. ELIGIBLE ORIGINAL EQUIPMENT MANUFACTURER (OEM) CRITERIA

- a) For purposes of this Clause, the term “goods” includes commodities, raw material, machinery, equipment, and industrial plants; and “related services” includes services such as insurance, transportation, supply, installation, integration, testing, commissioning, training, and initial maintenance.
- b) Bidders must comply with the Office Memorandum no. F. No. NH-35014/20/2020-H, Government of India, Ministry of Road Transport & Highways dated 04.08.2020, regarding Department of Expenditure (DoE), Ministry of Finance, Govt. of India O.M. No. 6/18/2019-PPD dated 23.07.2020, vide which Rule 144 of the general Financial Rules 2017 entitled “Fundamental principles of public buying” has been amended by inserting sub-rule 144 (xi) in the General Financial Rules (GFRs), 2017. As per the new rule “Any bidder from a country which shares a land border with India will be eligible to bid in any procurement whether of goods, services (including consultancy services and non-consultancy services) or works (including turnkey projects) only if the bidder is registered with the Competent Authority.” The Bidder shall furnish the registration status of the supplier with Competent Authority (for the items / goods proposed to be procured from any country which shares a land border with India).
- c) OEM should not be rebranding & reselling products in India through importing/ trading from a country that shares a Land Border with India.
- d) Source code of the Software and Firmware being supplied for all the relevant equipment being supplied against this bid does not reside in any Country that shared a Land Border with India.
- e) OEM for each product or technology quoted should be in the business of that product or solution or technology for at least 3 years as on the date of release of the RFP.
- f) OEM for all active components should give a declaration that products or technology quoted are neither end-of-sale nor end-of-life as on the date of installation and commissioning and are not end-of-support till the successful completion of O&M period of the project.
- g) Bidder's proposed OEM should not have been blacklisted by any State / Central Government Department or Central /State PSUs in India or abroad as on bid submission date.
- h) Each of the proposed OEM should have existing capability and infrastructure to provide 24x7x365 technical support in India.
- i) Each of the proposed OEMs for active components shall have MLFF experience in India or abroad.
- j) Adequate supporting documents pertaining to the above points, along with a summary compliance table, should be submitted in the technical proposal by the Bidder.

3.2. CONFLICT OF INTEREST

- a) A Bidder shall not have a conflict of interest that may affect the bidding process (the “Conflict of Interest”). Any Bidder found to have a Conflict of Interest shall be disqualified. In the event of disqualification, IHMCL shall invoke the bid securing declaration as mutually agreed genuine pre-estimated loss and damage likely to be suffered and/ or incurred by the IHMCL and not by way of penalty for, inter alia, the time, cost, and effort of IHMCL including consideration of such Bidder’s Bids, without prejudice to any other right or remedy that may be available to IHMCL hereunder or otherwise.
- b) IHMCL requires that the selected bidder provides professional, objective, and impartial advice and always holds IHMCL’s interest’s paramount, avoiding conflicts with other assignments or its own interests. The selected bidder shall not accept or engage in any assignment that would 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 IHMCL.
- c) A Bidder shall be deemed to have a Conflict of Interest affecting the bidding process, if:
1. A constituent¹ of Bidder is also a constituent of another Bidder; or
 2. Such Bidder, its member or its associate receives or has received any direct or indirect subsidy or grant from any other Bidder, its member, or its Associate; or
 3. Such Bidder has the same legal representative for purposes of this Bid as any other Bidder; or
 4. Such Bidder, its member or its associates has a relationship with another Bidder, its member or its associates, directly or through common third parties, that puts them in a position to have access to each other’s information about the bids, or if they share or access each other’s information regarding the bids or to influence the bid of either or each of the other Bidder; or
 5. There is a conflict among this, and other assignments of the Bidder (including its member, associates, personnel, agents and subordinates) and any subsidiaries or entities controlled by such Bidder or having common controlling shareholders or Key Managerial Personnel; or
 6. While providing services to IHMCL for this assignment, the Bidder shall not take up any assignment that by its nature will result in conflict with the present assignment; or
 7. A company/firm that has been engaged by the Authority to provide goods and/or works, and/or services for a project, and its associates, will be disqualified from providing consulting services for the same project and/or associated services. or
- d) Bidders should be deemed to be in a conflict-of-interest situation if it can be reasonably concluded that their position in a business or their personal interest could improperly influence their judgment in the exercise of their duties. The process for selection of Bidders should avoid both actual and perceived conflict of interest; or
- e) The normal way to identify conflicts of interest is through self-declaration by the Bidder. Where a conflict exists, which has not been declared, competing companies are likely to bring this to the notice of IHMCL. All conflicts must be declared as and when the Bidder becomes aware of them.

¹ For this clause the word “*constituent*” shall include Promoter, Director, Shareholder, Partner, Agent, representative etc.

4. DISCLAIMER AND CLARIFICATION REGARDING RFP DOCUMENT

4.1. SITE VISIT

- a) Before the pre-bid meeting date, bidders are strongly advised and encouraged to conduct site visits, including visits to the toll plaza, to assess the existing situation and gather information relevant to their bid proposal. The Authority strongly advises and encourages bidders to address any questions they may have about the site conditions through a pre-bid inquiry. Failing which, it shall be deemed that the bidder has fully satisfied itself about the site conditions as outlined in the Contract Agreement.
- b) The bidder shall not hold the Authority responsible or liable for any inconsistencies, inaccuracies, mismatches, or errors that may arise between the Contract Agreement and the actual site conditions.
- c) Bidders must adhere to all safety and security protocols during site visits. The Authority reserves the right to limit or restrict access to certain areas of the site, or to impose conditions on site visits as deemed necessary for safety, security, or operational reasons.
- d) The Authority makes no representations or warranties regarding the accuracy, completeness, or suitability of the information gathered by bidders during site visits, and bidders undertake their own risk assessment and due diligence based on such information.
- e) Bidders agree that their proposals are based on their independent analysis and expertise, and they shall not hold the Authority liable for any discrepancies, omissions, or inaccuracies in the information gathered by the bidders during site visits.
- f) Bidders agree to indemnify and hold harmless the Authority, its officers, employees, and agents against any claims, damages, liabilities, or expenses that may arise because of or in connection with their site visit activities.

4.2. PRE-BID MEETING

- a) A prospective Bidder requiring any clarification regarding the RFP may notify IHMCL in writing or e-mail at IHMCL's address indicated in the invitation to Bid. IHMCL will respond to any request for clarification which is received before the pre-bid meeting.
- b) The Bidder or his authorized representative is invited to attend a pre-bid meeting which will take Place at IHMCL, G - 5 & 6, Sector-10, Dwarka, New Delhi-110075 as mentioned in the Schedule of Events.
- c) The Bidder who is interested in attaining the pre-bid meeting should confirm IHMCL about the participation (Only three authorised persons) one day prior to the schedule. The confirmation can be sent to tenders@ihmcl.com.
- d) The purpose of the meeting will be to clarify issues and to answer questions on any matter pertaining to this RFP document.
- e) All Bidders are requested to go through the RFP document carefully and submit any queries/ clarifications addressed to the COO, IHMCL in the format prescribed in Part III. If no query is raised, then it shall be assumed that such a Bidder has fully satisfied itself regarding the sufficiency of information contained in the RFP. The Bidder is requested to submit any questions / queries in

writing or by email in editable format to tenders@ihmcl.com before 11/11/2024, to reach at IHMCL well before the scheduled meeting.

- f) Clarifications to the queries will be hosted on IHMCL's website/ e-tender portal only.
- g) Any modification in the RFP document which may become necessary because of the deliberations in the pre-Bid meeting shall be made by IHMCL separately through issue of an Addendum/ Amendment and the same will be hosted on IHMCL's website/ e-tender portal.



5. ACCESSING BID DOCUMENTS, PREPARATION AND SUBMISSION OF BID

Website for accessing RFP is <http://etenders.gov.in>. The Bidders shall submit the proposal strictly as per criteria laid down in the RFP. The tender process timelines are mentioned in the RFP as “Fact Sheet” in Part-I Instructions to Bidders of the RFP. The same can also be viewed / downloaded from IHMCL e-tender portal.

5.1. PREPARATION & SUBMISSION OF BIDS

- a) Detailed RFP may be downloaded from the e-tender portal and bid shall be submitted online following the instruction appearing on the screen.
- b) The scanned copies of the following documents shall be submitted as part of a bid to IHMCL before the prescribed date & time for submission of Bids.
- c) Tender Application Fee in the manner prescribed.
- d) Bid Securing Declaration in the manner prescribed.
- e) Original Power of Attorney in Favor of Authorized Signatory in the Format prescribed in this document.
- f) MOU in the format prescribed in this document.
- g) The Technical and Financial bid should be submitted online separately only in the prescribed format given on the e-tender portal. No other mode of submission is allowed.
- h) No physical document shall be accepted unless and until the same is specifically stated in the RFP or it is a legal requirement.

5.2. BID VALIDITY

The bid should remain **valid for a period of 120 calendar days from the bid due date**. IHMCL will make its best efforts to complete the evaluation process and work award within the bid validity period. Under exceptional circumstances, prior to the expiration of the bid validity, IHMCL may request bidder to extend the bid validity for a specified additional period. Such request by IHMCL and replies / responses from bidders shall be in writing. The bidder(s) not agreeing to such an extension will be allowed to withdraw their bids without invocation of their bid securing declaration.

5.3. BID COMPOSITION

The Bid shall comprise the following:

PART 1: Technical Bid

To be uploaded on E-tender portal only. Physical submission of bids is not allowed.

- a) Tender Fee (proof of deposition in given account number)
- b) Bid Security (Scan copy of Bank Guarantee).
- c) Technical Bid comprising of various formats prescribed in RFP.
- d) Stipulated documentary evidence attested by the authorized signatory in support of their claim for fulfilling the prescribed eligibility criteria and an undertaking on the bidder's letterheads to the

fairness of these documents in support of their claim while submitting the Bids.

- e) Undertaking that the bidder should not have been blacklisted or debarred by any government department/ agency/PSU for material non-performance or contractual non-compliance in India or abroad in the last 3 years as on bid due date.
- f) Self-declaration concerning any 'Conflict of Interest' prescribed under Para 3.3 of eligibility criteria.
- g) All credentials of sub-contractor (SI) as per PQ criteria countersigned by bidder shall be part of technical bid.
- h) Other documents:
 - a. Valid Certificate from NPCI for acquiring services.
 - b. Work Orders/Completion Certificates/Declarations in respect of Eligibility Criteria.
 - c. MoU between Acquirer Bank and Sub-Contractor.
 - d. Copy of Certificate of Incorporation of Company or LLP.
 - e. MoA and AoA of a company / or other documents showing object clause of a firm.
 - f. Signed copy of Integrity Pact in the prescribed format; and
Any other document providing additional information in respect of technical / financial strength as well as technical experience etc.
- i) Technical Proposal
 - a. The Bidder shall describe the proposed works in sufficient detail in his Technical Proposal as per format given in T-6 to enable the IHMCL to evaluate the technical adequacy of the proposed system. Authority may ask clarification, and if not found satisfactory response, the technical bid shall be declared non-responsive.
 - b. Detailed Project Plan
 - c. Risk and mitigation Plan

PART 2: Financial Bid

(In the prescribed format on E-Tender portal)

- a) Financial bid shall be submitted online on e-tender portal on the prescribed format which may be downloaded well before the bid due date from e-tender portal.
- b) In case of any difference in figures and words, the amount mentioned in words will prevail.
- c) The bid must encompass all costs/charges/expenditure payable in complete adherence/conformity/compliance to the Scope of Work, including all necessary works, ancillary or incidental in nature, regardless of whether they are explicitly stated or not, as well as other terms indicated in the RFP document. No additional/further payments shall be made in this regard.
- d) The bid should include all statutory taxes/ levies / surcharge on tax etc., Prices quoted by bidder shall be inclusive of Taxes.
- e) Bidder should note that Income tax payable by the Bidder is not reimbursable by IHMCL. TDS will be applicable on all payments made by IHMCL as per applicable law.

5.4. COST OF BIDDING

The Bidder shall be solely responsible for all the costs associated with the preparation and submission of their Bids including subsequent negotiation, visits to IHMCL, project site etc. IHMCL shall not be responsible in any way liable for such costs, regardless of the conduct or outcome of the bidding process.

5.5. LANGUAGE OF THE BIDS

The Bid and all communications in relation to or concerning the RFP shall be in **English language**. No supporting document or printed literature shall be submitted with the Bid unless specifically asked for and in case any of the documents are in another language, it must be accompanied by an accurate translation of the relevant passages in English, in which case, for all purposes of interpretations of the Bid, the original documents attached with the bid or the information incorporated in the bid shall be final and binding.

5.6. MODIFICATION /SUBSTITUTION/ WITHDRAWAL OF BIDS

1. The Bidder may modify, substitute, or withdraw its e-bid after submission prior to the Bid Due Date. No Bid shall be modified, substituted, or withdrawn by the Bidder on or after the Bid Due Date.
2. In case, if the bid is withdrawn by bidder after due date, IHMCL shall forfeit the EMD submitted by bidder.

5.7. OPENING & EVALUATION OF BIDS

1. Opening and evaluation of bids will be done through online process.
2. The bids will be opened on-line on the due date and time prescribed in the RFP document in the presence of the bidders who choose to attend. The Authority will subsequently examine and evaluate the bids in accordance with the provisions set out.
3. Prior to evaluation of bids, the Authority shall determine whether each Bid is responsive to the requirements of this RFP.
4. 'Financial Bid' of non-responsive bidders shall not be opened.
 - a) To assist in the examination, evaluation, and comparison of Bids, IHMCL may, at its discretion, ask any Bidder for clarification of its Bid. The request for clarification and the response shall be in writing or by e-mail, but no change in the price or substance of the Bid shall be sought, offered, or permitted except as required to confirm the correction of arithmetic errors discovered by IHMCL in the evaluation of the Bids.
 - b) Except in case any clarification is asked by IHMCL, no Bidder shall contact IHMCL on any matter relating to its Bid from the time of the Bid opening to the time the Contract is awarded. If any Bidder wishes to bring additional information to the notice of IHMCL, it should do so in writing at the address prescribed in the Notice Inviting Tender.
 - c) All information and discussions related to the bid evaluation process shall be treated as confidential. Bidders and any other involved parties must maintain strict confidentiality and refrain from disclosing any details regarding the evaluation process or deliberations.
 - d) The Evaluation Committee's deliberations and discussions on bid proposals, shall be considered confidential and privileged information. The Committee shall refrain from discussing or sharing details of their deliberations with bidders or any unauthorized individuals.

6. BID EVALUATION CRITERIA AND SELECTION PROCEDURE

1. The bids shall be opened on-line by the Evaluation Committee on the date and time prescribed. Prior to evaluation of the bids, IHMCL shall determine as to whether each bid is responsive to the requirements of this RFP document. A bid will be declared non-responsive in case:
 - a) If a bidder does not fulfil pre-qualification criteria mentioned in the RFP including the pre-qualification criteria of sub-contractor (SI).
 - b) If a bidder submits more than one bid against this RFP.
 - c) Bid is submitted without Tender Fee.
 - d) Bid is submitted without Bid Security.
 - e) If the Authorized Signatory holding Power of Attorney (POA) or the person executing/delegating such POA and Digital Signatory are not the same.
 - f) If a bidder submits a conditional bid or makes changes in the terms and conditions given in this RFP document.
 - g) Failure to comply with all the requirements of RFP document by a bidder.
 - h) If the bid is not submitted in the formats prescribed in the RFP document.
 - i) If any requisite document/certificate is not in the prescribed format the same shall not be considered while evaluating the bids and the same may lead to bid being declared as non-responsive.
 - j) A bid valid for a period shorter than prescribed in the RFP document.
 - k) No commercial information shall be part of technical proposal.
2. A two-stage procedure shall be adopted for evaluation of the bids.
3. The stages of bid evaluation are mentioned as below:

First Stage: Pre-Qualification/ Eligibility Stage:

- a) The Evaluation Committee shall carry out initial screening of technical bids by examining the statement of qualification, furnished by the Bidder in support of their fulfilment of eligibility against the criteria prescribed in this RFP.
- b) The Evaluation Committee may, at its discretion, call for additional information from the bidder(s) through email/fax/telephone/meeting or any other mode of communication. Such information must be supplied within the set-out time frame as provided by the Evaluation Committee; otherwise, Evaluation Committee shall make its own reasonable assumptions at the total risk and cost of the bidders and the proposal is liable to be rejected. Seeking clarification cannot be treated as acceptance of the proposal. For verification of information submitted by the bidders, the committee may visit the bidder's offices at its own cost. The bidders shall provide all the necessary documents, samples, and reference information as desired by the Committee. The bidders shall also assist the committee in obtaining relevant information from their references.
- c) The bidder shall have to submit all the required documents as per the various formats provided in the Appendices. These documents will be scrutinized in this phase of evaluation. Those bidders who do not fulfil the terms and conditions of Eligibility Criteria as specified in this tender will not be eligible for further evaluation i.e. Second Stage: Financial Bid Evaluation.

Second Stage: Financial Bid Evaluation

- a) The Financial Bids of technically qualified bidders as declared in First Stage will be opened on the prescribed date on e-tender portal.
- b) The Financial Bid Evaluation will be based on the lowest revenue share demanded by the bidder in the Financial Bid Form F-1.
- c) If two bidders have the same bid financial transaction percentage value (upto 2 values of

decimal places as per Arithmetic Convention defined in clause 1.2.4), preference may be given to the bidder where the sub-contractor has the expertise of proven expertise of larger number of MLFF projects (As per Clause-3, 3.1 PQ Criteria, Point number-PQ 3) in India/abroad.

- d) At any point of tender process, IHMCL reserves the right to cancel the bid, without providing any reasons thereof.

6.1. SITE VISIT BY IHMCL

IHMCL officials may visit the project where the bidder has claimed to have successfully implemented MLFF. If any discrepancy/mismatch is found during the site visit with respect to credentials submitted in the bid, the bid is liable to be declared non-responsive.

6.2. SELECTION AND AWARD CRITERIA

- a) IHMCL will award the Contract to the bidder whose bid has been determined to be responsive as per criteria defined above and who has quoted the lowest revenue share. The bidder who has quoted second Lowest revenue share shall be kept in reserve and may be invited to match the bid submitted by the lowest revenue share bidder in case such lowest revenue share bidder withdraws or is awarded the contract for any reason. If the second Lowest revenue share bidder does not match the bid of the lowest bidder, the Authority may, on its discretion, shall invite fresh bids.
- b) The Successful bidder shall be intimated by IHMCL through a Letter of Award (LoA). Upon issue of the LoA the successful bidder shall be required to furnish the Letter of Acceptance and Performance Security and other guarantees as prescribed in the RFP document. IHMCL shall have the right to get bank guarantees verified from the respective issuing bank. Upon receipt of verification, the successful bidder shall be invited to sign the contract with IHMCL. The format of Contract Agreement is prescribed in the RFP Document.
- c) IHMCL reserves the right to reject any bid which is non-responsive and no request for alteration, modification, substitution, or withdrawal shall be entertained by IHMCL in respect of such bids.

6.3. WARRANTY AND GAURANTY

Bidder is solely responsible for function and maintenance of MLFF System equipment/components provided by bidder should have five years of warranty.

6.4. PERFORMANCE SECURITY

- a) The Acquirer bank shall furnish a Performance Security totaling Rs. 15,50,00,000/- consisting of (a) a crossed account payee demand draft/pay order amounting to Rs. 7,75,00,000/- (Rupees Seven Crore and Seventy-Five Lakh Only) (an amount equal to 50% of the total PBG value) and (b) a bank guarantee amounting to Rs. 7,75,00,000/- (Rupees Seven Crore and Seventy-Five Lakh Only) (an amount equal to 50% of the total PBG value) as per the format prescribed by IHMCL for a period of 4 years from the Date of LOA. The Bidder shall have the liberty to submit a crossed account payee demand draft/pay order issued by a Scheduled Bank in India in lieu of the bank guarantee. In case the monthly APC increases by 50% or more in the future, the bidder is required to deposit an additional 50% of the submitted Performance Security in the same way, i.e. 50% of the Performance Security amount in the form of Cash Performance Security and the remaining additional 50% in the form of PBG.
- b) In case the contract is extended, the bidder shall extend the validity of PBG appropriately such that it remains valid until one year beyond completion of the contract.
- c) The PBG from following scheduled banks shall only be accepted:
- I. State Bank of India or its subsidiaries.
 - II. Any Indian Nationalized Bank.
 - III. Any Scheduled Commercial Bank approved by RBI having a net worth of not less than 500

Crores as per the latest Annual Report of the Bank. In the case of a Foreign Bank (issued by the branch of India) the net worth in respect of the Indian operations shall only be considered.

6.5. MISCELLANEOUS

1. Resolution of Disputes

a) Any dispute, difference or controversy of whatever nature howsoever arising under or out of or in relation to the Contract (including its interpretation) between the Parties, and so notified in writing by either Party to the other Party (the "Dispute") shall, in the first instance, be attempted to be resolved amicably in accordance with the conciliation procedure.

b) The Parties agree to use their best efforts for resolving all Disputes arising under or in respect of the Contract promptly, equitably and in good faith, and further agree to provide each other with reasonable access during normal business hours to all non-privileged records, information and data pertaining to any Dispute.

c) Mediation

In the event of any Dispute between the Parties, either Party may call upon the Chairman in case of IHMCL or his nominee and the Managing Director/ /CEO/Director in case of the Service Provider to mediate in arriving at an amicable settlement thereof. If after expiry of 30 days of receipt of the documents in relation to the Dispute or such extended period as the Parties may agree in writing, the Dispute remains unresolved, the Parties shall attempt to resolve the dispute through conciliation and/or Arbitration under the Arbitration and Conciliation Act, 1996.

d) Conciliation

The Parties shall attempt to select one of the experts from the list of empaneled arbitrators of the Society for Affordable Redressal of Disputes ("SAROD") as the Conciliator to mediate and assist the Parties in arriving at an amicable settlement thereof. If the Parties fail to agree on nominating a conciliator within 15 (fifteen) days or the Dispute is not resolved as evidenced by the signing of written terms of settlement within 60 (sixty) days of the notice in writing or such longer period as may be mutually agreed by the Parties, either Party may refer the Dispute to arbitration.

e) Arbitration

- a. Any Dispute which is not resolved amicably by conciliation, shall be finally settled by arbitration as set forth below:
- b. The Dispute shall be referred to the SAROD. The dispute shall be dealt with in terms of Rules of SAROD. The detailed procedure for conducting Arbitration shall be governed by the Rules of SAROD and provisions of Arbitration & Conciliation Act, 1996, as amended from time to time.
- c. The seat of Arbitration shall be New Delhi and the language for all documents and communications between the parties shall be English.
- d. The expenses incurred by each party in connection with the preparation, presentation, etc., of arbitral proceedings shall be borne by each party itself.
- e. The arbitrators shall make a reasoned award (the "Award").
- f. The Service Provider and IHMCL agree that an Award may be enforced against the Service Provider and/or IHMCL and their respective assets wherever situated.
- g. This Agreement and the rights and obligations of the Parties shall remain in full force and effect, pending any proceedings hereunder. Further, the Parties unconditionally acknowledge and agree that notwithstanding any Dispute between them, each Party shall proceed with the performance of its respective obligations, pending resolution of Dispute.

2. This RFP document also includes the format of the Contract Agreement to be executed with the successful bidder for providing the stipulated services to IHMCL. bidders are advised to study the RFP document along with its amendment/ addendum carefully if any.

3. No bidder shall submit more than one bid against this RFP. If more than one bid is received from the same bidder, all such bids shall be summarily rejected.

4. The bidding process shall be governed by, and construed in accordance with, the laws of India and courts at New Delhi shall have exclusive jurisdiction over all disputes arising under, pursuant to and/or in connection with the bidding process.
5. Any dispute arising out of this procurement process shall be referred to Society for Affordable Redressal of Disputes (SAROD). The decision of the SAROD in this regard shall be final and binding on the parties.
6. IHMCL, in its sole discretion and without incurring any obligation or liability, reserves the right, at any time, too.
 - (i) Suspend and/or cancel the bidding process and/or amend and/or supplement the bidding Process or modify the dates or other terms and conditions relating there to.
 - (ii) Consult with any bidder to receive clarification or further information.
 - (iii) Retain any information and/ or evidence submitted to IHMCL by, on behalf of, and/ or in relation to any bidder; and/or.
 - (iv) Independently verify, disqualify, reject and/ or accept all submissions or other information and/or evidence submitted by or on behalf of any bidder.
7. IHMCL is not bound to reply/ respond to any representation/ letter or request for Change in Scope of work, eligibility criteria or any relaxation in respect of the tender conditions.
8. It shall be deemed that by submitting the Bid, the bidder agrees and releases IHMCL, its employees, agents and advisers, irrevocably, unconditionally, fully and finally from any and all liability for claims, losses, damages, costs, expenses or liabilities in any way related to or arising from the exercise of any rights and/or performance of any obligations hereunder, pursuant hereto and/or in connection with the bidding process and waives, to the fullest extent permitted by Applicable Law, any and all rights and/ or claims it may have in this respect, whether actual or contingent, whether present or in future.
9. Verification and Dis-qualification: IHMCL reserves the right to verify all statements, information, and documents submitted by the bidder in response to this RFP, and the bidders shall, when so required by IHMCL, make available all such information, evidence, and documents as may be necessary for such verification. Any such verification or lacks such verification, by IHMCL shall not relieve the bidders of its obligations or liabilities hereunder, nor will it affect any rights of IHMCL thereunder.
10. IHMCL reserves the right to reject any Bid and/ or declare it non-responsive, if:
 - i. At any time, a material misrepresentation is made or uncovered, or
 - ii. The bidder does not provide, within the time specified by IHMCL, the supplemental information sought by IHMCL for evaluation of the Bid.
11. Such misrepresentation/ improper response shall lead to the disqualification of the bidder. If such disqualification/ rejection occurs after the bids have been opened and the lowest bidder gets disqualified/ rejected, then IHMCL reserves the right to take any such measure as may be deemed fit in the sole discretion of IHMCL, including annulment of the Bidding process.

6.6. AMENDMENT TO RFP

- a) Any modification in the RFP document shall be made by IHMCL separately through issue of an Addendum/ Amendment.
- b) At any time prior to the bid due date, IHMCL may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the conditions specified in the RFP document by an amendment. Any amendment/ addendum thus issued shall be part of the RFP document and shall be communicated by hosting the same on IHMCL website only and should be taken into consideration by the prospective bidders while preparing their bids.
- c) To give prospective bidders reasonable time to take the amendment into accounting preparing their

bid, IHMCL may, at its discretion, extend the bid due date.

d) The bidder must read all the instructions in the RFP and abide by the same accordingly.

6.7. INDEMNITY

The bidder shall, subject to the provisions of the Contract, indemnify IHMCL for any loss or damage caused on account of any act/ omission attributable to the bidder.

6.8. PROPRIETARY DATA

All documents and other information provided by IHMCL or submitted by a bidder to IHMCL shall remain or become the property of IHMCL. Bidders are to treat all information as strictly confidential. IHMCL will not return any bid, or any information related thereto. All information collected, analyzed, processed, or in whatever manner provided by the successful bidder to IHMCL in relation to the services shall be the property of IHMCL.

6.9. CORRUPT OR FRAUDULENT PRACTICES

IHMCL requires bidder to observe the highest standard of ethics during the procurement and execution of the Contract. In pursuance of this policy, IHMCL:


- a. Defines, for the purposes of this provision, the terms set forth below as follows:
 1. "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.
 2. "Fraudulent Practice" means a misrepresentation of facts to influence a procurement process or the execution of a contract to the detriment of IHMCL and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificially non-competitive levels and to deprive IHMCL of the benefits of free and open competition.
 3. "Coercive Practice" means impairing or harming, or threatening to impair or harm, directly or indirectly, any person or property to influence any person's participation or action in the bidding process.
 4. "Undesirable Practice" means (i) Establishing contact with any person connected with or employed or engaged by IHMCL with the objective of canvassing, lobbying or in any manner influencing, or attempting to influence the bidding process; or (ii) having a Conflict of Interest; and
 5. "Restrictive Practice" means forming a cartel or arriving at any understanding or arrangement among bidders with the objective of restricting or manipulating a full and fair competition in the bidding process.
- b. IHMCL will reject a bid if it determines that the bidder has engaged in Corrupt Practice or Fraudulent Practice or Coercive Practice or Undesirable Practice or Restrictive Practice in competing for the Contract in question.
- c. IHMCL will blacklist/ declare a bidder ineligible, either indefinitely or for a stated period, to be awarded any contract by IHMCL if it at any time determines that the bidder has engaged in Corrupt Practice/ Fraudulent Practice/Coercive Practice/Undesirable Practice/Restrictive Practice in competing for or in executing IHMCL Contract.

6.10. INTEGRITY PACT

Bidder shall comply with the provisions of the Office Memorandum No. 13030/09/2008-Vig. Dated 28.01.2013 issued by NHAI (Copy enclosed) at **Appendix-I**.

a) Appendix-I

Appendix -1 attached below.



भारतीय राष्ट्रीय राजमार्ग प्राधिकरण
 (सड़क परिवहन और राजमार्ग विभाग)
National Highways Authority of India
 (Ministry of Road Transport and Highways)
 पी-5 एवं 6, सेक्टर-10, द्वारका, नई दिल्ली-110075
 G-5 & 6, Sector-10, Dwarka, New Delhi-110075

दूरभाष / Phone: 91-11-25074100/250741200
 फैक्स / Fax: 91-11-25032507 / 25032514

No.13030/09/2008-Vig. Dated : 28th January, 2013

Office Memorandum

Subj: Adoption of Integrity Pact (IP) for NHAI Projects-reg.

In suppression of OM No. NHAI/CMC/IP/IEM/2011-12 dated 13.08.2012 and OM of NHAI/CMC/IP/IEM/2011-12 dated 14.08.2012, it has been decided to implement the concept of Integrity Pact in NHAI projects. The Integrity Pact (IP) envisages an agreement between the prospective bidder and the buyers committing the persons/officials of both the parties, not to exercise any corrupt influence on any aspect of the contract. The IP also envisages empanelment of Independent External Monitors (IEM). The IEM may review independently and objectively whether and to what extent parties have complied with their obligations under the pact.

2. NHAI is going to appoint IEM shortly for implementation of the IP in NHAI. MoRT&H vide its letter no. C-13030/8/2009-Vig. dated 18.11.2011 has approved applicability of adoption of IP in NHAI works as mentioned below:

- (i) Civil Works above Rs.100.00 crore
- (ii) Services such as consultancy, engineering etc. above Rs.5.00 crore

3. In this connection, all the officers of NHAI are hereby requested to implement and follow the concept of IP and adopt the same in all future projects of NHAI as scrupulously in works included in para.2 above as per Model Agreements (copy enclosed) for each category. This Model Agreement would be provided to the bidders at NIT/ Pre-bid /Technical bid stage, whichever applicable, with instruction to submit the same after signing it. Contractor/ concessionaire / consultant / bidder would be required to submit this duly signed agreement (signed by the same signatory competent/authorized to sign the relevant contract agreement) along with their Technical Bid/Tender Documents. The representative authorized to sign contract agreement, on behalf of NHAI, would sign the same while signing the contract so that this may be made a part of the contract document and binding for both the parties signing the contract.

4. It is clarified that IP should cover all phases of the contract, i.e. from the stage of Notice Inviting Tender (NIT) / pre-bid stage till the conclusion of the contract, i.e. the final payment or the duration of warranty / guarantee / defect liability / concession period, whichever applicable. The IEM would be, invariably, cited in the NIT. Further, information relating to tender in progress and under finalization would need to be shared with IEM on monthly basis.

contd.2.


5. After implementation of Integrity Pact, NHAI has to send progress/status in the implementation of IP enabling CVC to include the same in their annual report as prescribed in the CVC circular no. 10/5/09 dated 18.05.2009 and subsequent circular no.31/08/10 dated 13.08.2010 (copies enclosed). Further, an internal assessment of the impact of IP shall be carried out periodically by the CVO and reported to the CVC through their report or special report, wherever necessary. In view of this, status of implementation of IP would be reported by all divisions to CVO on monthly basis.

6. All the Divisions engaged in purchase/procurement shall ensure strict compliance of this.

This issues with the approval of Chairman, NHAI.

- Encl: (1) Model Agreement for category (i) works
(2) Model Agreement for category (ii) works
(3) CVC's Circular no. 10/5/09 dt. 18.05.09
(4) CVC's Circular no.31/08/10 dt.13.08.10

To


(B.N.Sahay)
General Manager (CMC)

1. All PIUs/CMUs
2. All ROs
3. All CGMs at HQ
4. All GMs at HQ
5. CVO, NHAI

Copy for information to:

1. PS to Chairman
2. All PS to Members

b) INTEGRITY PACT FORMAT

(To be executed on plain paper and submitted along with Technical Bid. To be signed by the bidder and same signatory competent/ authorized to sign the relevant contract on behalf of IHMCL)

RFP No. IHMCL/MLFF DWE/2024/XX dated XX/XX/2024

This Integrity Pact is made at _____ on this _____ day of _____ 2024
between

Indian Highways Management Company Limited (IHMCL), incorporated under Companies Act 1956, having its office at G-5 & 6, Sector – 10, Dwarka, New Delhi, hereinafter referred to as “**The Principal**”, which expressions shall unless repugnant to the meaning or context thereof include its successors and permitted assigns.

And

_____, hereinafter referred to as “**The Bidder**” and which expression shall unless repugnant to the meaning or context thereof include its successors and permitted assigns.

Preamble

Whereas, the Principal intends to award, under laid down organizational procedure's contract/s for The principal values full Compliance with all relevant laws of the land, rules of land, regulations, economic use of resources and of fairness/ transparency in its relations with its Bidder(s)/ Bidder(s).

And whereas to meet the purpose aforesaid, both the parties have agreed to enter this Integrity Pact (hereafter referred to as Integrity Pact) the terms and conditions of which shall also be read as integral part and parcel of the Tender documents and contract between the parties. Now, therefore, in consideration of mutual covenants stipulated in this pact, the parties hereby agree as follows and this pact witnessed as under:

Article 1- Commitments of the Principal

- (1) The principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:
 - (a) No employee of the principal, personally or through family members, will in connection with the tender for or the execution of a contract, demand, take a promise for or except for self or third person any material or immaterial benefit which the person is not legally entitled to.
 - (b) The principal will during the tender process treat all bidder(s) with equity and reason. The principal will in particular before and during the tender process provide to all bidder(s) the same information and will not provide to any bidder(s) confidential/ additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
 - (c) The principal will exclude all known prejudiced persons from the process, whose conduct in the past has been of biased nature.
- (2) If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the IPC/PC Act or any other Statutory Acts or if there be a substantive suspicion in this regard, the principal will inform the Chief Vigilance Officer and in addition can initiate disciplinary actions as per its internal laid down Rules/ Regulations.

Article 2- Commitments of the Bidder(s)

The bidder(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.

- (a) The bidder(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal's employees involved in the tender process or the execution of the contract or to

- any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.
- (b) The bidder(s) will not enter with other bidders into any undisclosed agreement or understanding, whether formal or informal. This applies to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
 - (c) The bidder(s) will not commit any offence under the relevant IPC/ PC Act and other Statutory Acts; further the bidder(s)/ Contractor(s) will not use improperly, for purposes of completion or personal gain, or pass on to others, any information or document provided by the principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
 - (d) The bidder(s) of foreign origin shall disclose the name and address of the Agents/ representatives in India, if any. Similarly, the Bidder(s) of Indian Nationality shall furnish the name and address of the foreign principle, if any.
 - (e) The bidder(s) will, when presenting his bid, disclose all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract. He shall also disclose the details of services agreed upon for such payments.
 - (f) The bidder(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.
 - (g) The bidder(s) will not bring any outside influence through any Govt. bodies/ quarters directly or indirectly on the bidding process in furtherance of his bid.

Article 3- Disqualification from tender process and exclusion from future contracts

- a) If the bidder(s) before award or during execution has committed a transgression through a violation of any provision of Article-2, above or in any other form such as to put his reliability or credibility in question, the principal is entitled to disqualify the Bidder(s) from the tender process.
- b) If the bidder(s) have committed a transgression through a violation of Article-2 such as to put his reliability or credibility into question, the principal shall be entitled to exclude including blacklist and put on holiday the bidder(s) for any future tender/ contract award process. The imposition and duration of the exclusion will be determined by the severity of the transgression. The severity will be determined by the principal taking into consideration the full facts and circumstances of each case particularly considering the number of transgressions, the position of the transgressors within the company hierarchy of the bidder(s) and the amount of the damage. The exclusion will be imposed for a minimum of 1 year.
- c) A transgression is considered to have occurred if the principal after due consideration of the available evidence concludes that "On the basis of facts available there are no material doubts".
- d) The bidder(s) with its free consent and without any influence agrees and undertakes to respect and uphold the principal's absolute rights to resort to and impose such exclusion and further accepts and undertakes not to challenge or question such exclusion on any ground, including lack of any hearing before the decision to resort to such exclusion is taken. This undertaking is given freely and after obtaining independent legal advice.
- e) The decision of the principal to the effect that a breach of the provisions of this Integrity Pact has been committed by the bidder shall be final and binding on the bidder.
- f) On concurrence of any sanctions/ disqualification etc. arising out from violation of integrity pact the Bidder shall not be entitled for any compensation on this account.
- g) Subject to full satisfaction of the principal, the exclusion of the bidder could be revoked by the principal if the bidder can prove that he has restored/ recouped the damage caused by him and has installed a suitable corruption prevention system in his organization.

Article 4- Compensation for Damages

- a) If the Principal has disqualified the bidder(s) from the tender process prior to the award according to Article 3, the principal shall be entitled to invoke the bid securing declaration apart from any other legal right that may have accrued to the principal.
- b) In addition to 1 above, the principal shall be entitled to take recourse to the relevant provisions of the contract related to Termination of Contract. In such case, the principal shall be entitled to forfeit the Performance Bank Guarantee of the bidder and/or demand and recover liquidated and

all damages as per the provisions of the Contract Agreement against Termination.

Article 5 - Previous Transgressions

- a) The bidder declares that no previous transgressions occurred in the last 3 years immediately before signing of this Integrity Pact with any other Company in any country conforming to the anti-corruption/ Transparency International (TI) approach or with any other Public Sector Enterprise/ Undertaking in India or any Government Department in India that could justify his exclusion from the tender process.
- b) If the bidder makes incorrect statement on this subject, he can be disqualified from the tender process or action for his exclusion can be taken as mentioned under Article-3 above for transgressions of Article-2 and shall be liable for compensation for damages as per Article-4 above.

Article 6 - Equal treatment of all Bids(s)

- a) The Bidder(s) undertake(s) to demand from all sub- contractor(s) a commitment in conformity with this Integrity Pact, and to submit it to the principal before contract signing.
- b) The principal will enter into agreements with identical conditions as this one with all Bidder(s).
- c) The principal will disqualify from the tender process all Bidders who do not sign this Pact or violate its provisions.

Article 7 - Criminal charges against violating Bidder (s)

If the Principal obtains knowledge of conduct of a Bidder or Sub-contractor (SI), or of an employee or a representative or an associate of a Bidder or Sub-contractor (SI), which constitutes corruption, or if the principal has substantive suspicion in this regard, the principal will inform the same to the Chief Vigilance Officer.

Article 8 - Pact Duration

This Pact begins when both parties have legally signed it. It expires for the Bidder 12 months after his Defect Liability Period is over or 12 months after his last payment under the contract whichever is later and for all other *unsuccessful* Bidders 6 months after the Contract has been awarded.

If any claim is made/ lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/ determined by Chairman of IHMCL.

Article 9 - Other Provisions

- a) This Pact is subject to Indian Law Place of performance and jurisdiction is the Registered Office of the Principal i.e., New Delhi.
- b) Changes and supplements as well as termination notices need to be made in writing.
- c) Should one or several provisions of this Agreement turn out to be invalid, the remainder of this Agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- d) Any disputes/ differences arising between the parties about term of this Pact, any action taken by the principal in accordance with this Pact or any relation thereof shall not be subject to any Arbitration.
- e) The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceedings.

In witness whereof the parties have signed and executed this Pact at the place and date first donementioned in the presence of following witnesses:

[For & On behalf of the (Principal)]

(Office Seal)

[For & On behalf of the Bidder/
Concessionaire/ Consultant]



Place:

Date: _____

Witness 1:
(Name & Address)

Witness 2:
(Name & Address)



PART-II

FORMAT FOR BID SUBMISSION



Form T-1 Technical Bid Covering Letter

(To be prepared on letterhead of the Bidder, scanned & uploaded on E-tender portal)

To,

Chief Operating Officer,
Indian Highways Management Company Limited,
G 5&6, Sector-10, Dwarka,
New Delhi – 110075

Sub.: RFP for Selection of Acquirer Bank for Multi Lane Free Flow (MLFF) based Toll collection at Dwarka Expressway.

Ref: RFP No..... on above subject.

Dear Sir,

1. I/We, the undersigned, have carefully examined the contents of the above referred RFP document including amendments/ addendums (if any) thereof and we undertake to fully comply and abide by the terms and conditions specified therein and hereby submit our Bid for the aforesaid service. Our bid for the subject RFP is unconditional and unqualified.
2. I/We offer to execute the work in accordance with the Scope of work and the Conditions of Contract of this RFP both explicit and implied.
3. I/We undertake that, in competing for (and, if the award is made to us), for executing the above contract, we will strictly observe the laws against fraud and corruption in force in India namely "Prevention of Corruption Act 1988".
4. I/We understand that:
 - i. This bid, if found incomplete in any respect and/ or if found with conditional compliance or not accompanied with the requisite Bid Securing Declaration, shall be summarily rejected.
 - ii. If at any time, any averments made or information furnished as part of this bid is found incorrect, then the bid will be rejected and the contract if awarded based on such information shall be cancelled.
 - iii. IHMCL is not bound to accept any/ all Bid(s) it will receive.
 - iv. Until a contract is executed, this bids together with RFP Document as well as the subsequent corrigendum, notification of the Letter of Award issued by IHMCL shall constitute a binding Contract between us.
5. I/We declare that:
 - i. I/we have no proceeding for insolvency/bankruptcy in NCLT / Court as on Bid Due Date.
 - ii. I/We have not been blacklisted/ *declared ineligible* by IHMCL or National Highways Authority of India (NHAI) or Ministry of Road Transport & Highways, Government of India or any other agency as on Bid Due date. I/We also confirm that I/We have not been *declared as non-performing or debarred* by IHMCL or NHAI or Ministry of Road Transport & Highways, Government of India as on Bid Due Date.
 - iii. I/We *haven't been blacklisted* by a Central/ State Government Institution/ Public Sector Undertaking/ Autonomous body and there has been *no litigation* with any Government Department/ PSU/ Autonomous body on account of similar services as on Bid Due Date.
 - iv. I/We have *not* directly or indirectly or through an agent engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice,

as defined in the Contract Agreement, in respect of any tender or request for proposal issued by or any Contract entered into with IHMCL or any other public sector enterprise or any government, Central or State; and I/We hereby certify that we have taken steps to ensure that in conformity with the provisions of the RFP document, no person acting for us or on our behalf has engaged or will engage in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice.

6. I/We have not directly or indirectly or through an agent engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice, as defined in the Contract Agreement, in respect of any.
7. In the event of my / our bid being declared as successful bid, I/we agree to enter into a Contract Agreement in accordance with the format of the Contract Agreement. I/We agree not to seek any change in the aforesaid format of the Contract Agreement and agree to abide by the same.
8. I/We certify that:
 - i. I/We have not been convicted by a Court of Law or indicted or adverse orders passed by a regulatory authority which could cast a doubt on our ability to undertake the subject work or which relates to a grave offence that outrages the moral sense of the community.
 - ii. Neither the bidder nor any of its directors are the subject of criminal or civil proceedings that could be expected to adversely affect its business or its ability to bid in the present tender.
 - iii. No investigation by a regulatory authority is pending either against us or against our CEO or any of our directors/ managers/ employees.
 - iv. I / We don't have any conflict of interest in terms of Clause 3.1 of eligibility criteria defined in this RFP document.
 - v. The information provided in this technical bid (including the attachments) as well as the financial bid is true, accurate and complete to the best of my knowledge and belief. Nothing has been omitted which renders such information misleading; and all documents accompanying my/our bid are true copies of their respective originals. I/We shall be liable for disqualification or termination of contract at any stage, if any information/ declaration is found to be incorrect or false. I/We will intimate IHMCL promptly in case of any change in the information submitted as part of this technical bid.
 - vi. I/We offer the cost of the RFP document and bid Security in accordance with the RFP document as per the details furnished below:

#	Reference No.	Date	Amount (Rs.)	Issuing Bank / Branch
Tender Fee				
Bid Security				

9. The documents in original accompanying the bid document have been submitted in a separate envelope as envisaged in the RFP document and marked appropriately.
10. I am the Director / Authorized Signatory of the aforesaid company / firm, and I am authorized to sign this bid on behalf of the firm / company. I am submitting this bid after carefully reading all the terms and conditions contained in the RFP document and its addendum/ amendment, if any, and undertake to abide by the same. It is also certified that the bid is being submitted in the prescribed formats without any addition / deviation / alteration and our bid is unconditional.

Yours Sincerely,

Name

Designation/ Title of the Authorized Signatory.....

Form T-2: Brief Information about the Bidder(s)

(To be prepared on letterhead of the Bidder, scanned & uploaded on E-tender portal)

To,

Chief Operating Officer,
Indian Highways Management Company Limited,
G 5&6, Sector-10, Dwarka,
New Delhi – 110075

Sub.: RFP for Selection of Acquirer Bank for Multi Lane Free Flow (MLFF) based Toll collection at Dwarka Expressway

Ref: RFP No. on above subject.

1)

- a) Name of Bidder:
- b) Year of establishment:
- c) Constitution of the bidder entity e.g., Government enterprise, private limited company, limited company, proprietorship / partnership firm etc.
- d) In case of a government enterprise, please indicate as to whether legally and financially autonomous and operate under commercial law.
- e) Name(s) of Directors/ Proprietors/ Partners Yes/ No/ Not applicable
.....
.....
.....

2) Address for correspondence with Telephone/ Fax numbers/ e-mail address:

- (a) Complete postal address:
- (b) Fixed telephone number
- (c) Mobile telephone number
- (d) E-mail address

3) Name & Address of the Acquirer bank:

- (a) Bank A/c Number
- (b) Branch Address
- (c) IFSC /MICR Code:

4) Name of the Statutory Auditor/ Company Secretary/ Chartered Accountant certifying the documents along with his/ her Membership number, if applicable:

Name
Designation of the Authorized Signatory

Form T-3 Power of Attorney/Letter of Authorization (as relevant)

(On non-judicial Stamp Paper of appropriate denomination)

Know all men by these presents, we, (Name of Company and address of the registered office) do hereby constitute, nominate, appoint and authorize Mr. / Ms. son/daughter/wife

of..... and presently residing at....., who is presently employed with us and holding the position of as our true and lawful attorney (hereinafter referred to as the "Authorized Signatory or Attorney") to do in our name and on our behalf, all such acts, deeds and things as are necessary or required in connection with or incidental to submission of our Bid for selection as the Bidder for "RFP for Selection of Acquirer Bank for Multi Lane Free Flow (MLFF) based Toll collection at Dwarka Expressway" proposed by Indian Highways Management Company Limited, including but not limited to signing and submission of all applications, bid(s) and other documents and writings, and providing information/ responses to IHMCL, representing us in all matters before IHMCL, signing and execution of all contracts and undertakings consequent to acceptance of our bid and generally dealing with IHMCL in all matters in connection with or relating to or arising out of our Bid for the said Tender and/or upon award thereof to us.

AND, we do hereby agree to ratify and confirm all acts, deeds and things lawfully done or caused to be done by our said Authorized Signatory or Attorney pursuant to and in exercise of the powers conferred by this Power of Attorney and that all acts, deeds and things done by our said Authorized Representative/ Attorney in exercise of the powers hereby conferred shall and shall always be deemed to have been done by us.

IN WITNESS WHEREOF WE, THE ABOVE-NAMED PRINCIPAL HAVE EXECUTED THIS POWER OF ATTORNEY ON THIS DAY OF, 2024

For

(Signature, name, designation, and address)

Witnesses:

1.

2.

Notarised

Accepted

.....
(Signature, name, designation, and address of the Attorney)

Notes:

- a. 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. **The Power of Attorney should be executed on a non-judicial stamp paper of appropriate denomination and should be duly notarised by a notary public.**
- b. Wherever required, the bidder should submit for verification the extract of the charter documents and other 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.

- c. For a Power of Attorney executed and issued overseas, the document will also have to be legalised by the Indian Embassy and notarised in the jurisdiction where the Power of Attorney is being issued. However, bidders from countries that have signed the Hague Legislation Convention 1961 need not get their Power of Attorney legalised by the Indian Embassy if it carries a conforming Apostles certificate.



Form T-4 Format of Submission of Work Experience/Technical Strength of Sub-Contractor (SI) (On the Letter Head of Sub-Contractor – countersigned by Bidder)

To,

Chief Operating Officer,
Indian Highways Management Company Limited,
G 5&6, Sector-10, Dwarka,
New Delhi – 110075

Sub.: RFP for Selection of Acquirer Bank for Multi Lane Free Flow (MLFF) based Toll collection at Dwarka Expressway.

Ref: RFP No. on above subject.

Client Details Client Name: Address: Name of Contact Person: Contact No. Contact E-mail ID. <div style="text-align: right;">(Official e-mail ID)</div>		Name of Work / Project ⁴ Location: Approximate Value of Work / Project (INR)- (Equivalent in INR as per current Exchange rates)
Start Date		Present Status of Project (as per the Bidders mandate)
Completion Date		
Present Status		
Length of Project where MLFF solution is implemented (in Km)		
Application Users		
Name of Persons Deployed (Key Persons only)		
Detailed features of Project Executed:		

Name

Designation/ Title of the Authorized Signatory.....

Bidder Signature

Dated: //2024

Note: Bidder should submit relevant details of each project in this format and should enclose:

- i) Go-live / acceptance / completion Certificate issued by the customer; and
- ii) Work Order / Purchase order / Copy of contract / Letter of Award highlighting detailed scope of project implemented within the last 5 financial years prior to the Bid due date as proof for the same.

Form T-5 Undertaking from the Bidder

To,

Chief Operating Officer,
Indian Highways Management Company Limited,
G 5&6, Sector-10, Dwarka,
New Delhi – 110075

Sub.: RFP for Selection of Acquirer Bank for Multi Lane Free Flow (MLFF) based Toll collection at Dwarka Expressway.

Ref: RFP No. on above subject.

Dear Sir,

I/we undertake the following:

- 1) That the OEM is having direct presence in India since **last three years** as on Bid due date and own service and support offices to ensure smooth after sales service support on site.
- 2) That the proposed OEM(s) fully comply with the Office Memorandum no. F. No. NH-35014/20/2020-H, Government of India, Ministry of Road Transport & Highways dated 04.08.2020, regarding Department of Expenditure (DoE), Ministry of Finance, Govt. of India O.M. No. 6/18/2019-PPD dated 23.07.2020, vide which Rule 144 of the general Financial Rules 2017 entitled "Fundamental principles of public buying" has been amended by inserting sub-rule 144 (xi) in the General Financial Rules (GFRs), 2017 which states that:
 - a. Any bidder from a country which shares a land border with India will be eligible to bid in any procurement whether of goods, services (including consultancy services and non-consultancy services) or works (including turnkey projects) only if the bidder is registered with the Competent Authority." This condition shall also be applicable on sub-contracting of any works / goods / services, etc. The Bidder shall furnish the registration status of the sub-contractor (SI)/ supplier with Competent Authority (for the items / goods proposed to be procured from any country which shares a land border with India).
- 3) That the OEM(s) should not be rebranding & reselling products in India through importing/ trading from a country that shares a Land Border with India.
- 4) That the source code of the Software and Firmware being supplied for all the relevant equipment being supplied against this bid does not reside in any Country that shares a Land Border with India.
- 5) That the OEM(s) for all active components will give a declaration that products or technology quoted are neither end-of-sale nor end-of-life as on the date of installation and commissioning and are not end-of-support till the successful completion of O&M period of the project.
- 6) That the proposed OEM is not blacklisted by any State / Central Government Department or Central /State PSUs as on bid submission date.
- 7) That each of the proposed OEM(s) has existing capability and infrastructure to provide 24x7x365 technical support in India.
- 8) Adequate supporting documents pertaining to the above points, along with a summary compliance table, should be submitted in the technical proposal (Form T-6) by the Bidder.

(Name and Signature of the Power of Attorney Holder)

Form T-6 Submission of Detailed Methodology and Work Plan

To,

Chief Operating Officer,
Indian Highways Management Company Limited,
G 5&6, Sector-10, Dwarka,
New Delhi – 110075

Sub.: RFP for Selection of Acquirer Bank for Multi Lane Free Flow (MLFF) based Toll collection at Dwarka Expressway.

Ref: RFP No. on above subject.

NOTE:

- i. Submission under this item is subject to evaluation under technical bid, while giving information, the bidders are advised to strictly focus and address the topic/sub-topic as asked for in a structured manner. Any superfluous submission shall be at bidders' risk.
- ii. IHMCL/IHMCL's Representative may seek clarification on any of the submission made by the bidder in form T-6. Any superfluous submission or inconsistent clarification with respect to site condition, is liable to make the bid non-responsive.

Dated: /.... /2024

- i. System design document for field systems with a List of items with quantity and location of equipment:

.....

.....

.....

.....

S.No.	Equipment	Chainage (Km.)	LHS/RHS
1.	
2.	
3.	
Total Quantity			

- ii. Control Center Hardware design document with a list of items with quantity Software architecture & components

.....

.....

- iii. Methodology of implementation:

.....

.....

- iv. Equipment Delivery Schedule and Time schedule to complete the entire work supported with bar chart, including the civil works for MLFF:

.....

.....

- v. Make, model, specs, and Brochure of all major components (hardware & software) *:
.....
.....
- vi. Any other aspects the Bidder may wish to add:
.....
.....
- vii. System Design (Hardware and Software) proposed.
.....
.....
- viii. Design of MLFF System.
.....
.....
- ix. Total manpower being proposed as per design by designation.
.....
.....

*Any equipment/hardware not conforming to OEM criteria given in RFP shall make the bid liable to be rejected.

(Name and Signature of the Bidder)



Form T-7 Proforma for submitting written queries.

(To be submitted in doc/editable format only at the given email address⁵)

To,

Chief Operating Officer,
Indian Highways Management Company Limited,
G 5&6, Sector-10, Dwarka,
New Delhi – 110075

Sub.: RFP for Selection of Acquirer Bank for Multi Lane Free Flow (MLFF) based Toll collection at Dwarka Expressway.

Ref: RFP No. on above subject.

Dated: /.... /2024

Name of Company: _____,
Name of Person _____
Contact No. _____,
Email Id: _____

Sr.No.	Page no. of RFP	Clause	RFP Statement	Query	Remarks

Form T-8 Bank Guarantee for Bid Security

(Refer Clauses 1.2 of General Terms of Bidding in Section -I of RFP)

B.G.No.

Dated:

1. In consideration of you, ****, having its office at **** (hereinafter referred to as the “Authority”, 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 and having its registered office at (and acting on behalf of its JV) (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 RFP for Selection of Acquirer Bank for Multi Lane Free Flow (MLFF) based Toll collection at Dwarka Expressway (hereinafter referred to as “the Project”) pursuant to the RFP Document dated issued in respect of the Project and other related documents, including without limitation the draft contract Agreement (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 2.2 read with Clause 2.3 of the RFP Document, irrevocably, unconditionally, and without reservation guarantee the due and faithful fulfilment 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 the Authority an amount of Rs. **** (Rupees **** only) (hereinafter referred to as the “Guarantee”) 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 the Authority 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 the Authority is disputed by the Bidder or not, merely on the first demand from the Authority stating that the amount claimed is due to the Authority by reason of the 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 set forth in the said Bidding Documents for any reason whatsoever. Any such demand made on the Bank shall be conclusive as regards the 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 *** ** only).
4. This Guarantee shall be irrevocable and remain in full force for a period of 180 (one hundred and 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 the Authority 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 the Authority 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 the Authority that the Bidder is in default as aforesaid shall be final and binding on us, notwithstanding any differences between the Authority 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. To give full effect to this Guarantee, the Authority shall be entitled to treat the Bank as the principal debtor. The Authority 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 the time for the submission of the BIDs or the BID validity period or the period for conveying acceptance of the Letter of Award by the Bidder or the period for fulfilment 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 the Authority, and the Bank shall not be released from its liability under these presents by any exercise by the Authority 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 the Authority or any indulgence by the Authority to the said Bidder or by any change in the constitution of the Authority 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, which shall be deemed to have been duly authorized to receive the said notice of claim.
10. It shall not be necessary for the Authority 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 the Authority 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 unrealized.
11. We, the Bank, further undertake not to revoke this Guarantee during its currency except with the previous express consent of the Authority in writing.
12. The Bank declares that it has power to issue this Guarantee and discharge the obligations contemplated herein; the undersigned is duly authorized and has full power to execute this Guarantee for and on behalf of the Bank.
13. For the avoidance of doubt, the Bank's liability under this Guarantee shall be restricted to Rs. *** crore (Rupees ***** crore only). The Bank shall be liable to pay the said amount or any part thereof only if the Authority serves a written claim on the Bank in accordance with paragraph 9 hereof, or before [*** (indicated date falling 180 days after the BID Due Date)].

14. This guarantee shall also be operatable at our Branch, New Delhi from whom, confirmation regarding the issue of this guarantee or extension / renewal thereof shall be made available on demand. In the contingency of this guarantee being invoked and payment thereunder claimed, the said branch shall accept such invocation letter and make payment of amounts so demanded under the said invocation.
15. The guarantor/bank hereby confirms that it is on the SFMS (Structural Finance Messaging System) platform & shall invariably send an advice of this Bank Guarantee to the designated bank of [Ministry/IHMCL/NHIDCL/State PWD/BRO], details of which is as under:

#	Particulars	Details
1.	Name of Beneficiary	Indian Highways Management Company Limited
2.	Name of Bank	Canara Bank
3.	Account No.	8598201006217
4.	IFSC	CNRB0008598

Signed and Delivered by Bank

By the hand of Mr. /Ms....., itsand authorized official.

(Signature of the Authorized Signatory)
(Official-Seal)

Form T-9 Format of Bank Guarantee**Performance Security/Additional Performance Security]**

To,

Chief Operating Officer,
Indian Highways Management Company Limited,
G 5&6, Sector-10, Dwarka,
New Delhi – 110075

Sub.: RFP for Selection of Acquirer Bank for Multi Lane Free Flow (MLFF) based Toll collection at Dwarka Expressway.

Ref: RFP No. on above subject.

WHEREAS:

- (A) [name and address of Bidder] (hereinafter called the “**Bidder**”) and Indian Highways Management Company Limited, G-5 & 6, Sector 10, Dwarka, New Delhi - 110075, (hereinafter called the “**Authority**”) have entered into an agreement (hereinafter called the “**Agreement**”) for “RFP for Selection of Acquirer Bank for Multi Lane Free Flow (MLFF) based Toll collection at Dwarka Expressway” subject to and in accordance with the provisions of the Agreement
- (B) The Agreement requires the Bidder to furnish a Performance Security for due and faithful performance of its obligations, under and in accordance with the Agreement, during the {Construction Period/ Defects Liability Period and Maintenance Period} (as defined in the Agreement) in a sum of Rs.... cr. (Rupees crore) (the “**Guarantee Amount**”).
- (C) We, through our branch at (the “**Bank**”) have agreed to furnish this bank guarantee (*hereinafter called the “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 Bidder’s obligations during the {Construction Period/ Defects Liability Period and Maintenance Period} under and in accordance with the Agreement, and agrees and undertakes to pay to the Authority, upon its mere first written demand, and without any demur, reservation, recourse, contest or protest, and without any reference to the Bidder, such sum or sums up to an aggregate sum of the Guarantee Amount as the Authority shall claim, without the 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 the Authority, under the hand of an officer not below the rank of General Manager in the Indian Highways Management Company Limited, that the Bidder 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 the Authority shall be the sole judge as to whether the Bidder is in default in due and faithful performance of its obligations during and under the Agreement and its decision that the Bidder is in default shall be final and binding on the Bank, notwithstanding any differences between the Authority and the Bidder, or any dispute between them pending before any court, tribunal, arbitrators or any other authority or body, or by the discharge of the Bidder for any reason whatsoever.
3. To give effect to this Guarantee, the Authority shall be entitled to act as if the Bank were the principal debtor and any change in the constitution of the Bidder 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 the Authority to proceed against the Bidder 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 Bidder contained in the Agreement or to postpone for any time, and from time to time, any of the rights and powers exercisable by the Authority against the Bidder, and either to enforce or forbear from enforcing any of the terms and conditions contained in the Agreement and/or the securities available to the Authority, and the Bank shall not be released from its liability and obligation under these presents by any exercise by the Authority of the liberty with reference to the matters aforesaid or by reason of time being given to the Bidder or any other forbearance, indulgence, act or omission on the part of the 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 the 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 Bidder under the Agreement.
7. Notwithstanding anything contained hereinbefore, the liability of the Bank under this Guarantee is restricted to the Guarantee Amount and this Guarantee will remain in force for the period specified in paragraph 8 below and unless a demand or claim in writing is made by the Authority on the Bank under 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 Guarantee shall cease to be in force and effect on ****\$. Unless a demand or claim under this Guarantee is made in writing before expiry of the Guarantee, the Bank shall be discharged from its liabilities hereunder.
9. The Bank undertakes not to revoke this Guarantee during its currency, except with the previous express consent of the 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 authorised 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 the 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 up to the date specified in paragraph 8 above or until it is released earlier by the Authority pursuant to the provisions of the Agreement.
12. This guarantee shall also be operatable at our..... Branch at New Delhi, from whom, confirmation regarding the issue of this guarantee or extension / renewal thereof shall be made available on demand. In the contingency of this guarantee being invoked and payment thereunder

\$ Insert date being 2 (two) years from the date of issuance of this Guarantee.

claimed, the said branch shall accept such invocation letter and make payment of amounts so demanded under the said invocation.

13. The guarantor/bank hereby confirms that it is on the SFMS (Structural Finance Messaging System) platform & shall invariably send an advice of this Bank Guarantee to the designated bank of IHMCL, details of which is as under:

S. No.	Particulars	Details
1.	Name of Beneficiary	Indian Highways Management Company Limited
2.	Name of Bank	Canara Bank
3.	Account No.	8598201006217
4.	IFSC Code	CNRB0008598

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

SIGNED, SEALED AND DELIVERED

For and on behalf of the Bank by: (Signature)

(Name)

(Designation)

(Code Number)

(Address)

NOTES:

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

Form T-10 Bid Securing Declaration Form

(To be submitted by Bidder on the Letter head)

To,

Chief Operating Officer,
Indian Highways Management Company Limited,
G 5&6, Sector-10, Dwarka,
New Delhi – 110075

Sub.: RFP for Selection of Acquirer Bank for Multi Lane Free Flow (MLFF) based Toll collection at Dwarka Expressway.

Ref: RFP No. on above subject.

I/We. The undersigned, declare that:

I/We understand that, according to your conditions, bids must be supported by a Bid Securing Declaration.

I/We accept that I/We may be disqualified from bidding for any contract with you for a period of one year from the date of notification if I am /We are in a breach of any obligation under the bid conditions, because I/We

- a) have withdrawn/modified/amended, impairs or derogates from the tender, my/our Bid during the period of bid validity specified in the form of Bid; or
- b) having been notified of the acceptance of our Bid by the purchaser during the period of bid validity.
 - i. fails or reuse to execute the contract, if required, or
 - ii. fail or refuse to furnish the Performance Security, in accordance with the Instructions to Bidders.
- c) I/We understand this Bid Securing Declaration shall cease to be valid if I am/we are not the successful Bidder, upon the earlier of
 - i. the receipt of your notification of the name of the successful Bidder; or
 - ii. thirty days after the expiration of the validity of my/our Bid.

Signed: (insert signature of person whose name and capacity are shown) in the capacity of (insert legal capacity of person signing the Bid Securing Declaration)

Name: (insert complete name of person signing the Bid Securing Declaration)

Duly authorized to sign the bid for an on behalf of (insert complete name of Bidder)

Dated on _____ day of _____ (insert date of signing)

Form T-11 Undertaking for Compliance

To,

Chief Operating Officer,
Indian Highways Management Company Limited,
G 5&6, Sector-10, Dwarka,
New Delhi – 110075

**Sub.: RFP for Selection of Acquirer Bank for Multi Lane Free Flow (MLFF) based Toll collection
at Dwarka Expressway.**

Ref: RFP No. on above subject.

Name of the Bidder:

S. No.	Equipment Name	OEM Name* Proposed by Bidder
1.	ANPR Cameras	
2.	RFID Reader & Antenna	
3.	Detector-Lidar or Radar	
4.	And other Equipment (As per Indicative BoQ)	

* The Bidder shall mention name of all the OEM(s) being proposed for the concerned equipment.

We undertake that the minimum specifications of the equipment mentioned in the RFP shall be provided by the above OEM(s) proposed by us in our MLFF solution to meet the functional requirements mentioned in the RFP.

Bidder Name:

Name of Person Holding Power of Attorney:

Signature:

Date: ...

Form-T:12 Format for the declaration of non-Blacklisting**DECLARATION – Non-Blacklisting**
(By Authorized signatory on company letter head)

To,

Chief Operating Officer,
Indian Highways Management Company Limited,
G 5&6, Sector-10, Dwarka,
New Delhi – 110075**Sub.: RFP for Selection of Acquirer Bank for Multi Lane Free Flow (MLFF) based Toll collection at Dwarka Expressway.**

Ref: RFP No. on above subject.

I /We hereby declare that _____, as on the date of bid submission, has not been blacklisted or debarred in the last three years for the work performed by it and is not under blacklisting period /active debarred list by _____ or any of the Central or State Government Organization / Public Sector Undertaking / Autonomous Body in India or abroad .

Signed: (insert signature of person whose name and capacity are shown)

Name: (insert complete name of person signing the Bid Securing Declaration)

Duly authorized to sign the bid for an on behalf of (insert complete name of Bidder)

Dated on _____ day of _____ (insert date of signing)

Form-T:13 Letter of Authorization from Sub-Contractor (SI)

To,

Chief Operating Officer,
Indian Highways Management Company Limited,
G 5&6, Sector-10, Dwarka,
New Delhi – 110075

Sub.: RFP for Selection of Acquirer Bank for Multi Lane Free Flow (MLFF) based Toll collection at Dwarka Expressway.

Ref: RFP No. on above subject.

I/we undertake the following:

- 1) I/We undertake that we are firm operating in the field of Design and Development of MLFF services for at least five (2) years as on bid due date (Supporting Documents enclosed).
- 2) I/We undertake that we have deployed our own MLFF integrated software which is integrated with the subsystems and the same is in operation since last two year from bid due date. All IPR, source code etc. of the MLFF software are owned by the SI Documentary evidence shall be submitted along with the bid confirming the ownership and the operational period of more than one year. For operational period confirmation, a certificate from authorized signatory of their client may be submitted with a brief write-up on their MLFF application.
- 3) Adequate supporting documents pertaining to the above points, along with a summary compliance table, should be submitted in the technical proposal (Form T-6) by the Bidder.

(Signature of the Power of Attorney Holder)

Form F-1: Format for Financial Bid Submission

(For sample only, actual Format to be downloaded from e-tender portal for on-line submission)

To,

Chief Operating Officer,
Indian Highways Management Company Limited,
G 5&6, Sector-10, Dwarka,
New Delhi – 110075

Sub.: RFP for Selection of Acquirer Bank for Multi Lane Free Flow (MLFF) based Toll collection at Dwarka Expressway.

Ref: RFP No. on above subject.

Name of the Bidding Entity:

Registered Address:

#	Bidding Entity Name	Revenue Share on Toll able traffic (in %)

*The PMF (Program management fee) for acquirer bank services shall be paid additionally as per NETC program guidelines as amended time to time.

Authorized Signatory Signature:

Name: ...

Designation: ...

Bidder's Name: ...

Address: ...

Email and Phone: ...

No financials should be a part of technical bid. If any form of financial bid/indication is mentioned in the technical bid, IHMCL shall summarily reject the bid.

Form F-2: Format for Equipment Cost

#	Minimum BoQ	Unit Rate	Qty	Total Price
A	Lane Equipment			
1.	RFID Antenna			
2.	RFID Reader			
3.	Detector -Radar			
4.	Detector – LiDAR			
5.	ANPR Camera			
6.	Audit Surveillance Camera			
7.	IR Illuminator			
8.	Edge Level switch			
9.	Switch (Layer 3) – 24 Port			
10.	Any additional Component			
B	Control Center Equipment			
1.	MLFF Local Server			
2.	Workstation with Display 27"			
3.	Storage (minimum 125 TB)			
4.	Server Rack (27U)			
C	Software			
1.	Multi Lane Free Flow Software for per lanes and Portal with Dashboard			
2.	ANPR Application Per Channel			
3.	Video Management Software/AI Base License			
4.	Detector -Radar applications			
5.	Detector -LiDAR applications			

6.	RFID Reader and Antenna Application			
7.	Enterprise Management Software (EMS)			
Grand Total				

Note:

1. Bidders must fill in the quantities and unit rates for the equipment/services/software, etc., as specified above to meet the functional requirements outlined in Schedule B, adhering to the standards and specifications in Schedule C. Any variations in quantities or omitted items will not result in additional payments or changes to the scope.
2. The Grand Total in Form F-2 must not exceed the Estimated Amount of ₹5 crore. If the Grand Total in Form F-2 exceeds ₹5 crore, the depreciated cost will be calculated based on the ceiling limit of ₹5 crore, as per clause 1.2.33.2(ii)(b) of the RFP.
3. Form F-2 is solely for calculating the Depreciated Cost according to Clause 1.2.33 of the General Conditions of Contract in the RFP. The L-1 Bidder will be selected based on the quoted cost in Form F-1.
4. Line items not applicable to the bidder's proposed design may be left blank. The rates should include all statutory taxes/levies, excluding service tax/GST (as applicable). Updates should be made according to the reference RFP shared by IHMCL.

A large, faint, light blue semi-circular graphic serves as a background for the title. Inside this semi-circle is a stylized road with a green center line and white lane markings, receding into the distance. Below the semi-circle, the letters "IHMCL" are written in a large, light gray, sans-serif font.

PART-III

DRAFT FORM OF CONTRACT AGREEMENT

1.1. DRAFT CONTRACT AGREEMENT

No.

This Contract Agreement (hereinafter called the "Contract") is made on this _____ day of the month of _____, 2024.

BETWEEN

Indian Highways Management Company Limited (IHMCL), incorporated under Companies Act 1956, and having its head office at G 5 & 6, Sector 10, Dwarka, New Delhi-110075 (hereinafter referred to as the "IHMCL", which expression shall, unless repugnant to or inconsistent with the context, mean and include its successors and assigns) of the first part.

AND

M/s _____, an Acquirer Bank incorporated under the provisions of the (Hereinafter referred to as the "*Bidder/Bank*" which expression shall unless repugnant to or inconsistent with the context, mean and include its successors and assigns) of the OTHER PART.

WHEREAS

- a) the Bidder, in the ordinary course of its business, is engaged in providing similar services to their clients, and have represented to IHMCL through their bids, against RFP for the "RFP for Selection of Acquirer Bank for Multi Lane Free Flow (MLFF) based Toll collection at Dwarka Expressway" that they have the required experience, professional skills, personnel and technical resources to provide the required Services.
- b) on the basis of the said Tender, IHMCL has adjudged the Bidder as a Successful Bidder and issued Letter of Award (LoA) No. dated. __, 2024 for the same.
- c) the Bidder has agreed through their letter of acceptance No. dated to provide the said Services on the terms and conditions set forth in this Contract Agreement and has also submitted performance bank guarantee equivalent to (Rs.) such that it remains valid until one year beyond completion of the contract.

NOW THEREFORE, in consideration of the foregoing and the respective covenants and agreements set forth in this Contract Agreement, the receipt and sufficiency of which is hereby acknowledged, and intending to be legally bound hereby, the Parties hereby agree as follows:

1. The mutual rights and obligations of the Bidder and IHMCL shall be as set forth in this Contract Agreement, in particular:
 - i. The Bidder shall carry out the Services in accordance with the provisions of the Contract and Good Industry Practice; and
 - ii. IHMCL shall make payments to the Bidder in accordance with the provisions of the Contract.
2. The following schedules/ appendices shall be deemed to form and be read and construed as part of this Contract Agreement viz.

	General Conditions of Contract
Schedule A:	The Site
Schedule B:	The Proposed MLFF Facilities
Schedule C:	Standards & Technical Specifications
Appendices:	
Appendix A	Copy of Financial Bid of the Bidder
Appendix B	Letter of Award issued by IHMCL.
Appendix C	Letter of Acceptance submitted by the Bidder

Appendix D	Copy of the Performance Security submitted by the Bidder including copies of confirmation provided by the respective bank.
Appendix E	Copy of the Technical Bid and/or any subsequent correspondence of the Bidder/ IHMCL
Appendix F	Copy of RFP Document and subsequent amendment / addendum including Minutes of Pre-bid Meeting if any

IN WITNESS WHEREOF, the parties hereto have caused this Contract Agreement to be executed by their respective authorized representatives on the day and year first before written.

FOR AND ON BEHALF OF
(Indian Highways Management Company Limited)(Authorized Representative)
Name: _____ Designation _____
Indian Highways Management Company Limited
G-5&6, Sector – 10, Dwarka
New Delhi – 110075

FOR AND ON BEHALF OF
(M/s _____)
(Authorized Representative)
Name: _____
Designation: _____
M/s _____
Address: _____

In the presence of following witnesses:

Name: _____
Designation _____
Indian Highways Management Company Limited
G-5&6, Sector – 10, Dwarka
New Delhi – 110075

Name: _____
Designation: _____
M/s _____
Address: _____

Name: _____
Designation _____
Indian Highways Management Company Limited
G-5&6, Sector – 10, Dwarka
New Delhi – 110075

Name: _____
Designation: _____
M/s _____
Address: _____

1.2. GENERAL CONDITIONS OF CONTRACT

1.2.1. Definition

The words and expressions beginning with capital letters and defined in this Contract Agreement shall, unless the context otherwise requires, have the meaning ascribed thereto herein and the words and expressions defined in the Schedules and used therein shall have the meaning ascribed thereto in the Schedules annexed hereto. Words used in capitals and not defined herein but defined in the RFP shall have the meaning as ascribed thereto in the RFP.

Tollable Traffic means all vehicles for which User Fee is applicable under NH Fee (Determination of rates and Collection) Rules 2008 and its amendment from time to time. This does not include exempted vehicles.

1.2.2. Interpretation

1.2.2.1. In this Contract Agreement, unless the context otherwise requires,

- a) references to any legislation or any provision thereof shall include amendment or re-enactment or consolidation of such legislation or any provision thereof so far as such amendment or re-enactment or consolidation applies or can apply to any transaction entered hereunder.
- b) references to laws of India or Indian law or regulation having the force of law shall include the laws, acts, ordinances, rules, regulations, bye laws or notifications which have the force of law in the territory of India and as from time to time may be amended, modified, supplemented, extended or re-enacted.
- c) references to a **“person”** and words denoting a natural person shall be construed as a reference to any individual, firm, company, corporation, society, trust, government, state or agency of a state or any association or partnership (whether having separate legal personality) of two or more of the above and shall include successors and assigns.
- d) the table of contents, headings or sub-headings in this Contract Agreement are for convenience of reference only and shall not be used in, and shall not affect, the construction or interpretation of this Contract Agreement.
- e) the words **“include”** and **“including”** are to be construed, without limitation and shall be deemed to be followed by **“without limitation”** or **“but not limited to”** whether they are followed by such phrases.
- f) any reference to any period shall mean a reference to that according to Indian Standard Time.
- g) references to a (**“day”** or **“business day”**) shall be construed as a reference to all days of the year.
- h) any reference to month shall mean a reference to a calendar month as per the Gregorian calendar.
- i) references to any date, period or time shall mean and include such date, period or time as may be extended pursuant to this Contract Agreement.
- j) 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 and dates; provided that if the last day of any period computed under this Contract Agreement is not a business day, then the period shall run until the end of the next business day.

- k) the words importing singular shall include plural and vice versa.
- l) “**lakhs**” means a hundred thousand (100,000) and “**crore**” means ten million (10,000,000).
- m) references to the “**winding-up**”, “**dissolution**”, “**insolvency**”, or “**reorganization**” of a company or corporation shall be construed so as to include any equivalent or analogous proceedings under the law of the jurisdiction in which such company or corporation is incorporated or any jurisdiction in which such company or corporation carries on business including the seeking of liquidation, winding-up, reorganization, dissolution, arrangement, protection or relief of debtors.
- n) save and except as otherwise provided in this Contract Agreement, 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; provided that this Sub-clause shall not operate so as to increase liabilities or obligations of IHMCL hereunder or pursuant hereto in any manner whatsoever;
- o) any agreement, consent, approval, authorization, notice, communication, information or report required under or pursuant to this Contract Agreement from or by any Party shall be valid and effective only if it is in writing under the hand of a duly authorized representative of such Party, as the case may be, in this behalf and not otherwise.
- p) the Schedules and Recitals to this Contract Agreement form an integral part of this Contract Agreement and will be in full force and effect as though they were expressly set out in the body of this Contract Agreement.
- q) References to Recitals, Articles, Clauses, Sub-clauses or Schedules in this Contract Agreement shall, except where the context otherwise requires, mean references to Recitals, Articles, Clauses, Sub-clauses and Schedules of or to this Contract Agreement and references to a Paragraph shall, subject to any contrary indication, be construed as a reference to a Paragraph of this Contract Agreement or of the Schedule in which such reference appears; and
- r) the damages payable as set forth in this Contract Agreement, whether on per diem basis or otherwise, are mutually agreed genuine pre-estimated loss and damage likely to be suffered and incurred by the Party entitled to receive the same and are not by way of penalty (the “**Damages**”).
- s) “**Arbitration Act**” means the Arbitration and Conciliation Act, 1996 and shall include amendments, modifications to or any re-enactment thereof as in force from time to time.
- t) “**SYSTEM**” means “**MLFF based Tolling System.**”
- u) “**Effective Date**” shall mean date of this Contract Agreement.
- v) “**Uptime**” refers to the duration during which an MLFF equipment or system is actively functioning, operating, and ready to execute its intended tasks effectively, meeting the operational characteristics as defined in the RFP document, without encountering significant interruptions or failures.
- w) “**Downtime**” refers to the period during which MLFF equipment or system is either non-functional or not actively operating to execute its intended tasks effectively, thus failing to meet the operational characteristics outlined in the RFP document due to significant interruptions or failures.
- x) “**Bank**”, “**Bidder**”, “**Acquirer Bank**” and “**Service Provider**” mean the Successful Bidder who has executed the contract with IHMCL and has complied with other requirements as specified in this RFP to the satisfaction of IHMCL.

1.2.2.2. Any word or expression used in this Contract Agreement shall, unless otherwise defined or

construed in this Contract Agreement, bear its ordinary English meaning, and, for these purposes, the General Clauses Act 1897 shall not apply.

1.2.3. Definitions

The definitions mentioned in the RFP is referred from the Section under “Definitions” in the RFP.

1.2.4. Arithmetic conventions

All calculations should be rounded to two decimal places. If the third digit after the decimal point is 5 or higher, the same shall be rounded up. If the third digit is less than 5, the same shall be rounded down.

1.2.5. Priority of Agreements, Clauses, and Schedules

1.2.5.1. In case of inconsistency between the provisions of this Contract Agreement and the RFP, the terms of this Contract Agreement shall prevail to the extent of such inconsistency.

1.2.5.2. In case of ambiguities or discrepancies within this Contract Agreement, the following shall apply:

- (a) between two or more Clauses of this Contract Agreement, the provisions of a specific Clause relevant to the issue under consideration shall prevail over those in other Clauses.
- (b) between any two Schedules/Articles, the Schedule / Article relevant to the issue shall prevail.
- (c) between the written description on the drawings/design documents, if any, and the Specifications and Standards, the latter shall prevail; and
- (d) between any value written in numerals and that in words, the latter shall prevail.

1.2.6. Scope of project

Under this Agreement, the scope of the Project shall mean and include:

1. **Development of the MLFF** based tolling facility on the Site set forth in Schedule- A with the provision of Facilities as specified in Schedule-B in conformity with the Specifications and Standards set forth in Schedule-C
2. **Operations & maintenance** of the MLFF based Tolling System in accordance with the provisions of this Agreement and in conformity with the requirements set forth in Schedule-C; and
3. **Toll Collection** from MLFF system will be based on the total daily revenue collected at the toll plaza, after deducting the bank's share. The remaining amount will be submitted to IHMCL/NHAI. Detailed toll collection model is specified in Schedule B.
4. **Performance and fulfilment of obligation** of the Bidder in accordance with the provisions of this Agreement and matters incidental thereto or necessary for the performance of any or all the obligations of the Bidder under this Agreement.
5. **IHMCL intends to build a comprehensive portal** with dashboard functionality, wherein the system should enable users to view transactions, toll revenue collected, e-notices issued, and other toll plaza details in real-time. The portal should feature an intuitive interface for easy navigation and data visualization, ensuring users can quickly access and interpret key metrics. Additionally, the portal must be designed with scalability in mind, allowing for seamless integration of future advancements and technologies to enhance functionality and user experience. This will ensure the portal remains adaptable and capable of meeting evolving

needs and requirements.

6. **Cleanliness & Maintenance of Control Center**, Plaza Building, Toilets and surrounding areas
- The bidder is responsible for ensuring the cleanliness and maintenance of the Control Center, Plaza Building, toilets, and surrounding areas throughout the entire contract period. This includes regular cleaning schedules, waste management, and upkeep of hygiene standards. The bidder must employ adequate staff and resources to maintain these areas in pristine condition, ensuring that all facilities are always functional and presentable. Regular inspections should be conducted to identify and address any maintenance issues promptly. Additionally, the bidder must adhere to all relevant health and safety regulations, providing a clean and safe environment for all users.

1.2.7. Relationship between the Parties

Nothing contained herein shall be construed as establishing a relationship of master and servant or of principal and agent between IHMCL and the Bidder. The Bidder, subject to this Contract Agreement, has complete charge of Personnel performing the Services and shall be fully responsible for the Services performed by them or on their behalf hereunder. The Bidder shall alone be responsible for the remuneration and statutory compliance with respect to its employees, Bidder's, or representatives. IHMCL has no liability w.r.t. the representatives/ employees of the Bidder. The Bidder will keep IHMCL fully indemnified in this regard.

1.2.8. Governing Law and Jurisdiction

This Contract Agreement shall be construed and interpreted in accordance with and governed by the laws of India, and the courts at Delhi shall have exclusive jurisdiction over matters arising out of or relating to this Contract Agreement.

1.2.9. Language

This Contract Agreement has been executed in English, which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Contract Agreement.

1.2.10. Effectiveness of Contract

This Contract Agreement shall come into effect on the date the Contract is signed by both the Parties. The date, the Contract comes into effect is defined as the Effective Date.

1.2.11. Commencement of Services

The Bidder shall commence the Services from the date of Handing over the site.

1.2.12. Expiration of Contract

- 1) The term of this Contract Agreement shall be for a period of 3 (Three) years for Operation and Maintenance and 3 (Three) months for construction of the system with effect from Effective Date, Any additional implementation work awarded during these three years and three months period shall be adjusted as implementation and O&M in such a manner that the said period does not exceed beyond the initial three years and three months or additional extended period thereof, if approved by IHMCL.
- 2) At the sole discretion of IHMCL, the O&M period may be extended on a yearly basis for a maximum of 2 years on the same terms and conditions of the Contract Agreement, subject to the performance of the Bidder.

1.2.13. Assignment

This Contract Agreement shall not be assigned by the Bidder to any person / agency except with the prior consent in writing of IHMCL and IHMCL shall be entitled to decline without assigning any reason

whatsoever. Notwithstanding anything to the contrary contained in this Contract Agreement, IHMCL may, after giving 30 days' notice to the Bidder, assign and/ or transfer any of its rights, benefits and/or obligations under this Contract Agreement to an assignee who is, in the reasonable opinion of IHMCL, capable of fulfilling all IHMCL's then outstanding obligations under this Contract Agreement.

1.2.14. Severability

If for any reason whatsoever any provision of this Contract 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 will negotiate in good faith with a view to agreeing to one or more provisions which may be substituted for such invalid, unenforceable or illegal provisions, as nearly as is practicable to such invalid, illegal or unenforceable provision. Failure to agree upon any such provisions shall not be subject to the Dispute Resolution Procedure set forth under this Contract Agreement or otherwise.

1.2.15. Notices

Any notice, request or consent required or permitted to be given or made pursuant to this Contract Agreement shall be in writing. Any such notice, request or consent shall be deemed to have been given or made when delivered in person to an authorized representative of the Party to whom the communication is addressed, or when sent to such Party at the address specified below. The mode of service of any notice shall be either courier or registered post or e-mail or fax or by hand.

The addresses for service of Notice shall be:

IHMCL: Chief Operating Officer
Address: Indian Highways Management Company Limited, G-5&6, Sector-10, Dwarka, New Delhi - 110075
E-mail: tenders@ihmcl.com

Bidder:
Attention:
Address:
E-mail: ...

IHMCL

1.2.16. Time Schedule

S.No.	Activity	Time period
1.	Date of signing of Contract Agreement	T
2.	System requirement and design document	T+15 days
3.	Implementation of MLFF based tolling system including Go-Live (3 Days trial)	T + 3 Months
4.	Operation & Maintenance Period	Three Years from the date of issuance of Go-Live certificate/signoff letter issued by IHMCL. The O&M period may be extended on yearly basis for a maximum of 2 years on the same terms and conditions of the Contract Agreement, subject to performance of the Bidder and sole discretion of IHMCL.

1.2.17. Damages

1.2.17.1. Damages for Delay in completion of work

Refer to Section Service Level Agreements (SLA), in the RFP Schedule B Section 12.

1.2.17.2. Extension of Time (EOT)

- i. The Bidder may request an extension of time beyond the binding completion schedule if it encounters unforeseen circumstances or events beyond its control that materially and significantly impact its ability to meet the deadline.
- ii. The Bidder shall submit a written request for the extension, detailing the reasons for the delay and providing supporting documentation, to IHMCL within a reasonable time frame after becoming aware of the delay.
- iii. IHMCL shall review the extension request and may grant an extension if it deems the reasons provided by the Bidder to be valid and justifiable.
- iv. If the Bidder fails to request an extension of time within thirty (30) day from the date of occurrence of the delay-causing event or if the delay is not attributable to reasons beyond its control, the request of the Bidder will not be considered by IHMCL.
- v. The Bidder shall not be entitled to any extension of time or relief from damages for delays caused by its own negligence, inadequate planning, insufficient resources, or failure to adhere to project timelines.
- vi. The decision of IHMCL regarding extension requests and imposition of damages shall be final and binding on the Bidder, subject to dispute resolution mechanisms as outlined in the Contract Agreement.

1.2.17.3. Damages for Non-Compliance to Safety Standards at site

Failure by the Bidder's personnel in maintaining the safety standards at the site as per Schedule-C at any time shall attract damages on every instance noticed by the IHMCL (or its representatives).

- a. Staff working without safety gears – damages of INR 10,000/- per instance. In the case of repeated instances by the same staff member of the Bidder, the damages shall be doubled per instance. The Bidder shall have to Replace the repeated offenders / personal (safety lapses more than thrice) with immediate effect.
- b. Improper safety measures at site, safety hazard to the commuters due to poor workmanship, etc. working during low visibility hours or at night time without proper safety measures, warning signages and lighting/ improper traffic diversion / non-standard warning signages etc. / unauthorized lane closure / traffic rule violation – minimum damages of INR 1,00,000/- per instance shall be imposed on recommendation of the IHMCL (or its representatives). In cases of repeated instance, the penalty shall be doubled per instance. The Bidder shall have to Replace the repeated offenders / personal (safety lapses more than twice) with immediate effect. IHMCL shall also take legal action against the errant staff / sub-contractor (SI) of the Bidder, as such safety lapses may lead to major safety concerns / hazards for the road users as well as the workers.

1.2.17.4. Damages for non-adherence of Service Level Agreement (SLA)

- a. Non-Adherence of SLA during the O&M period would result in damage mentioned in Schedule-B of the Agreement. The damage will be recovered as defined under clause 1.2.19 of the General Conditions of the Contract.
- b. During the currency of the Contract Agreement, every first week of the Quarter, the Bidder is obligated to make an inventory of the items presented and provide a copy to IHMCL. Furthermore, the Bidder shall provide an undertaking attesting to the presence and functionality of all required items per the Technical Bid, accompanied by the necessary documentary evidence to support this claim.
- c. To verify the undertaking or even otherwise, every quarter, IHMCL or its representative can do an inventory or inspection of the items that are to be present and working as per the technical bid. If technical requirements are not found to be met, IHMCL can pause the calculation payments until all technical requirements are met again. In such cases, IHMCL will eliminate the paused period and make prorated payments for that quarter.

1.2.18. Payments

- (a) The revenue share as per Bidder's Financial bid Form F-1 and accepted by the Authority in consideration of the obligations specified in this Agreement.
- (b) Under any circumstances, the percentage revenue share quoted by the bidder shall not be revised upwards, including if there is any increase in any tax, statutory, or financial liability of the Bidder that was not in existence or in prevalence at the time of bid submissions.
- (c) The percentage revenue share quoted in the financial bid, unless otherwise specified in the Contract Agreement, encompasses all the Bidder's responsibilities for the works specified in this Agreement as well as all essential, desirable, and obligatory items for the construction, operation and maintenance of the subject matter without compromising on the quality

standards expected as per the Contract Agreement, Good Industry Practice, and official memos, circulars, and notices issued or to be issued by IHMCL/NHAI that are relevant to the scope of the present Contract Agreement and the remedying of any defects in the MLFF based tolling system.

1.2.19. Payment Terms

The bank shall be entitled to get revenue share quoted in the financial bid, subject to following conditions:

- a) The Acquirer bank shall deposit the collected user fee amount (Clean Pass+ Local Pass + Monthly Pass) for a period from Tuesday (00:00:00 Hrs.) of the prior week to Monday (23:59:59 Hrs.) after deduction of bidder's revenue share into specified bank account.
- b) Every Tuesday, the Acquirer bank shall deposit the collected user fee amount (Clean/Settled transaction + Local Pass + Monthly pass) for a period from Tuesday (00:00 Hrs) of the prior week to Monday (23:59 hrs) of current week after deduction of bidder's revenue share on the cleaned Transactions + Local pass issued in that week + Monthly Pass issued in that week + half the amount of e-Notices issued in the that week. No revenue share is payable on the Exempted Vehicles as per NH Fee (Determination of rates and Collection) Rules 2008 and its amendment from time to time. As per the NH Fee (Determination of rates and Collection) Rules 2008, vehicles without FASTag/Invalid FASTag/loose (unaffixed) FASTag shall be levied double the applicable User Fee. As such all the e-notices shall be issued for an amount equal to double the usual User Fee for that Vehicle Class. However, the Banks shall be entitled revenue share only for half the amount of e-Notice i.e the usual fare for that vehicle class.

Illustration: The total collection of revenue is Rs. 100 out of which Rs. 80 is collected from MLFF based tolling system via (Clean Transaction + Local Passes + Monthly Passes) and Rs. 20 collected through e-Notices issued for the period of Tuesday of the prior week till Monday of current week. If the revenue share quoted by the Acquirer bank is 5%. In such case, The Acquirer bank shall be liable to deposit Rs. 95.50/- $[100 - (80 \times 5\% + \frac{1}{2}(20 \times 5\%))]$.

- c) Bidder/bank shall ensure that e-notice generated for any violations should be double the amount of the actual toll value. However, the percentage of revenue share of bidder/bank for e-notices shall be as per actual toll value only. The revenue share to the Bank for e-notices shall be as per the applicable fare/toll. Not as per the value/amount of e-notice generated.
- d) No e-notices shall be issued for exempted vehicles in any circumstances.
- e) SLA calculations shall be done on monthly basis. SLA Penalty settlement will happen in first week of every month.
- f) The Acquirer bank shall be required to pay the penalty amount within 3 working days of the intimation by IHMCL failing which the same will be adjusted from the Cash Performance Security. Cash Performance security shall be replenished by the bidder within 3 working days from the date of such recovery. If agency fails to replenish the performance security and clear the dues in next 3 working days, IHMCL may penalize the bidder and forfeit the PBG.
- g) The Acquirer bank shall make following note for Exemption and violations:
 - 1) The successful bidder will be responsible for identifying, recording and reporting violations and all applicable exemptions in accordance with the NETC Program and the guidelines/notices issued by IHMCL.
 - 2) IHMCL shall not be liable to pay any revenue percentage share for vehicles under exempted category. i.e., No notice for exemption vehicle
 - 3) Violations and exemptions will be assessed based on VRN classification and in accordance with NHAI toll fee guidelines. The bidder will be responsible for

periodically updating the historical violations and exemptions, post approval of IHMCL.

- h) In case the volume of clean transaction in the week is above 90% of total transaction at toll plaza, the bank shall be entitled for additional revenue share of 20% (over and above quoted revenue % as per F1) on the clean transactions performed during that week, wherein week shall mean Tuesday of prior week to Monday.

1.2.20. Change of Scope

- a) Bank shall be entitled for additional payment over and above the revenue share only in case of Change of Scope Order is given by IHMCL. Change of Scope will be initiated in the following cases only after written instructions from IHMCL or its representative:
 - b) Variation in number of MLFF gantry location with respect to those mentioned in the Schedule-B. For avoidance of doubt, any variation in quantity(ies) of equipment, support system, OFC, Civil/Mechanical Works, Software/Hardware etc. of MLFF Components whose locations are mentioned in Schedule-B, or any software/App upgradation works mentioned in Schedule-C shall not constitute any Change of Scope.
 - c) The estimate of any Change of Scope Work due to the condition mentioned above shall be derived as per mutually agreed terms based on Good Engineering Practice.
 - d) Upon receipt of written instruction from IHMCL or its representative, the bank shall submit the Change of Scope proposal within 15 days duly including the estimate, design drawing of the work along with functional and technical specifications and time required for completion of the additional work, to IHMCL or its representative for issue of the Change of Scope Order.
- i. Change Control Note (CCN)
 - a) This applies to and describes the procedure to be followed in the event of any proposed change to contract, site Implementation, and Service levels. Such change shall include, but shall not be limited to, changes in the scope of services provided by Successful bidder and changes to the terms of payment.
 - b) Change requests in respect of the contract, the site implementation, or the Service levels shall emanate from the Parties' representative who shall be responsible for obtaining approval for the change and who shall act as its sponsor throughout the Change Control Process. CCNs shall be presented to the other Party's representative who shall acknowledge receipt by signature of the authorized representative of the IHMCL.
 - c) Successful bidder and Authority while preparing the CCN, shall consider the change in the context of whether the change is beyond the scope of Services including ancillary and concomitant services required.
 - d) The CCN shall be applicable for the items which are beyond the stated/implied scope of work as per the RFP document.

1.2.21. Project Administration

The IHMCL designates COO, IHMCL as its coordinator, who will be responsible for the coordination of activities under this Contract Agreement, for acceptance and finalization of the services and of other deliverables by IHMCL. IHMCL may appoint a Supervision Consultant or any official of IHMCL/NHA to act on its behalf.

1.2.22. Fraud and Corruption

1.2.22.1. Definitions

It is IHMCL's policy that IHMCL as well as bidder observe the highest standard of ethics during the selection and execution of such contracts. In pursuance of this policy, IHMCL defines, for the purpose of this provision, the terms set forth below as follows:

- i. "Corrupt practice" means the offering, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the selection process or in contract execution.
- ii. "Fraudulent practice" means a misrepresentation or omission of facts to influence a procurement process or execution of a contract with IHMCL; and includes collusive practice among bidders, prior to or after bid submission, designed to establish bid prices at artificially high or non-competitive levels and to deprive IHMCL of the benefits of free and open competition.
- iii. "Collusive practices" means a scheme or arrangement between two or more bidders, with or without the knowledge of IHMCL, designed to establish prices at artificial, non- competitive levels.
- iv. "Coercive practices" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in a procurement process or affect the execution of a contract.
- v. "Unfair trade practices" means supply of services different from what is ordered on, or change in the Scope of Work which was not agreed to; and
- vi. "Restrictive practices" means forming a cartel or arriving at any understanding or arrangement among bidder(s) with the objective of restricting or manipulating a full and fair competition in the bidding process.

1.2.22.2. Measures to be taken by IHMCL.

- a) IHMCL may terminate the contract if it determines at any time that representatives of the Bidder were engaged in corrupt, fraudulent, collusive or coercive practices during the selection process or the execution of that contract, without the Bidder having taken timely and appropriate action satisfactory to IHMCL to remedy the situation; and
- b) IHMCL may also sanction against the Bidder, including blocklisting or declaring the Bidder ineligible, either indefinitely or for a stated period, to be awarded a contract if it at any time determines that the Bidder has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or executing a contract with IHMCL.

1.2.23. Confidentiality of the Assignment/Findings

- (a) During the term of this Contract Agreement and for three years following its expiration or termination, the Bidder shall not divulge or authorise the disclosure of the services, this Contract Agreement, or the business or operations of IHMCL to a third party without IHMCL's prior written consent. This excludes its agents, consultants, or sub-contractors (SI) who require the information for the purpose of performing its duties under the Contract Agreement. The Bidder must ensure that such agents, consultants, or sub-contractors (SI) are bound to preserve the complete confidentiality of any Proprietary and Confidential Information of IHMCL.
- (b) The Bidder and its personnel shall use such Proprietary Information only for the purpose for which it was disclosed and shall not use or exploit such Proprietary Information for its own benefit or the benefit of another without the prior written consent of the IHMCL. Without limitation of the foregoing, Bidder shall not cause or permit reverse engineering of any Proprietary Information or recompilation or disassembly of any information or software programmes that are part of the Proprietary Information received by it under this Contract Agreement. For the purposes of this Contract Agreement - Proprietary Information shall include, but not be limited to, strategies, official secrets, actual and anticipated research, developments or plans, services, software, source codes, inventions, processes, discoveries, formulas, architectures, concepts, ideas, designs, drawings, personnel, financial information, demonstrations, operations, records, assets, technology, data, and information derived, whether existing or derived or analysed out of the information made available to the Bidder in the form of raw data or reports, in any form whatsoever.

- (c) The Bidder alone shall be responsible for ensuring the maintenance of confidentiality as contemplated above and shall be responsible for employing sufficient measures to prevent any unauthorised access to the Proprietary Information.

1.2.24. Insurance cover to be maintained.

- (a) The Bidder shall ensure to maintain proper insurance coverage of all the equipment, materials, establishment against fire, theft, vandalism or any other perceived risk(s) / natural disaster etc. during the entire duration of the contract period.
- (b) In addition to material and equipment, the Bidder shall also ensure to have adequate insurance for all its personal working/ deployed under this Contract Agreement. The insurance shall also fully cover the personnel / workers / laborers of sub-contractors (SI). In case any worker / laborer claim is not covered by the insurance company, the Bidder shall be responsible for covering the entire expenses for medical, transportation, wages, compensation etc. of the personnel in case of any incident / accident/ mishap / death, or a claim by the third party etc. Suitable compensation shall be paid by the Bidder to the personnel deployed at the project in case of any incident / accident/ mishap / death, etc. if any happened on the site/ project or in transit, irrespective of the reason. Hence the insurance policy shall be comprehensive and shall cover all types of risks and compensation.
- (c) The Bidder shall fully indemnify IHMCL against any damage/ loss of property or personnel of Bidder working on any site under this Contract Agreement.
- (d) The Bidder shall submit copies of the insurance policies to IHMCL within 15 days of issuance of LOA, and renewal policy within 15 days of the expiration of the policy until the end of the Contract period. A penalty of INR 10,000 shall be levied on the Bidder for each working day from the due date of submission or expiry of the insurance policy documents till the actual date of submission.

1.2.25. Labour Laws

- (a) The Bidder shall obtain all relevant labor registrations and comply with all relevant labor laws applying to its employees and shall duly pay them and afford them all their legal rights.
- (b) The Bidder shall make all deductions of tax at source and all contributions to the Payment of Gratuity, Provident Fund (including Employees' contribution) and Employees' State Insurance Scheme as may be required by Applicable Laws and deposit the aforesaid contributed amount with the appropriate authority/(s).
- (c) The Bidder shall require all personnel engaged in the work to obey all Applicable Laws and regulations. The Bidder shall permit the Authority to witness labor payments for the Bidder direct labor or the sub-contractors'(SI) labor. The Bidder shall ensure that all its sub-contractors (SI) strictly comply with all labor laws.
- (d) Documentary evidence confirming the above compliance, as may be required from time to time, shall be provided to the IHMCL's Representative.
- (e) IHMCL shall not be liable for any delay or default of the Bidder in compliance with the labor laws.

1.2.26. No partnership

This Contract Agreement shall not be interpreted or construed to create an association, joint venture, or partnership between the Parties, or to impose any partnership obligation or liability upon either Party and neither Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or act as an agent or representative of, or to otherwise bind, the other Party.

1.2.27. Intellectual Property Rights

All Intellectual Property of the respective Parties shall continue to vest with the respective Party and one Party may make use of the Intellectual Property only with the express consent of the other Party. However, it is agreed and acknowledged by the Bidder that intellectual property rights in the

Proprietary Information as well as any other data or information/ reports generated during the performance of services contemplated herein by the Bidder shall always vest with IHMCL and Bidder or its employee, agent, official, sub-contractor (SI) will not have any right in such IPR whatsoever.

1.2.28. Force Majeure

In the event that either party "**Affected Party**" is unable to perform its obligations under this Contract Agreement, despite its best effort, due to circumstances beyond its reasonable control, including but not limited to acts of God, natural disasters, war, terrorism, strikes, government actions/ policies, acts of military authority, public disorder, riots, embargoes, epidemics, insurrections, civil commotion, war, enemy actions or other unforeseeable events, which substantially/materially bars or affect the performance of obligations by such event (hereinafter referred to as "**Force Majeure Event**"), then the Affected Party shall not be considered in default of performance of its obligations under the terms of this Contract Agreement. The Bidder will be solely responsible to complete the risk assessment and ensure implementation of adequate security hygiene, best practices, processes, and technology to prevent any breach of security and any resulting liability therefrom (wherever applicable).

1.2.28.1. Reporting of Force Majeure

If a Force Majeure Event arises in the aforesaid manner, the Affected Party shall within maximum 24 hours notify the other Party in writing of such condition and the cause thereof. However, in case the Bidder claims to have suffered a Force Majeure Event, the Bidder shall continue to perform its obligations under this Contract Agreement as far as is reasonably practical, and shall seek all reasonable alternative means for performance, unless otherwise directed by IHMCL.

1.2.28.2. Mitigate the Force Majeure Event

Upon occurrence of Force Majeure Event, the Affected Party shall immediately take steps as are reasonably necessary to remove the causes resulting in Force Majeure if within its control and to mitigate the effect thereof. Any costs incurred and attributable to such event or curing of the Force Majeure Event shall be solely borne by the Affected Party.

1.2.29. Dispute Resolution

Refer to dispute resolution section of the RFP.

1.2.30. Events of default by the Bidder

The failure on the part of the Bidder to perform any of its obligations or comply with any of the terms of this Contract shall constitute an Event of Default on the part of the Bidder. The events of default as mentioned above may include inter-alia of the following:

- a. the Bidder fails to provide, extend, or replenish the Performance Security in accordance with this Agreement.
- b. the Bidder abandons or manifests intention to abandon the Construction or O&M of the Project without the prior written consent of the Authority.
- c. the Project Completion Date does not occur within the period specified in RFP Clause 1.2.12 for the Scheduled Completion Date, or any extension thereof accorded under Clause 1.2.12. point no 2.
- d. the Bidder fails to rectify any Defect, the non-rectification of which shall have a Material Adverse Effect on the Project, within the time specified in this Agreement or as directed by the Authority.
- e. the Bidder subcontracts the Works or any part thereof in violation of this Agreement or assigns any part of the Works or the Maintenance without the prior approval of the Authority.

- f. the Bidder creates any Encumbrance in breach of this Agreement.
- g. an execution levied on any of the assets of the Bidder, or if a trustee or receiver is appointed for the Bidder or for the whole or material part of its assets that has a material bearing on the performance of the Bidder under the Contract Agreement.
- h. the Bidder is adjudged bankrupt or insolvent, has been, or is in the process of being liquidated, dissolved, wound-up.
- i. the Bidder has been or is in the process of being amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the Authority, a Material Adverse Effect or would be in breach of the terms of the Contract Agreement.
- j. any representation or warranty of the Bidder herein contained which is, as of the date hereof, found to be false or that the Bidder is at any time hereafter found to be in breach or non-compliance thereof.
- k. the Bidder submits to the Authority any statement, notice or other document, in written or electronic form, which contains false contentions/ information and can potentially adversely impact the Authority's rights, obligations or interests if accepted on its face value.
- l. the Bidder has failed to fulfil any obligation, for which failure Termination has been specified in this Agreement.
- m. the Bidder commits a default in complying with any other provision of this Agreement if such a default causes a Material Adverse Effect on the Project or on the IHMCL.
- n. the Bidder fails to deposit the collected amount in NHAI bank account within timeline defined in Payment Terms.
- o. In case bidder fails to complete Hand Over Take Over (HOTO) activities during the contract period, as per Clause 1.2.34.
- p. Gives or offers to give (directly or indirectly) to any person any bribe, gift, gratuity, commission, or other thing of value, as an inducement or reward:
 - i. for doing or forbearing to do any action in relation to the Contract, or
 - ii. for showing or forbearing to show favor or disfavor to any person in relation to the Contract, or
 - iii. if any of the Bidder's personnel, agents, or sub-contractors (SI) give or offer to give (directly or indirectly) to any person any such inducement or reward as is described in this sub-paragraph (o). However, lawful inducements and rewards to Bidder's Personnel shall not entitle termination.

1.2.31. Consequences of Default

Where an Event of Default subsists or remains uncured then IHMCL shall be entitled to:

- 1) Impose any such obligations and conditions and issue any clarifications as may be necessary to inter alia ensure smooth continuation of project and the Services which the Bidder shall be obliged to comply with. The Bidder shall in addition take all available steps to minimize is resulting from such event of default.
- 2) Notwithstanding anything stated in this Contract Agreement, in the event of any defaults on part of the Bidder, IHMCL shall issue a notice to the Bidder (hereinafter referred to as Cure Period Notice) setting out specific defaults / deviances / omissions / non-compliances / non-performances and providing a notice of Fifteen (15) days ("Cure Period") to enable such defaulting party to remedy the default committed. If the Bidder fails to cure the default within the Cure Period, as stated in the Cure Period Notice, the Bidder shall be deemed to be in default of this Contract Agreement, unless the default has occurred solely as due to Force Majeure or for reasons not

attributable to the Bidder. The Cure Period under this Clause shall be calculated from the date of receipt of the notice by the Bidder or when the default comes into the knowledge of the Bidder, whichever is earlier. If the Bidder fails to remedy the default after lapse of cureperiod notice, the contract is liable to be terminated by IHMCL.

1.2.32. Termination

- (a) Without prejudice to any other rights or remedies which the Authority may have under this Agreement, upon occurrence of a Bidder Default, the Authority shall be entitled to terminate this Agreement by issuing a Termination Notice to the Acquirer bank; provided that before issuing the Termination Notice, the Authority shall by a notice inform the Acquirer bank of its intention to issue such Termination Notice and grant 15 (fifteen) days to the Bidder to make a representation, and may after the expiry of such 15 (fifteen) days, whether or not it is in receipt of such representation, issue the Termination Notice.
- (b) Notwithstanding the above, IHMCL at its sole discretion may terminate the Contract Agreement any time by giving 30 days prior notice without assigning any reason.
- (c) Contract can be terminated by either party on the expiry of 90 days of notice of an occurrence of a Force Majeure event by the Affected Party or earlier if the Parties believe that the Force Majeure event cannot be resolved or is no longer practicable.
- (d) Nothing herein shall restrict the right of the IHMCL to invoke the Bank Guarantee and other Guarantees furnished hereunder and pursue such other rights and/or remedies that may be available to the IHMCL under this Agreement and/or the Applicable Law.

1.2.33. Consequence of Termination

1. Upon Termination on account of Clause 1.2.32 (a), the Authority may:
 - i. Encash and appropriate the Performance Security, Additional Performance Security if any.
 - ii. Debar/Backlist the successful bidder from participating in any other project/assignment/work of IHMCL for a period as determined by IHMCL at its sole discretion.
2. Upon Termination on account of Clause 1.2.32 (b), the Authority shall make Termination Payment as under:
 - i. **During (3 Months Development period) + O&M Period (36 months) :**
 - I. Depreciated value of the equipment(s) and shall take into possession the installed equipment(s). In such a case the depreciating cost of the equipment shall be calculated as below:
 - a) The depreciation value of the indicated equipment in Form F-2 of the financial bid shall be reduced by 33.33% every year to the rate mentioned for the respective items, subject to the provision of Note 3 of Form F-2.
 - b) If the unit cost of any equipment is Rs. 100/-, after 1 year, the depreciated cost of the equipment remains Rs. 66.66/-. Similarly, after the 2nd year, the cost of equipment remains Rs. 33.33/-, and after the 3rd year, the cost of equipment remains Rs. 0/-.
 - ii. **During extended O&M Period (Above 40 to 64 months)**
- II. The Bidder expressly agrees that Termination Payment shall constitute a full and final settlement of all claims of the Bidder on account of Termination of this Agreement and any other payment

payable with respect to the Contract Agreement. The Bidder undertakes that it shall not have any further right or claim under any law, treaty, convention, contract, or otherwise, arising out of or in connection with the Contract Agreement.

- III. Upon Termination on account of Clause 1.2.32 (c), the provisions of Clause 1.2.28 shall be applicable.
- IV. Upon Termination, the Bidder shall handover all reports, all applicable photographs, videos and all other data generated in readable format as per the provision of entire MLFF based tolling system data facility including all data, backup data and any other material / document set forth in this Agreement, to IHMCL or its representative in running condition.

1.2.34. Handing over and taking over

- a) After the expiration of the Maintenance Period stipulated in the Contract Agreement and any extensions thereof, the Bidder shall deliver the gantries and pole in a good, workable, and painted condition as per the conditions outlined in the RFP.
- b) After the expiry of the Maintenance Period set forth in the Contract Agreement and any extension thereof, the bank shall handover entire facility in good working condition, reports, all applicable photographs, videos and all other data generated in readable format as per the provision of entire MLFF based tolling system data facility including all data, backup data and any other material / document set forth in this Agreement, to IHMCL or its representative in running condition.

1.2.35. Survival of rights

Notwithstanding anything to the contrary contained in this Contract Agreement, any Termination pursuant to the provisions of this Contract Agreement shall be without prejudice to the accrued rights of either Party including its right to claim and recover money damages, security deposits, and other rights and remedies which it may have in law or contract.

1.2.36. Indemnification

- (a) The Bidder shall indemnify, defend, save and hold harmless, IHMCL and NHAI and M/o Road Transport and Highways (MoRTH) and its Officers, Agents, Engineer, against any direct loss, damage, claims, cost and expense of whatever kind and nature (including without limitation, legal fees, claims and expenses incurred in connection with any suit, action or proceeding or any claim asserted, such as fees and expenses incurred), joint or several, that arise out of or are based upon any order passed by any statutory authority including courts, tribunals or other judicial/ quasi – judicial authorities, on account of breach of the Bidder's obligations under this Contract Agreement or any other related agreement or otherwise, any fraud or negligence attributable to the Bidder or its Agents or Sub-Contractors (SI), under contract or tort or on any other ground whatsoever, all eventualities of theft, dacoity, robbery, etc., except to the extent that any such suits, proceedings, actions, demands and claims has arisen due to any breach or default of this Contract Agreement on the part of IHMCL.
- (b) The Bidder shall indemnify IHMCL and NHAI and MoRTH of all legal obligations of its professionals deployed. IHMCL and NHAI and MoRTH also stand absolved of any liability on account of death or injury sustained by the Bidder's staff during the performance of their work and for any damages or compensation due to any dispute between the Bidder and its staff.
- (c) The remedies provided under this Article are not exclusive and shall not limit any rights or remedies that may otherwise be available to IHMCL Indemnified Party at law or in equity.
- (d) The provisions of this Article shall survive Termination.

1.2.37. Compensation for default by the Bidder

- 1) In the event of the Bidder being in breach of this Contract Agreement, unless such default or delay is on account of Force Majeure or through no fault of the Bidder, the Bidder shall pay to IHMCL, all direct costs suffered or incurred by IHMCL because of such breach, within 30 days of receipt of the demand supported by necessary particulars thereof.
- 2) The Bidder shall pay to IHMCL all direct costs suffered or incurred by IHMCL incurred because of all losses, claims, damages and liabilities (including, without limitation, legal fees and other expenses incurred in connection with any suit, action or proceeding or any claim asserted, such as fees and expenses incurred), joint or several, that arise out of, or based upon:
 - (i) Any untrue statement or misrepresentation of a material fact provided by the Bidder or an omission to state a material fact required to be communicated.
 - (ii) Any non-performance or breach of the roles, responsibilities, representations, warranties, undertakings and declarations contained herein by the Bidders or its directors, employees, personnel or representatives.
 - (iii) Negligence, fraud or misconduct of the Bidder or any of its employees, agents, affiliates or advisors.

1.2.38. Cap on Liability of Parties

Notwithstanding anything stated herein above and under any circumstances, the liability of Bidder under this Clause for site shall not exceed the total value of PBG value.

1.2.39. Representation and warranties of the Bidder

The Bidder declares, represents, and warrants as follows:

- 1) It is duly organized and validly existing under the laws of India and has full power and authority to execute and perform its obligations under this Contract Agreement and to carry out the works and provide services contemplated hereby.
- 2) It has taken all necessary corporate actions under Applicable Laws to authorize the execution and delivery of this Contract Agreement and to validly exercise its rights and perform its obligations under this Contract Agreement.
- 3) It has obtained all necessary internal/external approvals, registrations and certifications required from relevant authorities and other entities for fulfilling its obligations as set out in this Contract Agreement.
- 4) It has not violated any of the conditions subject to which such approvals, registrations and certifications have been granted or any other applicable regulations and / or guidelines or directives or statutes.
- 5) It shall ensure that such approvals, registrations and certifications will remain in force, including, by taking prompt steps for timely renewal of the same.
- 6) It undertakes to continue to comply with all Applicable Laws with respect to its roles / obligations under this Contract Agreement.
- 7) There are no actions, suits, proceedings, or investigations pending before any court or before any other judicial, quasi-judicial or other authority, the outcome of which may result in the breach of this Contract Agreement or which individually or in the aggregate may result in any material impairment of its ability to perform any of its obligations under this Contract Agreement.
- 8) It shall at no time sub-contract any of its obligations under this Contract Agreement without the prior permission from IHMCL. IHMCL. Provided that in case the Bidder proposes to sub-contract any of its obligations under this Contract Agreement, it shall seek written permission along with the details of the activities that it proposes to sub-contract to third parties.
- 9) No representation or warranty by the Bidder contained herein or in any other document furnished by it to IHMCL in relation to Applicable Laws contains or will contain any untrue or misleading statement of material fact or omits or will omit to state a material fact necessary to

- make such representation or warranty not misleading.
- 10) No sums, in cash or kind, have been paid or will be paid, by or on behalf of the Bidder, to any person by way of fees, commission or otherwise for securing the award of this Contract Agreement or for entering into this Contract Agreement or for influencing or attempting to influence any officer or employee of IHMCL in connection therewith.

1.2.40. Exit Management

1. The bidder shall submit a structured & detailed Transition and Exit Management plan to IHMCL along with the bid.
2. At the end of the contract period or during the contract period, if any other agency is identified or selected for providing services related to the scope of work, the bidder shall ensure that a proper and satisfactory handover is made to the other agency.
3. All risk during transition stage shall be properly documented by the bidder and mitigation measures shall be planned to ensure a smooth transition without any service disruption.
4. The bidder must ensure that no end of support products exist at time of transition.
5. The bidder must provide notice (XX) months in advance before starting the exit management activities.
6. The transition & exit management period will start 3 months before the expiration of the contract. The bidder will provide shadow support for at least three months and secondary support for an additional three months before the end of the O&M period or termination of the contract or mutually exit, as applicable at no additional cost to IHMCL. In case of termination, the exit management period will start from effective date of termination, or such other date as may be decided by IHMCL but no later than 3 months from effective date of termination.
7. Closing off all critical open issues as on date of exit. All other open issues as on date of Exit shall be listed and provided to IHMCL.
8. The bidder shall provide all necessary knowledge transfer and transition support. The deliverables are indicated below:
 - a) Updated transition plan on periodic basis
 - b) Complete documentation for the entire system handed over to the IHMCL /identified agency.
 - c) Handover of all AMC support related documents, credentials etc. for all OEM products supplied/maintained in the system.
 - d) Handover of the list of complete inventories of all assets created for the project.
 - e) Assisting the new agency/ IHMCL with the complete audit of the system including
 - f) Detailed walk-throughs and demos for the solution.
 - g) Hand-over of the entire software including source code, program files, configuration files, setup files, project documentation, etc.
 - h) Knowledge transfer of the system to IHMCL to the satisfaction of the prescribed conditions per the specified timelines.
9. The bidder shall be released from the project once successful transition is completed by meeting the parameters defined for successful transition.

Schedule - A

Site of the Project

1. The Site

- (i) Site of the Eight Lane Project Highway comprises the section of National Highway stretch from Km.-0+600 to Km.28+460 (Dwarka Expressway) of National Highway No. NH248-BB in the State of Delhi & Haryana Border {The "Project: Dwarka Expressway (NH248-BB). The toll plaza location is at chainage 9+500 as described in Annex-I of this Schedule-A.
- (ii) The dates of handing over the Right of Way to the Bidder of this Schedule-A.
- (iii) As on date, total 34 lanes are available at Dwarka expressway. Out of 34 lanes, total 16 lanes are dedicated to MLFF system implementation.

1.1. Annex – I (Schedule-A)

1.1.1. Toll Plaza /MLFF Control Centre Location

The Site of the Project Highway comprises the proposed Toll Plaza described in Table A-1.

Table-A-1	
Location of Toll Plaza (Chainage)	Project Length (in km)
At Km/Ch: 09+050 of NH-248 BB	Detailed breakup provided in the Table A-2 below



1.1.2. Appendix A-1

Index map of Project Highway



Schedule – B

2. Development of the MLFF based tolling facility.

a) About the MLFF based Tolling Project

- i. The Authority has envisaged implementation of MLFF system on the project to reduce travel time, make road-travel efficient & sustainable, and enable stress-free travel by adoption of MLFF System on Dwarka Expressway.
- ii. The MLFF system will consist of field equipment and sensors mounted on gantries, which will capture the necessary information from passing vehicles. This data will be transmitted to the NETC payment ecosystem for the deduction of the user fee.
- iii. The Successful bidder/bank is required to Design, Develop, Test, Commission, Operate and Maintain the Multi Lane Free Flow (MLFF) based tolling system and seamlessly integrating it with the bank's acquiring platform as part of the project to provide all the services as defined by IHMCL and NPCI for Acquiring bank. The setup must enable real-time processing of all vehicle transactions at MLFF gantry, while also connecting with NPCI's ETC systems (ETC Switch and Mapper) to accurately calculate toll fares and process payments efficiently.
- iv. The system should comply with all applicable NETC and PG guidelines of NPCI & IHMCL.
- v. The MLFF System shall be provided with functional and technical specifications specified in the Schedule-C and shall be operated and maintained throughout the contract period.

b) Development of the Multi Lane Free Flow (MLFF) based Tolling Project

- i. Through this RFP, IHMCL seeks to select Bank to acquire all ETC transactions at public-funded toll plazas using Multi Lane Free Flow technology. The selected bidder/bank will be responsible for all roles as defined in the Procedural Guidelines – National Electronic Toll Collection Network (latest version) issued by NPCI, and any subsequent guidelines/circulars issued by NHAI/IHMCL/NPCI/MoRTH.
- ii. The Scope of Project includes Design, Supply, Installation, Testing, Commissioning and Operation & Maintenance of Multi Lane Free Flow (MLFF) System at Toll Plaza located on Km 9+500 of Dwarka Expressway as described in this Schedule-B and in Schedule-C.
- iii. The Bidder/bank is required to implement the solution across a total of 16 lanes on the Dwarka Expressway. Out of these, 12 lanes will be dedicated to the MLFF solution, with 4 lanes serving as redundant lanes. The remaining lanes will be closed by NHAI upon the successful commissioning of the project. Bidder/bank should ensure that these lanes remain closed during the period.

c) Control Center

- i. MLFF Based sensors / smart devices on field and integrating, analyzing data received from these field devices / sensors at a Control Center (CC). The Application System and Field Devices as part of the MLFF project should have provision to share necessary data to the application software at Dashboard and CC so that more informed decisions and Audit can be taken at the CC for Highways management or during enforcement of revenue.
- ii. CC shall have 3 major functional areas namely Command and control with monitoring,

manual validation of transactions with low accuracy and issuance of e-Notice to toll violators.

- iii. As part of the control and monitoring, 24*7 monitoring of MLFF toll operations including alert management shall be undertaken by the CC staffs.
- iv. A separate team of staff shall be dedicatedly working on the manual validation process for which the ANPR & RFID had less accuracy or confidence level to initiate the transaction at the gantry application level. The staff shall be using the evidence from the system generated from the gantry end and validate the correct transaction of the vehicle.
- v. To ensure the operation quality and system performance, the team should design in two levels of resources plan for 24*7 operation. Operations and Maintenance will be segregated into two parts.

Level I. Real-time Facility Monitoring Center (Online)

- a. Control and monitoring module shall be a tool to check and monitor and control the real time health status of gantry equipment.
- b. CC operator shall get an alert on the module if any device is down or not connected to the network.
- c. GUI of this module should represent all the device connected to the gantry and Server and their health status including network status.
- d. Operator for complete the transaction validation will be bidder/bank scope as per their requirement to fulfil the 24*7 operation of transaction at CC.
- e. As MLFF Gantry system is man less operation. Thus, the team should keep all equipment monitored by 24*7 Online through Control Center. When the alerts will come out, the issues will be handled by online setting remotely. If the issues can't be solved, the system should notify the Level II onsite engineers and request for corrective maintenance.

Level II. 24*7 of Front-end O&M Locations (on site)

- a. When Level I operation mechanism will not fix the issues remotely, the alerts should be sent to onsite engineers. They will check and correct the issues at gantries and ensure the service level can be achieved as described below:
- b. Maximum Gantry downtime, due to power failure or any other technical reason, to be not more than 4 hours per day at each gantry.
- c. Maximum Gantry downtime, due to power failure or any other technical reason, to be not more than 24 hours cumulative per month at each gantry.

3. Operations & maintenance of the MLFF based Tolling System (Refer detailed roles and responsibilities in Section 9 below)

Operations Activities:

1. Data Management:
 - Transaction Records: Maintain detailed records of all toll transactions for auditing and reporting purposes.
 - Compliance Reporting: Generate reports to comply with regulatory requirements and provide insights for traffic management.
2. Customer Support:
 - User Services: Provide support for vehicle owners regarding Toilets, Water facilities, complaint management and other facilities.
 - E-Notice Notifications: Send automated e-notices for toll violations or unpaid tolls to ensure timely compliance.

Maintenance Activities:

1. System Infrastructure:
 - Equipment Upkeep: Regular maintenance of RFID readers, cameras, and other tolling equipment to ensure optimal performance.
 - Software Updates: Implement updates and patches to the MLFF system software to enhance functionality and security.
2. Network Management:
 - Connectivity Monitoring: Ensure continuous and reliable network connectivity for real-time data transmission.
 - Troubleshooting: Address and resolve any technical issues promptly to minimize system downtime.
3. Security Measures:
 - Data Protection: Implement robust security protocols to protect financial and personal data from cyber threats.
 - Fraud Prevention: Monitor transactions for any fraudulent activities and take necessary actions to prevent them.
4. Performance Monitoring:
 - System Audits: Conduct regular audits to assess the performance and reliability of the MLFF system.
 - Feedback Mechanism: Collect and analyze feedback from users to identify areas for improvement and implement necessary changes.

By efficiently managing these operations and maintenance activities, the acquirer bank ensures the MLFF system operates smoothly, providing a seamless tolling experience for vehicle owners and contributing to better traffic management.

4. Toll Collection from the MLFF system

Transaction Processing for settled and non – settled transactions:

1. **Real-Time Toll Collection:** Ensure toll fees are accurately deducted from vehicle owners' accounts as they pass through MLFF technologies.
2. **Payment Gateway Management:** Maintain and manage secure payment gateways for processing transactions.
3. **Dispute Resolution:** Generating e-Notices for blacklisted or insufficient balance of users. Handle disputes of un-settled transactions related to violations on toll plaza.
4. **Revenue Collection from MLFF System:** Acquirer bank shall collect the revenue from the MLFF system and deposit the same to IHMCL/NHAI.

Bidder/bank should follow below mentioned Toll Collection Model for collecting Toll from the MLFF System.

Toll Collection Model

1. The bidder/bank shall submit the collected revenue from toll plaza latest by TUESDAY of every week and if Tuesday happens to be a BANK Holiday, then by NEXT bank working day as indicated below by way of a demand draft/pay order/ RTGS transfer for the said section of National Highway.
 - The week shall be counted from Tuesday (00:00:00 Hrs.) to Monday (11:59:59 Hrs.).

Rate of User Fee:

1. The bidder/bank shall collect User Fees as per the provisions of the National Highways Fee (Determination of Rates and Collection) Rules, 2008 and amended from time to time at such rates only and from such vehicles only as have been notified by the Central Government for the use of the said Section of the National Highway /she said bridge and in strict compliance with the provisions of the notification.
2. The bidder/bank specifically undertakes not to claim during continuity of the Contract any change including addition, deletion and change in the classification mentioned or the rate of User Fee specified in the Notification referred above.
3. The bidder/bank shall not be allowed to make its own interpretation about a particular type of vehicle attracting a particular rate to charge a higher rate from a particular type of vehicles. Decision of the Authority on such matter shall be final and binding.
4. For e-notices to be issued will be of double the applicable toll charges for that category of vehicles. No e-notices shall be issued for exempted vehicles in any circumstances. The revenue share to the Bank for e-notices shall be as per the applicable fare/toll. Not as per the value/amount of e-notice generated.
5. The Bidder should note that the Toll Fee Notification is yet to be issued by the Ministry. As such a purely indicative Annual Potential Collection of the Toll is estimated as Rs. 801.14 Cr. The actual Toll charges will be known only after Toll Fee Notification. The Bidder's must carry out their own due diligence for tollable traffic crossing the Toll Plaza.

Change in the Rate of User Fee

1. The User Fee shall be subject to revision every year in terms with Rule 5 of the National Highways Fee (Determination of Rates and Collection) Rules, 2008 and amended from time to time.
2. The proposal on the revised User Fee with the supporting calculations shall be submitted by the bidder/bank to concerned NHAI PIU at least 7 days prior to the actual applicable date. NHAI will give approval within 7 days. Delay in submission of proposal shall be considered as material breach.

Display of Rate of User Fee and User Fee Notification:

1. The rates of User Fee, the categories of vehicles exempted from payment of User Fee and the name, address, and telephone number of the Authority to whom complaints, if any, should be addressed, shall be conspicuously and prominently displayed 500m ahead of the MLFF site, 100m ahead of the MLFF site and at the MLFF site also. The height of the display boards and size of letters being such that it is easy for drivers to read. The display boards shall be provided by the

Authority.

2. The bidder/bank shall also display, a copy of Notification in published by IHMCL, appended to this Contract at a conspicuous place of the User Fee Plaza(s) for the information of the road users and the public and (ii) provide a copy of same to road user on demand upon payment of copying charges on a 'no profit no loss' basis.

Penalty for Failure to Pay Collected User Fee:

1. In case of delay in remittance of the User Fee of any installment due under this Contract to the Authority beyond the due/specified day as mentioned above, the Authority shall levy penalty @ 0.2% per day for delay in remittance of payment. The bidder/bank will be required to pay the dues along with penalty within 3 working days of the specified day failing which the same will be adjusted from the Cash Performance Security by Project Director and simultaneously the Project Director shall route the ETC Collection directly to NHAI Toll Account till clearance of dues. Cash Performance security shall be replenished by the bidder/bank within 3 working days from the date of such recovery. If agency fails to replenish the performance security and clear the dues in next 3 working days, the contract is liable to be terminated. Immediate/real time credit in the prescribed account after the completion of week,
2. For avoidance of doubt, if more than one remittance is delayed and the contractor deposits a lumpsum amount, this will be adjusted following First-in-First-out (FIFO) approach, i.e., the earliest installment due shall be first adjusted along-with the applicable penal interest on the earliest remittance on that date and in similar manner the other remittances shall be adjusted. No further interest shall be applicable on the penal interest component. The penal interest shall be simple, i.e., it shall not be compounded.
 - (a) If the remittances outstanding including penal interest, if any, on ending of the contract is less than the cash performance security, then such amount shall be recovered from cash performance security, accounts will be settled, and balance securities will be released, and penal interest shall be levied only upto end date of contract. In case the contractor has not deposited the remittance of last week on ending of the contract period which is also to be adjusted from the cash performance security, then an additional penal interest @ 0.2% per day for 3 working days on the last week remittance shall also be levied.
 - (b) If the remittances outstanding including penal interest, if any, on ending of the contract are more than the cash performance security, then the dues to the extent of cash performance security will be adjusted as provided Para 2 above, following FIFO approach and the balance including penal interest shall be deposited by the bidder/bank.
 - (c) For avoidance of doubt, it is clarified that the end of contract period, the penal interest @ 12% p.a compounded annually only will be applicable on the balance remittances and the penal interest due as on end date of contract period, till payment of dues by the bidder/bank.

Operational Transparency

The bidder/bank shall be solely responsible for efficient and transparent working and management of User Fee collection at all points of time. The bidder/bank shall ensure the following:

- (i) All transactions including violations, and exemptions/concessions will be processed through MLFF System available at fee plaza. Furthermore, the deployment or usage of any alternate software/system for user fee collection, except for the MLFF through which FASTag transactions are processed, is also strictly prohibited. Any instance of usage of such unauthorized software/system shall be treated as Fraudulent Activity and the bidder/bank, including its sub-contractor, employees, the Director(s) of such entities or owner, found practicing such fraudulent activities will attract penal action as per relevant clause of the contact agreement including debarment from NHAI for a period up to (1) year.
- (ii) Lane IDs will be correctly mapped in transaction files and no fraudulent transaction will be hosted to Acquirer host.
- (iii) Valid users are to be added into discount category through User fee Collection portal as provided by Acquirer Bank and ensure that such transactions shall process using FASTag only.
- (iv) No fraudulent/parallel system in lanes to process cash/exempt transaction.
- (v) Video recording system of toll plaza will be provided to Command Centre on 24*7 basis and is not mishandled.

Authorised Representative of the Authority (“referred as IHMCL”)

- (a) The said Representative of the Authority shall have the overall authority to control and supervise the work of collection of User Fee carried on by the bidder/bank with a view to ensure that collection of User Fee is carried out smoothly, efficiently and without any hindrance or harassment to the users of National Highway.
- (b) The Authority or any other officer of the Authority or any agency as authorized by the Authority or by the Authority, shall have right and authority to inspect and check the receipt books (used/unused/ counterfoils), registers and books of accounts maintained by the bidder/bank at any time without giving any notice.
- (c) The instructions given from time to time by the Authority or his authorised representative in this regard shall be complied with promptly by the bidder/bank.
- (d) The bidder/bank shall keep records of all the complaints received and replied directly or otherwise by it and forward a copy on fortnightly basis to the Authority.

5. Performance and fulfilment of all other obligations of the Bidder/Bank

- a) Integration with VAHAN systems.
- b) Ensuring all equipment functioning 24x7x 365 and redundant .
- c) Maintaining high availability (HA) of servers, network, and bandwidth.
- d) The Acquirer Bank shall assess the quantity of spares/ consumables to meet the SLA clauses mentioned in the bidding documents and factor that as part of his Bid. It is the bidder/bank responsibility to maintain the minimum required spares at any given time to meet the SLA requirement at no additional cost to the Client. bidder/bank should keep minimum 10% spare at any given point of project execution.
- e) The bidder/bank shall ensure that the toll plaza, including its equipment, is powered primarily by the (Raw power) grid and secondarily by UPS, DG sets, and other renewable sources. The secondary power sources must ensure seamless connectivity in case of grid power cuts. All electricity charges for both grid and secondary power sources shall be borne by the bidder/bank.
- f) Procurement of any software licenses and hardware required for implementation of the solution is the

sole responsibility of the bidder/bank. IHMCL bears no responsibility towards the same or towards any consequence resulting from non-conformance or non-compliance.

- g) The bidder/bank specifically undertakes to abide by all the instructions issued by the Authority from time to time on operational matters and further agrees not to raise any dispute against the same including any additional cost that the Contractor may be required to bear to comply with such instructions.
- h) During the contract Period, the contractor shall furnish to the Authority, within 7 (seven) days of completion of each month, a statement of User Fee substantially in the form as per monthly report Annexure-5, 5.2, Schedule II (the "Monthly User Fee Statement"). Proper record is to be maintained at the plaza for the purpose of providing such information. The bidder/bank shall also submit such information sought by the Authority in such format, as may be prescribed by the Authority from time to time.
- i) The bidder/bank also agrees to abide by the requirement of Standing Operating Procedure (Policy circular No 17.5.86/2023 dated 05.10.2023) during violence/Anticipated Violence at Toll Plazas.
- j) The bidder/bank undertakes the responsibility of the complete job of User Fee collection, upkeep/maintenance of adjacent Toilet blocks including recouping the consumable items maintenance of all records, maintenance of User Fee collection account, maintenance of vehicle type wise Traffic Data on shift to shift basis, maintaining the cleanliness of User Fee plazas/User Fee collection booths and surrounding area etc. and any other duty as may be assigned by the Authority from time to time.
- k) The bidder/bank undertakes the responsibility of the complete job of User Fee collection, upkeep/maintenance of adjacent Toilet blocks including recouping the consumable items maintenance of all records, maintenance of User Fee collection account, maintenance of vehicle type wise Traffic Data on shift to shift basis, maintaining the cleanliness of User Fee plazas/User Fee collection booths and surrounding area etc. and any other duty as may be assigned by the Authority from time to time.

Right of Inspection:

- (a) The Authority reserves the right to conduct checks including surprise checks at any time, to check/observe/witness the activities of the bidder/bank including the gantry and control center and to monitor or to ensure that any or all the activities are being carried out properly by the personnel deployed by the bidder/bank.
- (b) The Authority may exercise any check/control to ensure discharge of various obligations by the bidder/bank under the Contract including but not limited to following:
 - i. Correctness of the User Fee charges recovered from users, as prescribed.
 - ii. Issuance of timely messages to all Vehicles.
 - iii. Maintenance of proper registers including those relating to collection of User Fee from different type of vehicles.
 - iv. Weekly remittance of amount due from the bidder/bank by the prescribed day.
 - v. Checking of data in electronic/soft form.
 - vi. Maintain gantry and control center and its appurtenances by the bidder/bank at his cost and ensure that they are in good running condition.
 - vii. Arrangement for lighting and water are in order.
 - viii. There is no delay to the traffic due to procedure of collection of User Fee any blockage/hinderance to the passing vehicles; and
 - ix. Any other check or control as considered appropriate by the Authority including through its authorized representative.

The above rights of inspection by the Authority also extends to the Toilet blocks handed over to the bidder/bank.

6. IHMCL comprehensive portal, Software and Dashboard

IHMCL Intends to build a comprehensive portal with dashboard functionality, wherein the system should enable users to view transactions, toll revenue collected, e-notices issued, and other toll plaza details in real-time. The portal should feature an intuitive interface for easy navigation and data visualization, ensuring users can quickly access and interpret key metrics. Additionally, the portal must be designed with scalability in mind, allowing for seamless integration of future advancements and technologies to enhance functionality and user experience. This will ensure the portal remains adaptable and capable of meeting evolving needs

and requirements.

7. Cleanliness & Maintenance of Toilets, Control Center & Surrounding Areas

Bidder/bank shall be solely responsible for the Operation and Maintenance of the 'TOILETS' and surrounding areas. IHMCL shall not interfere in any manner whatsoever in operating and Maintaining of the 'Toilets'.

The timings of the said 'Toilets' to be operated, maintained and remain available for Highway Users 24x7x365.

- i. The bidder/bank shall make necessary arrangements for supply chain management, store management and category management, solely at his own cost and risk.
- ii. The bidder/bank or its representatives shall not do any act or deed which may cause nuisance and/or annoyance to IHMCL/NHAI or to Highway Users.
- iii. The bidder/bank shall take care of all fitting, fixtures and related accessories available at 'Toilets' and immediately after expiry of the period or on sooner termination and handover all fitting, fixtures and related accessories available at 'Toilets', without claiming any right, title or interest of any nature whatsoever in the "Toilet" or any part or portion thereof.
- iv. The bidder/bank arranges to provide adequate staff for Operations and maintenance activities and IHMCL shall not be responsible for any loss, theft or dacoity in relation to any of the activity relating to the 'Toilets'.
- v. The bidder/bank shall be solely responsible for maintenance and cleanliness of toilets.
- vi. The bidder/bank shall take care of disposal of all rubbish, garbage and keeping the premises neat and tidy and will be essential.
- vii. The bidder/bank shall be responsible for availability of round the clock water supply and electricity for smooth and proper functioning of 'Toilets' and maintenance of surrounding areas.
- viii. The bidder/bank shall be liable to follow the obligations of the operation and maintenance pointed out by IHMCL or any of its representatives from IHMCL/NHAI founded out during routine inspections.
- ix. The bidder/bank shall conduct a regular maintenance program in place for toilet/washroom cleaning to maintain the facilities in a clean, working condition.
- x. The bidder/bank shall ensure that cleanliness and maintenance of Control Center, plaza building and its surrounding areas at the site is maintained on regular basis. Ensuring every facility should be in place at site such as water facilities.

8. E-Notice Module

1. E-notices for toll violations are typically generated through an automated process. When a vehicle passes through a toll plaza without paying the required toll, cameras capture images of the vehicle's license plate. These images are then processed to identify the vehicle's registered owner using the information from the Department of Motor Vehicles (DMV). Once the owner is identified, an e-notice is issued and sent to the registered address along with SMS and registered email address, detailing the violation and any associated penalties.
2. A detailed process flow for generating e-notices by successful bidder/bank is as follows :
 - a) Successful bidder/bank shall conduct the Vehicle Detection through **Sensors and Cameras** installed at MLFF system. As a vehicle approaches the toll plaza, sensors and cameras detect its presence. This can include infrared sensors, LiDAR/Radar detectors, or Audit surveillance cameras. The system checks if the toll for the detected vehicle has been paid. If the toll is unpaid, the vehicle is flagged for a violation.
 - b) High-resolution ANPR cameras captures multiple images of the vehicle's license plate from different angles to ensure clarity and accuracy of the vehicle.
 - c) The extracted license plate number is cross-referenced with a central database (through VAHAN system) that contains information on toll payments by successful bidder/bank. This database is typically linked through an API integration with a third-party service provider.
 - d) Successful bidder/bank shall capture the details of the violation, including the date, timestamp, location, and images of the vehicle, are recorded in the system.
 - e) Further Successful bidder/bank shall generate e-Notice containing all relevant information

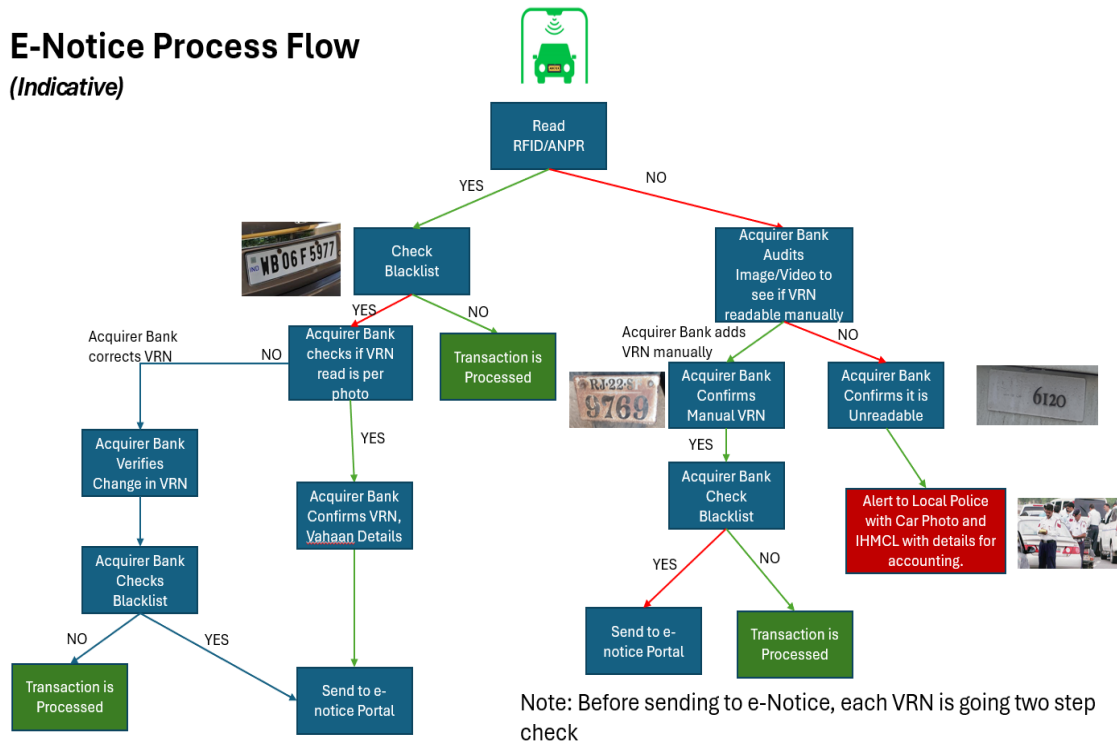
about the violation. This includes the vehicle's license plate number, the date and time of the violation, the toll plaza location, and the penalty amount. The e-notice is formatted as an official document, often including a unique reference number and instructions for payment or contesting the violation.

- f) The e-notice is sent to the registered owner of the vehicle. This can be done via registered mobile number through SMS, email if an email address is available, or through postal mail if only a physical address is on record. In addition, MLFF system may also send reminders or follow-up notices to end users if the initial e-notice is not responded to within a certain timeframe.
 - g) Bidder/bank shall ensure that e-notices generated by MLFF system should have Vehicle Number, Vehicle Classification, Date and Time stamp, Violation reason, preferred payment mode (Through QR, or Bharatkosh link) and other necessary information of the vehicle.
- 4) E-notices shall not be generated for exempted vehicles at toll plaza. The bidder/bank is responsible for preparing and updating a local database on daily basis, ensuring that details of exempted vehicles are pre-available and synced with the IHMCL vehicle database system. If an exempted vehicle, passes through the MLFF system, it should be able to detect the vehicle from the database, thereby preventing the generation of any e-notice. The application shall have the feature to generate MIS reports and other related reports based on parameters as required by IHMCL from time to time.
 - 5) Once the user recharges the FASTag, any dues pending on the FASTag shall trigger the necessary deductions of the outstanding dues to settle the payments.
 - 6) The issuing bank shall transfer the recovered dues to the acquiring bank through NPCI to settle the payment on First in First Out (FIFO) basis.
 - 7) Bidder/bank shall ensure that e-notice generated for any violations should be double the amount of the toll. However, the percentage of revenue share of bidder/bank for e-notices shall be as per actual toll value only.
 - 8) The payment demanded by end users shall be payable within a period of (07) days from the receipt of e-Notice and if the payment is due beyond the said period, at least one additional notice for payment may be sent through electronic means of communication or by way of call to the registered mobile number of the vehicle user for payment within a period of (15) days.

Process Flow Diagram of E-Notice Module for Blacklisted/Low Balance FASTags:



E-Notice Process Flow (Indicative)



9. Roles & Responsibilities of a Bidder/Bank

- a. The MLFF Project shall broadly include, but not limited to the following components to be provided as per the functional and technical specifications mentioned in Schedule-C:
 1. Radio Frequency Identification (RFID) Reader
 2. Radio Frequency Identification (RFID) Antenna
 3. Automatic Number Plate Reader (ANPR) Camera System and Application
 4. IR Illuminator
 5. Audit Surveillance Camera System
 6. Detectors – Radar/ Lidar
 7. Networking and Communications
 8. Software Application, Dashboard and Portal
 9. MLFF Control Center
 10. Power Supply for Field Equipment as well as for MLFF Control Center
 11. Operation & Maintenance (O&M) of the entire MLFF Facility
- b. The quantity and the technical specification of the equipment shall be proposed by the bidder/bank for each MLFF sub-system, unless until specified in this RFP, such that each sub-system fully meets the functional requirement as per the site conditions and SLA requirements.
- c. The entire system should function efficiently as an integrated solution during the entire O&M period.
- d. This RFP describes functional requirements envisaged by IHMCL. In addition, the minimum technical specifications have been prescribed in this document, wherever indispensable. The bidder/bank is responsible for the design of complete project and the system architecture to deliver state-of-the-art solution to IHMCL fully complying to the functional requirement specified in the RFP and site conditions. Any consideration affecting safety, security, redundancy, and compliance to stipulated provision prescribed by Government Authorities is the responsibility of the bidder/bank and shall be duly taken care of to ensure adherence to minimum functional and technical requirement stipulated in this document as well as the SLA parameters.
- e. The scope of the works under this RFP is deployment of Multi Lane Free Flow (MLFF) System on Turnkey basis by the bidder/bank.
- f. The 'bidder/bank hereafter may be called as 'bidder/bank shall conduct the field survey, preparation of design drawings and supply of MLFF equipment and materials, spare parts, test equipment, tools and materials, factory inspection (inspection of equipment & materials upon delivery), training, transportation, and site. delivery, construction and installation, preparation of as-built drawings, testing and commissioning of the MLFF system.
- g. The Bank will be provided with space in the Toll Plaza building for setting up of MLFF Control Centre. The bidder/bank shall be responsible for interior works, MEP works, etc. for construction and setting up the MLFF Control Centre, including any related electrical, lighting, generator set (preferably eco-friendly Gas powered), power backup, HVAC works, access control, air conditioning, CCTV, PTZ cameras, firefighting, alarm, extinguishers, etc. shall be in the scope of the Bidder. All operational expenses towards electricity, diesel/fuel, and other consumables shall be in the scope of the bidder/bank.
- h. The bidder/bank shall also undertake the works that are not specifically mentioned in this RFP but essential for the efficient implementation and operations of the MLFF System to meet the functional requirements specified in the RFP.
- i. The bidder/bank shall propose the MLFF solution and equipment to fully meet the functional requirements of this RFP. The quantity and the technical specification of the equipment shall be proposed by the bidder/bank for each MLFF sub-system, unless until specified in this RFP,

such that each sub-system fully meets the functional requirement as per the site conditions and SLA requirements.

- j. The requirements stated herein shall be construed as minimum requirement and meeting the respective requirements shall not relieve the bidder/bank from the responsibility of supplying the MLFF System that functions efficiently as a system and carry out its Operation & Maintenance for the entire Contract Period.
- k. The Bank shall quote for the entire system and facilities on a “**single responsibility**” basis. bidder/bank obligations mentioned in or to be reasonably inferred from the Contract Documents in respect of the design, manufacture, procurement, construction, installation, adjustment and testing of the Works and remedying any defect therein and operation and maintenance of entire setup for the contract duration. This includes all requirements under the bidder/bank responsibilities for testing and commissioning of the systems and facilities, and where required by the Contract Documents, the acquisition of all permits, approvals, and license, etc.; the training services and such other items and services as may be specified in the Contract Documents.
- l. The bidder/bank shall be responsible for Integration of MLFF system and sub-systems with the IHMCL Central Command Centre, or TMCC or any other projects as per the requirement raised from time to time by IHMCL or its authorized agency.
- m. Advance Traffic Management System (ATMS) is already installed at Dwarka Expressway, The solution proposed by the bidder/bank should be able to integrate with the existing ATMS system for data and information sharing and API integrations if required. All such technical coordination and integration will have to be carried out by the bidder/bank at its own cost.
- n. Growth and maturity levels – the proposed system shall be capable of meeting the requirements arising due to the increase in traffic in the coming years without any additional cost implication to IHMCL.
- o. The MLFF Software shall perform health monitoring check of all field equipment and generate an equipment downtime report based on the same as per provision of Schedule-C.
- p. In addition to the above requirements the MLFF Solution should include all the functional and technical requirements mentioned in schedule C.
- q. The MLFF solution should cover the entire transaction life cycle, including but not limited to:
 1. Capture of information such as FASTag Id, Vehicle Registration Number (VRN) through equipment installed over the Multi Lane Free Flow (MLFF) gantry.
 2. Integration of MLFF systems and NETC systems.
 3. Deployment of Host with secure public keys for toll processing.
 4. Online and Offline Communication between the Acquirer and Fee Plaza operators.
 5. Settlement of Transactions through NETC with adherence to TAT.
 6. Management of Toll Fare Calculations, including discount and exemption rules.
 7. Violation Processing and auditing of image data for discrepancy resolution.
 8. Chargeback Handling as per procedural guidelines.
 9. Helpdesk Support via toll-free numbers to assist Fee Plaza operators.
- r. **Issuance of e-notice** under following cases:
 1. Tag is in low balance or blacklisted tag.
 2. Vehicle Number Plate not automatically recognized through ANPR Camera and not read by RFID reader.
- s. **Integration with MLFF System:** The acquirer bank must process transactions from the MLFF Plaza Server in an online-only mode, ensuring toll fare calculations and transaction processing

as per NPCI and IHMCL standards. The host system should be capable of supporting both online and offline transaction processing based on connectivity availability. bidder/bank must provide the redundancy of parallel bandwidth with minimum of 500 Mbps to 1 Gbps for camera/ component and at CC for (image/ video/ data). The bidder/bank shall use MPLS/ Fiber/ Internet connectivity as per the specified requirements.

- t. **Integration with NETC System:** The Acquirer Bank must integrate its host system with NPCI's ETC system (ETC Switch and Mapper) to process transactions in the required format. The acquirer host will verify the tag status from the Mapper, calculate the toll fare based on vehicle class, and submit the transaction to the NETC switch for final processing. All technical and procedural guidelines of NPCI, NHAI, MoRTH, and IHMCL must be adhered to.
- u. **Integration with VAAHAN -** The integration with VAHAN enables the MLFF system to access updated end-user data for generating e-notices. By leveraging VAHAN's comprehensive vehicle registration database, the MLFF system can automatically identify vehicles and facilitate seamless toll transactions. This integration also ensures efficient generation of e-notices by providing the MLFF system with current user information.
- v. **Integration with TMCC –** The acquirer bank integrates their analytical data and details in the form of reports, daily transactions and any other important KPIs with IHMCL Traffic Management Control Center (TMCC) application.
- w. **Integration with nearby toll plaza -** Integrating the nearby toll plaza system with the Multi-Lane Free-Flow (MLFF) tolling system shall enable MLFF tolling system for getting the relevant information related with low balance FASTag in advance. This integration enables the MLFF system to preemptively have information of such vehicles having low balance and have crossed the nearby plaza and heading towards the MLFF system. Additionally, the system can automatically issue notices to road users for recharging accounts in case they are heading towards Dwarka Expressway Plaza to avoid issuance of e-notices. This streamlined approach not only improves toll collection efficiency but also enhances transparency and compliance, leading to smoother traffic flow and better road management.

The solution should include integration with Khedki Daula Toll Plaza on NH-48 such that if directions are issued from IHMCL/NHAI, user fee adjustment may be made at Khedki Daula Toll Plaza.
- x. **Future integration with advanced technologies such as GNSS, Raj Marg Yatra etc.** or any other similar system at no extra cost.
- y. **Grievance Portal and Redressal:** The bidder/bank is required to develop a comprehensive grievance portal and redressal system for the MLFF system. This system should enable customers to register complaints related to transactions seamlessly through both the MLFF interface and a customized portal. The solution must include features for live tracking of grievance redressal, accessible via the IHMCL Dashboard portal, to provide real-time updates and reports. Additionally, the system should generate a unique Complaint Reference Number (CRN) for each registered complaint, ensuring transparency and efficient resolution. The bidder/bank must ensure the system is user-friendly, secure, and capable of handling a high volume of complaints efficiently.
- z. A dedicated toll-free number should be established to allow end users to register any grievances or complaints. This service ensures that users have a direct and accessible channel for reporting issues, enhancing customer satisfaction and facilitating prompt resolution of concerns. The toll-free number should be operational 24/7, with trained personnel available to handle inquiries and provide necessary support efficiently.
- aa. Bidder/bank shall issue a notification in terms of advertisements via newspaper and social media in advance for updating the local/exemptions vehicles in IHMCL database.
- bb. **Real time Dashboard for IHMCL** having transactional data, processing time, violation, total vehicle counts etc. at
 - i. IHMCL intends to implement a e-Notice system, in such case, Acquirer Bank will be required to facilitate development and deployment of the e-Notice System while integrating with other systems (Vahan, thorough Bharatkosh) system with the MLFF system.

- ii. The transactions where RFID/ANPR cannot capture vehicle number plate details, the MLFF Validator will manually retrieve the number by searching the VAHAN database. The MLFF software should be integrated with the VAHAN database, and payments will be processed through the Bharatkosh portal using various payment methods such as QR codes, UPI, and internet banking.
- iii. The Acquirer Bank needs to decide on the point of integration of Vahan and MLFF software to validate the vehicle class/ weight / axle so that the classification accuracy is maintained as per the RFP.

cc. Transaction Processing for Multi Lane Free Flow Tolling

The system must support seamless transaction processing, both online and offline, with the following capabilities:

1. Transmission of Transaction Data from the MLFF controller to the NETC system, including successful, failed, and declined transactions.
2. Vehicle images for settled transactions must be retained for 30 days. For any unsettled transactions, the bidder/bank is required to retain the data (images/videos) until the end of the contract.
3. Business Rule Management for toll fare calculation, exemptions, and discount application as defined by the NHAI/IHMCL.
4. Reconciliation and Settlement of transactions with Fee Plazas and the NETC system, adhering to the defined TAT.
5. Violation Management, with a mechanism for auditing and adjusting toll charges for vehicle class mismatches based on image evidence.
6. Exception List Synchronization as per ICD 2.5 guidelines or latest between the Acquirer Host and Fee Plaza Server for backlists and exemption lists.

dd. Exception List

The acquirer host must support managing and updating the following exception lists:

1. Blacklist: A list of tag IDs that are denied toll passage, as defined by IHMCL/NPCI.
 2. Exempted Vehicles: Categories of vehicles exempt from toll, such as emergency services, as per government regulations.
 3. Reconciliation and Discrepancy Handling: Daily reconciliation of transactions with Fee Plaza and NETC data, and resolution of discrepancies.
 4. Dispute Resolution: Full responsibility for resolving disputes within the stipulated TAT in coordination with the Acquirer Bank and NPCI.
 5. Bidder/bank shall be responsible for provisioning of requisite electricity power and its recurring charges (during entire period). The bidder/bank shall comply with lightning-protection and anti –interference measures for system structure, equipment type selection, equipment earthing, power, signal cables laying. The bidder/bank shall describe the planned lightning- protection and anti –interference measures in the report. Bidder/bank shall ensure that the sufficient power supply should be available at the site, and it should be in the name of “IHMCL” only and any recurring cost for DG set and raw power incurred during functioning of overall project shall be borne by bidder/bank itself.
- ee. The bidder/bank must ensure that any branding, marketing, or banners by the acquirer bank or its associates are conducted in consultation with and approved by IHMCL.

10. Implementation Plan

- a. The bidder/bank is required to submit the implementation plan for MLFF System at toll plaza location.
- b. The project will be considered successfully implemented only after installation of all MLFF sub-systems at above mentioned sections and integration and Go-Live with NETC System.
- c. The Selected bidder/bank will create a database of exempted vehicle. The Database shall be synced with MLFF System software. The bidder/bank shall ensure to update the database in Realtime.



11. Transaction Processing Cases

Type of Transactions	Processing Cases	Timelines to be settled	Action to be taken	Outcome
Clean Transactions (Settled)	For every clean transaction having sufficient balance: In such case transactions amount shall be debited from the end user and collected by the Acquirer Bank on real time account through NETC/ NPCI for further settlement.	As per ICD 2.5 or latest	No e-Notice shall be issued in such cases.	No penalties
	For exempted Vehicles - In such cases, MLFF system shall detect the vehicle through RFID reader and ANPR cameras installed at Toll Plaza and validate it from database. If the database has details of the vehicle under exempted category, then it shall be considered under clean (Settled) transactions.	As per ICD 2.5 or latest	No e-Notice shall be issued in such cases.	No penalties
Blacklisted Transactions (Un-Settled)	Insufficient Balance/Hot listed in FASTag - vehicle shall be considered for issuance of e-notice in case its respective FASTag does not have sufficient balance / Threshold Amount to honour the toll payment.		e-Notices shall be issued within 24 hours of violation along with the intimation to the FASTag issuer bank for recovery of the pending toll charges	If the timelines for issuance of e-notice exceeded, then applicable penalties as defined in SLA is applicable.
	For blacklisted vehicles - In such cases, MLFF system shall detect the vehicle through RFID reader and ANPR cameras installed at Toll Plaza and validate it from database. The validator/auditor further review the details and generate e-notices.		e-Notice shall be issued in such cases within 24 hours of violation.	If the timelines for issuance of e-notice exceeded, then applicable penalties as defined in SLA is applicable.
	RFID reader, ANPR and Audit surveillance cameras fails to detect the VRN – In such cases, Acquirer bank shall generate the logs of such unidentified		Evidence (images and videos) of such cases shall be provided by successful bidder.	In case, if MLFF system failed to detect the vehicle FASTag and VRN, then penalty is applicable on Successful Bank

Type of Transactions	Processing Cases	Timelines to be settled	Action to be taken	Outcome
	vehicles, validated through validator/auditor, and provide the details to IHMCL. IHMCL shall further examine the logs provided by the successful bidder through third party auditor.			on per instance based. IHMCL reserve the right to verify such cases through assessment and validation from third party Auditor. IHMCL may decide based on mutual understanding.
	E-Notice already issued for the vehicle with payment pending - Bidder shall ensure that e-notice generated for any violations should be double the amount of the toll. However, the percentage of revenue share of bidder for e-notices shall be as per actual toll only.		Any pending dues on the FASTag will trigger the necessary deductions to settle the payments within seven days. However, if the dues remain unpaid after 15 days, a reminder e-notice will be generated.	If the timelines for issuance of e-notice exceeded, then applicable penalties as defined in SLA is applicable
Handling transactions through Manual Validation	Vehicle fail to identify an RFID (FASTag) passes at toll plaza – In such cases, MLFF system shall capture the Vehicle number plate through high resolution Automatic Number Plate Recognition (ANPR) cameras and store the details in server for validation.	A per IHMCL /NHAI policy	If RFID FASTag is not available, then e-Notice shall be issued on that VRN within 24 hours of violation. If FASTag is available on vehicle, <ul style="list-style-type: none"> In case of tag is having sufficient balance, the amount shall be deducted from available balance. In case of tag is insufficient balance, then e-notice shall 	If the timelines for issuance of e-notice exceeded, then applicable penalties as defined in SLA is applicable.

Type of Transactions	Processing Cases	Timelines to be settled	Action to be taken	Outcome
			be generated.	
	RFID reader & ANPR fails to detect the VRN – In such cases, MLFF system shall detect the vehicle through other cameras installed at Toll Plaza such as audit surveillance cameras through video evidence and validate it from database.	Within 24 hours	<p>e-Notice shall be issued in such cases within 24 hours of violation.</p> <ul style="list-style-type: none"> In case of tag is having sufficient balance, the amount shall be deducted from available balance. In case of tag is insufficient balance, then e-notice shall be generated. 	If the timelines for issuance of e-notice exceeded, then applicable penalties as defined in SLA is applicable.

Note:

- Detailed information on Settled and Un-Settled Transactions, refer latest NPCI PG Guidelines and ICD 2.5 Guidelines.**

12. Service Level Agreement

#	Parameter	Timelines	Basis of measurement	Penalties
Implementation Phase				
1.	Supply, Installation, Testing and Commissioning, (Go-Live)	90 days from the acceptance of LoA	Date of acceptance report	2.5 Lakhs per week for initial two week of delay, further 5 Lakhs for four weeks and after 6 weeks, 10 Lakhs per week. The maximum penalty during development and installation shall not be more than 1Cr. Furthermore, IHMCL may terminate the contracts.
Operation & Maintenance Phase				
2.	Manpower Availability (Aadhar based Bio metric Attendance is mandatory for deployed Manpower)	Attendance and availability of manpower	8 Hrs. per Shift	<p>a) In case of non-availability of manpower flat 3000 Rs per person/ Day shall be applicable.</p> <p>b) In case, if the non-availability of manpower is consecutively observed by IHMCL for more than 5 days then bidder shall be liable to replace the manpower</p>
Control Centre Equipment and Software				
#	Parameter	Basis of measurement	Accuracy	Penalties
3.	Availability of all Equipment/ Software in Control center	<p>The uptime availability of all equipment of MLFF system shall be 99.9% per lane per month through EMS tool.</p> <p>The downtime shall be calculated at a cumulative level when any of the Control center equipment as mentioned below is non-operational for that specific lane:</p> <ul style="list-style-type: none"> MLFF Server including Software. Network Switch 	<p>Maximum permissible downtime for all Equipment shall be 44 minutes per lane per month.</p> <p>Scheduled downtime is defined as a period of time when the system will remain unavailable for conducting</p>	<p>Within 44 minutes: No penalty</p> <ul style="list-style-type: none"> Beyond 44 mins, per hour per lane, a penalty of Rs 10,000 shall be applicable. The upper limit of the penalty shall be equal to total PBG value. Beyond that, IHMCL may consider it as a case of breach

		<ul style="list-style-type: none"> All Lanes communication down with MLFF server 	<p>necessary preventive maintenance, urgent repairs, etc. The maximum scheduled downtime for any Site shall be 4 hours per month for plaza system.</p>	<p>and may take necessary actions.</p> <p>If system availability is below than 98%, then IHMCL may consider as a breach and take necessary actions</p>
Lane Equipment				
#	Parameter	Basis of measurement	Accuracy	Penalties
4.	Availability of all components in Lane	<p>The uptime availability of equipment shall be a minimum 99.5% per lane per month.</p> <p>The downtime for a MLFF equipment lane shall be calculated cumulatively when any of the equipment, as mentioned below, is non-operational for that specific lane:</p> <ol style="list-style-type: none"> 1 RFID Reader & Antenna 2 Lidar 3 Radar 4 Audit Surveillance Camera 5 ANPR Camera and Application 6 IR Illuminator 7 MLFF Application 8 Any additional equipment 	<p>The permissible downtime for all Equipment shall be 4 hours per lane per month.</p>	<p>Within 4 hours: No penalty</p> <ul style="list-style-type: none"> Beyond 4 hours , per hour per lane, a penalty of Rs 10,000 shall be applicable. The upper limit of the penalty shall be equal to total PBG value. Beyond that, IHMCL may consider it as a case of breach and may take necessary actions. <p>If system availability is below than 98%, then IHMCL may consider as a breach* and take necessary action.</p>
5.	Lane Down Time	<p>The uptime availability of each lane shall be 99.9% per lane per month.</p> <p>The downtime of any lane shall be calculated when any lane is non-operational due to non-functioning of equipment or due to any other reasons.</p> <p>In case the lane is down, Bidder should close the down lane and shift to redundant lane immediately within 10 minutes incident.</p>	<p>The permissible downtime for lane shall be 44 minutes per lane per month.</p>	<p>Within 44 minutes No penalty</p> <p>Beyond 44 minutes per hour per lane, a penalty of Rs 10,000 shall be applicable.</p> <p>If any vehicle is passing during down lane, the revenue loss incurred shall be payable by the successful bidder. The upper limit of the penalty shall be equal to total PBG value.</p> <ul style="list-style-type: none"> Beyond that, IHMCL may consider it as a

				<p>case of breach and may take necessary actions.</p> <p>If system availability is below than 98%, then IHMCL may consider as a breach* and IHMCL may take necessary action.</p>
6.	E-Notice for end users	The E-Notice shall be generated, and log submitted to VAHAN within 24 hrs of validation.	Maximum 24 Hours	<p>Within twenty four-hour: No penalty</p> <p>After that per hours-per instance a penalty of Rs 1000/- shall be applicable.</p>

Accuracy - Vehicle Count and classification

#	Parameter	Basis of measurement	Accuracy	Penalties
7	Vehicle Count (Tollable and Non Tollable)	100% Vehicle count (on daily basis)	100%	<ul style="list-style-type: none"> For any missing count of any vehicle in the accuracy, a penalty of Rs 500000 shall be applicable Per day. Below 98% accuracy, shall be considered as breach. IHMCL reserves right to validate the accuracy through third party agency audit.
8	Vehicle Classification	99% Vehicle Classification (on daily basis)	99%	<ul style="list-style-type: none"> For any missing Classification of any vehicle in the accuracy, a penalty of Rs 500000 shall be applicable per day. Below 98% accuracy, shall be considered as breach. <p>IHMCL reserves right to validate the accuracy through third party agency audit.</p>

System Accuracy – Instance Wise

#	Parameter	Basis of measurement	Accuracy	Penalties
9.	Un availability of Images and video	<p>The vehicle passed through the lane, Acquirer Bank must account for the vehicle through ANPR (front and back) and audit surveillance cameras. Images and videos are not available it will be considered instance of unaccounted vehicle.</p> <p>IHMCL shall get the video from various cameras processed through third-party on sample or complete basis and arrive on count of vehicles that have passed through each lane.</p>	Per instance	Per Instance penalty shall be Rs 10000 is applicable along with revenue loss incurred from unidentified vehicles.
10	Remote video Check	<p>NHAI should be able to access any remote access through third party software or overview through IP and authentication details provided by NHAI/IHMCL.</p> <p>If for any reason (wrong, IP Password, network downtime etc.) the footage is not visible, or photo is not available in ANPR, Audit surveillance Camera then it will be considered a violation. Simple screenshot with a date time visible shall be enough to prove violation by IHMCL/NHAI.</p>	If for any reason	5000 Rs per camera per day. Same camera will not be checked again in the same day if violation found and recorded
11	API based data sharing with IHMCL MIS/ERP system	API or uploads-based sharing of reports from software to IHMCL ERP/MIS as prescribed in the contract and any notification / circular issued from time to time.	Per instances	Per Instance penalty shall be Rs 3000 for data sharing missed by Acquirer Bank.
12	Manual Entries	In case of any wrong manual entries done for vehicles or validated	Per instance	<p>A penalty of Rs 100000 per instance shall be applicable on each manual entry.</p> <p>IHMCL reserves right to validate the accuracy through third party agency audit</p>
13	Wrong e-notices	In case of any wrong e-notices issued and admitted by bidder	Per instance	<p>A penalty of Rs 100000 per instance shall be applicable on each wrong e-Notices issue and admitted by bidder.</p> <p>IHMCL reserves right to validate the accuracy through third party agency audit</p>

14	Transaction (remittances)	<p>The bidder shall deposit the collected user fee amount (Clean ETC transaction + Local Pass + Monthly pass and e-notices issued) for a period from Tuesday (00:00:00 Hrs) of the prior week to Monday (23:59:59 Hrs) after deduction of bidder's revenue share of the current week into the specified bank account.</p> <p>SLA shall be calculated on Monthly basis .SLA Penalty settlement will happen in first week of every month.</p> <p>Cash Performance security shall be replenished by the bidder within 3 working days from the date of such recovery.</p> <p>Immediate/real time credit in the prescribed account after the completion of week,</p>	Every Tuesday	<p>In case of delay in transactions (remittances) of the User Fee due under this Contract to the Authority beyond the due/specified day as mentioned above, the Authority shall levy penalty @ 0.2% per day for delay in remittance of payment.</p> <p>The bidder will be required to pay the dues along with penalty within 3 working days of the specified day failing which the same will be adjusted from the Cash Performance Security by Project Director and simultaneously the Project Director shall route the ETC Collection directly to NHA Toll Account till clearance of dues. Cash Performance security shall be replenished by the bidder within next 3 working days from the date of such recovery. If agency fails to replenish the performance security and clear the dues in next 3 working days, the contract is liable to be terminated.</p>
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Spare Availability

#	Parameter	Basis of measurement	Accuracy	Penalties
14	<p>Availability of 10% spare (RFID Reader & Antenna, Lidar</p> <ol style="list-style-type: none"> 1 Radar 2 Audit Surveillance Camera 3 ANPR Camera and Application 4 IR Illuminator 	<p>Audit at any point of time. IHMCL conduct surprise inspection for validation/ verification of spares</p>	100%	<p>Each violation/instance shall attract the penalty of Rs. 3,00,000/-.</p>

Cleanliness and Maintenance of Public Toilets, Control centre, and Surrounding areas of Plaza Building				
#	Parameter	Basis of measurement	Accuracy	Penalties
15	Maintenance of Toilets and Sanitation, Hygiene	Audit at any point of time. IHMCL conduct surprise inspection of toilets hygiene	100%	Each violation/instance shall attract the penalty of Rs. 1,00,000/-
16	Maintenance of Control Centre, Plaza Building, and assets and Surrounding Areas	Audit at any point of time. IHMCL conduct surprise inspection of Plaza area	100%	Each violation/instance shall attract the penalty of Rs. 1,00,000/-

Note

- I. Penalties may be cumulative, meaning multiple penalties can be applied for different types of non-compliance within the same period.
- II. Any other losses to revenue due to system issues/downtime shall be borne by bidder. Recovery of such losses shall be recovered by bidder.
- III. If a particular category of report mentioned in “accuracy in RFID reader and ANPR camera are not as per SLA by Acquirer Bank” repeatedly not acceptable for SLA penalty shall be applied. Further, the IHMCL reserves the right to terminate the contract and forfeit the PBG.
- IV. In case the delay is not solely attributable to the Acquirer Bank, no penalty shall be applicable.

12.1 Consequences of breach

- I. If the penalty is more than 10% of Cash performance guarantee for 3 consecutive months, the purchaser may consider it as breach and reserves the right to terminate the contract and forfeit the PBG.
- II. The total penalty leviable for SLAs violation in entire project duration is limited to 10% of total Performance guarantee (including cash performance guarantee and PBG.)

13. Manpower

Operation & Maintenance (O&M) Manpower

- (i) The O & M period after the successful completion of works shall include Operation & Maintenance of the entire MLFF Facility as per the Service Level Agreement (SLA) with Qualified Manpower mentioned in Schedule-C, Annexure-5, 5.1, Schedule-I including supply of adequate spares, parts, consumables, and maintenance equipment required for the facility. The Bidder shall maintain required spare parts to maintain required service levels. The minimum Operations & Maintenance manpower requirement as per Schedule C, Annexure-5, 5.1, Schedule-I is clarified as below. If acquirer bank feels more manpower shall be required to meet the SLAs, they may consider in their commercials.

#	Operation & Maintenance (O&M) Manpower	Minimum Manpower requirement for Control Center
a.	Project Manager (Dedicated On-site) – (1 Nos.)	1
b.	Field Engineer (8 No. s)	8
c.	Auditor/Transaction Validator	14
d.	Security Guard	14
e.	Cleaner	8

- (ii) The Bidder shall have sufficient infrastructure and capability to keep/store spares required for maintenances and will always during the contract period maintain sufficient inventory of spares and consumables for operating and maintaining the MLFF System, and to meet the Service Level Agreement.
- (iii) Before the start of O&M Period, the Bidder shall deploy the O&M Personal mentioned at Schedule-C with prior approval of the Authority. The resumes of the proposed personal shall be submitted in the format given in Schedule-C, Annexure-5, 5.1, Schedule-I.

Schedule - C

Standards & Specification



Standards and Specification of all MLFF Sub System

Note: All the specifications and compliance requirements should be either on OEM Letterhead or datasheet published by OEM on their website countersigned by acquirer bank.

The acquirer bank shall be required to submit the bid along with Manufacturer Authorization Form (MAF) issued by respective OEMs mentioning compliance requirement as per RFP number and date.

1.1 RFID Reader

#	Parameter	Minimum Specifications
1	Frequency	UHF 860-960 MHz (configurable)
2	Supported Protocols	ISO 18000 6C/63, RAIN RFID/Gen2v1, ISO 18000-6B, 6B-40K, 6B-80K, ISO 10374 (ATA), TDM (IAG/PS111), Title 21, Artifact SJ5511, FLEX
3	Conducted Power	+10 to +33 dBm (33 dBm is recommended for free flow tolling)
4	Interference Rejection	Dense Interrogator Mode
5	Reader Speed Detection	150km/hr. or higher.
6	Antenna ports	4 ports, N-type Female, switching time <5ms
7	Time synchronization	NTP /PPP
8	Communication Interface	10/100 BaseT Ethernet, CAN, RS232
9	Upgradeable Firmware	Yes
10	Operating Temperature	-10°C to +55°C (Ambient)
11	Storage Temperature	-10°C to +55°C
12	Relative Humidity	95%, non-condensing
13	Power	24DC +/- 10%
14	Regulatory	BIS, FCC
15	IP Rating	IP 67
16	Display	LED (Power, Transmit, Detect, LAN)
17	GPIO	2 Inputs, 2 Outputs
18	Memory	Persistent data storage for up to 10,00,000 unique transactions
19	Network Services	DHCP, HTTP, SNTP
20	Supported Regions	FCC, EN, FCC and RoHS
21	Safety	UL, IEC, EN
22	Preferred OEMs	SSI, Tag Master, Kathrein, Zebra or equivalent Equivalent means : OEMs equipment used in Multilane Free Flow Tolling System in India or Abroad and operational for at least 2 years

1.2 RFID Antenna

#	Parameter	Minimum Specifications
1	Frequency Range	865-928MHz
2	Gain	15 dBi \pm 1 dB
3	Return Loss	Below -15 dB
4	3 dB Beam width	Azimuth (E-plane): 27.5° - 29° Elevation (H-plane): 34° - 36°
5	Polarization	Linear Horizontal
6	Front to Back Ratio	Below -30 Db
7	Maximum Input Power	6 Watt
8	Impedance	50 Ω
9	Lightning Protection	DC Grounded
10	Operation temperature	-10°C to +55 °C
11	Storage temperature	-10°C to +55 °C
12	IP Rating	IP 67
13	Connector	N-Type Female
14	RoHS Compliance	Yes
15	Mounting Kit	Included
16	Preferred OEMs	SSI, Tag Master, Kathrein, Zebra or equivalent Equivalent means : OEMs equipment used in Multilane Free Flow Tolling System in India or Abroad and operational for at least 2 years

1.3 Audit Surveillance Camera

#	Parameter	Minimum Specification
1	IR Illumination Source	Latest High Power Led Technology LEDs
2	Lane Coverage	Up to 6 lanes (3.5Mtr Per Lane)
3	IR Effective Range	15 to 20M (License plate Capture) / 150M (Overview)
4	Speed Limit	150km/hr. or higher.
5	Image Sensor	1/2.7" Progressive CMOS or better
6	Effective Pixels	2048 x 1536
7	Optical Format	1/1.8"
8	Min. Illumination	Color: 0.1Lux / BW: 0 Lux (IR ON)
9	S/N Ratio	More than 60Db
10	Electronic Shutter	1/60000s to 1s or better to Adequately capture video footage of vehicles travelling at 150KMPH or higher
11	Frame Rate	Up to 50/60 fps (50/60 Hz) in all resolutions
12	Lens	12.0 ~ 22.0 mm or better as per requirement. The cameras shall have P-iris technology
13	Video Compression	H.265, H.264, M-JPEG, JPEG
14	Protocols	HTTP, RTP/RTSP(Uni/Multicast), TCP/IP(v4/v6), UDP, FTP, Telnet, HTTPS, RARP, PPPoE, SNMP, PAP, CHAP, DHCP, NTP, SMTP client, uPnP & etc.
15	Images Setting	Adjustable image size, quality, and bit rate Time/Date stamp and text caption overlay Configurable brightness, contrast, saturation, sharpness, white balance, and exposure AGC / AWB / AES / BLC / WDR should be at least 120 Db
16	Standard	ONVIF (Profile S & G/T/M)
17	Operating Temperature	-10 ~ +55°C
18	Power Option	POE/POE+ /POE++/ External Power supply (Industrial Grade Power Supply)
19	Certification	CE/ FCC/ BIS Certification, NEMA 4X, IP67 (Full metal Casing),
20	Chipset/Processor	The Camera should not have Hisilicon chipset/Processor
21	Preferred OEMs	Pelco/Avigilon, Axis, Vivotek, FETCI, Tattile or equivalent Equivalent means :OEMs equipment used in Multilane Free Flow Tolling System in India or Abroad and operational for at least 2 years.

1.4 Automatic Number Plate Recognition Systems

#	Parameter	Minimum Specifications
1	General	The Camera should have feature and functionalities to capture number plate and video evidence from t-5 to t+5 sec of the Toll violation at maximum speed of 150KM/Hr or higher and should also be recorded (t being the instant at which the infraction occurred). The system should have capability to detect both Retroreflective and Non-Retroreflective number plates for the vehicles during the day as well as nighttime as per the accuracy levels specified. System should be capable of generating a video in any of the standard industry formats.
2	Automatic Number Plate Recognition (ANPR) Camera	
a	Sensor Type	Progressive scan (CMOS) Day/Night Camera. The cameras Lens shall have P-iris technology
b	Resolution	5 Megapixels (2560* 2048) or better
c	Speed Detection	speed Upto 150km/hr. or higher.
d	Video Compression:	H.264, H.265
e	Normal Horizontal Field of View	At least 3.5 meters One lane, (For each lane, service lane and shoulder)
f	Typical Range	40 meters. or better
g	Operating Temp.	-10°C to +55°C
h	Auto Iris Control	Yes
i	Protection rating	NEMA 4X, IP-IP66 or Better (protection against water and dust ingress), Resistance to corrosion in harsh environments
j	Communication	10/ 100/ 1000 Base-T Ethernet interface Static IP/ DHCP support for IP address assignment & network configuration Image transfer over Ethernet (FTP and/ or TCP/IP) NTP (network time protocol) time synchronization
k	Data Processing	Built-in processor running Linux OS Advanced image processing functions Image buffering, Data/ Time stamp and image tags
l	MTBF	45,000 Hours
l	Power	24DC +/- 10%
m	Shutter Speed	1 sec. to 1/100,000 sec. or better shutter speed to cater to capturing number plate and video evidence
n	Frame Rate	Upto 50/60 fps at all resolutions with controllable bit rate and frame rate
o	Chipset/Processor	The Camera to be provided by the bidder should not have Hisilicon chipset/Processor.
p	Camera Housing	The camera shall be housed in a suitable housing to protect them from solar radiation, UV, dust, and rain. The field of view of the camera shall not be obstructed by the housing. Picture quality or optical performance shall not be degraded by the housing. The Housing shall have IP-67/IP-68 rating for Weather-proof with better dust & dirt protection, and NEMA 4X-rating or IK10 or higher rating for Vandal-proof. The housing shall have built-in heater and blower.
Q	Certification	CE/ FCC/ BIS Certification, NEMA 4X, IP67 (Full metal Casing),

r	Preferred OEMs	Pelco/Avigilon, Axis, Vivotek, FETCI, Tattile or equivalent Equivalent means :OEMs equipment used in Multilane Free Flow Tolling System in India or Abroad and operational for at least 2 years.
3.	On site – Network Connectivity & Electrical Interface	
a.	Data Storage on site	The system should be equipped with appropriate storage capacity for minimum 24-hour recording, with overwriting capability. The images should be stored in tamper proof format only.
b.	Network Connectivity	Wired/GPRS based wireless technology with 3G /4G upgradable to 5G capability.
c.	The system should be capable of working in ambient temperature range of -10°C to +55°C	
d.	Lightening arrester shall be installed for safety of system (As per BIS standard IS 2309 of 1989) on the structure. SPD should be installed at junction box at each location.	
e.	The housing(s) should be capable of withstanding vandalism and harsh weather conditions and should meet IP66, IK10 standards (certified).	
4.	Video Recording	
a.	The system should be capable of continuous video recording in control center in Unified Storage for 30 days. It should be noted that at any point of time the local storage at the base station should have the data of previous 30 days.	
b.	Direct extraction through any physical device like USB, Hard disk shall be possible through Unified Storage.	
c.	The Camera shall have inbuilt SD card slot and shall be provided with at least 128 GB class 10 SD card.	
6	Pelco/Avigilon, Axis, Vivotek FETCI, Tattile or equivalent Equivalent means :OEMs equipment used in Multilane Free Flow Tolling System in India or Abroad and operational for at least 2 years.	

1.5 IR Illuminator

#	Parameter	Minimum Specifications
1.	Illumination Source	High power LEDs (using components from leading LED manufacturer, ensuring long-term reliability)
2.	Wavelengths	Narrowband: NIR (850 nm), blue (470 nm), or Broadband: white spectrum
3.	Optical Output	Lighting Device max. 2400W (pulsed) Total radiant flux 190W (pulsed) Intensity variation<1% Flash power is programmable
4.	Lane Coverage	Beam angle options Beam pattern Upto 90 or better
5.	Trigger Modes	(1) Strobe Mode (flashes upon input pulse - up to 75 Hz for traffic bursts and image sequences) (2) Vehicle Safety Mode (strobe combined with continuous white light to limit the impacts on drivers when using white/blue flash)
6.	Pulse with control	Programmable or controlled by input pulse width Maximum pulse width for full intensity: 2.2-3.3ms
7.	Communication Control	Full user control on Illuminator parameters and strobe status output by USB, RS485, or via ANPR Camera system
8.	Connections	All connectors are quick disconnect for fast install Connector 1 or Power, Serial Communications, Strobe In, Strobe Status (mates with supplied cable)
9.	Cable	Cable for Connector to ANPR Camera IO system is included (shielded, outdoor rated, terminated with the connector to fit with ANPR Camera system)
10.	Virtualization	Rugged, compact, corrosion-resistant enclosure IP66 (protection against water and dust ingress)
11.	Operating Temperature	-10°C to +55°C [heated enclosure]
12.	MTBF	90,000 hours
13.	Illumination Range	Minimum 70Mtrs and should be adjustable
14.	Protection Function	Transient over peak suppression
15.	Power	Either POE+ or 24V DC \pm 10%
16.	Weight	Maximum of 4 kg
17.	Certifications	FCC Compliant, RoHS Compliant, CE Compliant / BIS
18.	IP Rating	IP 66 Rugged

1.6 Detector-Lidar

#	Parameter	Minimum Specifications
1.	Installation	Overhead
2.	Light Source	Infrared (865-905nm)
3.	Detect vehicle speed	10–220 km/hr.
4.	Coverage	Minimum two lanes per unit
5	IP rating	IP 67
6	Operating Temperature	-10°C to +55°C
7	Trigger response time	>=10ms
8	Observability	Device can minimum operate 15 mtrs under various weather conditions such as sunshine, heavy rain, fog...etc. These weather conditions should not affect the sensor performance
9	Communication	Ethernet TCP/IP 10/100 Mbit, Serial (RS-232, RS-422/485), USB
10	Power consumption	15-30 W,
11	Time synchronization	NTP
12	Inbuilt process unit	The Lidar shall have inbuilt processing unit to avoid any disruption in case of network/connectivity failure

1.7 Detector-Radar

#	Parameter	Minimum Specification
1	Objects Tracking	Up to 256 Objects
2	Lane Coverage	Up to 4 lanes with single sensor
3	Detection Range	Up to 300 m
4	Speed Detection Range	150 kmph or higher
5	Speed Detection Accuracy	<±1%
6	Sensor Frequency	76 - 81 GHz
7	EIRP	Up to 36 dBm
8	Measurement	Cartesian (x, y, z) coordinates, Azimuth, Elevation, Speed
9	Communication Interfaces	Ethernet /USB, RS 485
10	Refresh time	24 MS
11	Power Supply	12V
12	Power Consumption	10-40W
13	Operating Temperature	-10 to 60 ° C
14	Environment Protection	IP67
15	Certification	Speed detection accuracy of the system should have been Certified and tested for speed accuracy from government agency/s under Central Motor Vehicle Rule (CMVR) 126 like ARAI/ ICAT/ VRDE/ GARC etc.) with accuracy should be more than 220 km/h ± 1%.

1.8 Local Server

BIDDER can supply the server as per the requirement to run the overall system. If required, the bidder must upgrade the server to achieve the desired outcome as per the requirement.

#	Parameter	Minimum Specifications
1.	Processor	Latest series/ generation of 64-bit x86 processor(s) with Twelve or higher Cores, Intel/ AMD Processor speed should be a minimum of 2.4 GHz. Minimum 2 processors per each physical server
2.	RAM	Minimum 64 GB or higher configured Memory per physical server
3.	Application Storage	Minimum 30TB storage available disk space. Minimum 7 days of storage should be available on local server, which shall be overwrite after every 7 days.
4.	Network interface	2 X 10 GbE LAN ports for providing Ethernet connectivity. Optional: 1 X Dual-port 16Gbps FC HBA for providing FC connectivity The required connectivity can be provided using converged FCOE ports on servers
5.	Power supply	Dual Redundant Power Supply
7.	RAID support	As per requirement/solution
8.	Operating System	Licensed version of 64-bit latest version of Linux/ Unix/Microsoft® Windows based Operating system)
9.	Form Factor	Rack mountable
10.	Virtualization	Shall support Industry standard virtualization hypervisor like Hyper- V, VMWARE and Citrix. Bidder will decide.
11.	Operating Temperature	5 C to 40 C, should be an Industrial grade model

1.9 Storage

#	Parameter	Minimum Specifications
1.	Solution Type	IP Based/iSCSI/FC/NFS/CIFS/N2N
2.	Storage	<p>Storage Capacity should be minimum 125 TB or more as per requirement (usable, after RAID configuration)</p> <p>To store all types of data (Data, Voice, Images, Video, etc)</p> <p>Storage system should be capable of upward scalability.</p> <p><i>Note: Storage space to be finalized during the design phase.</i></p>
3.	Hardware Platform	<p>Rack mounted form-factor</p> <p>Modular design to support controllers and disk drives expansion</p>
4.	Controllers	At least 2 Controllers in active/active mode. The controllers / Storage nodes should be upgradable seamlessly, without any disruptions / downtime to production workflow for performance, capacity enhancement and software / firmware upgrades.
5.	RAID support	Should support various RAID levels
6.	Cache Memory	Minimum 256 GB per controller of useable cache memory across all controllers. If cache memory is provided in additional hardware for unified storage solution if applicable, then cache memory must be over and above 256 GB per controller.
7.	Redundancy and High Availability	The Storage System should be able to protect the data against single point of failure with respect to hard disks, connectivity interfaces, fans, and power supplies.
8.	Management software	<p>All the necessary software (GUI Based) to configure and manage the storage space, RAID configuration, logical drives allocation, snapshots etc. are to be provided for the entire system proposed.</p> <p>Licenses for the storage management software should include disc capacity/count of the complete solution and any additional disks to be plugged in in the future, upto max capacity of the existing controller/units.</p> <p>A single command console for entire storage system.</p> <p>Should also include storage performance monitoring and management software.</p> <p>Should provide the functionality of initiative-taking monitoring of Disk drive and Storage system for all disk failures.</p> <p>Should be able to take "snapshots" of the stored data to another logical drive for backup purposes</p>
9.	Data Protection	The storage array must have complete cache protection mechanism either by de-staging data to disk or providing complete cache data protection with battery backup for up to 4 hours

#	Parameter	Minimum Specifications
10.	Storage Timelines	<ol style="list-style-type: none"> 1. Successful bidder shall keep the storage of complete data (Images and videos) on storage devices for a period of 30 days. 2. Successful bidder shall keep the storage of complete data (images/video recording) on storage devices, in case of any disputed/discrepancy, till the end of the contract period. 3. Any type of additional storage requirement shall be borne by the bidder.



1.10 Monitoring Workstations

#	Parameter	Minimum Specifications
1.	Processor	Latest generation 64bit X86 Quad core processor(3Ghz) (preferably Core i7 or better processors)
2.	Chipset	Latest series 64bit Chipset
3.	Motherboard	OEM Motherboard
4.	RAM	Minimum 8 GB DDR3/4/5 ECC Memory @ 1600 Mhz. Slots should be free for future upgrade. Minimum 4 DIMM slots, supporting up to 32GB ECC
5.	Graphics card	Minimum Graphics card with 2 GB video memory (non- shared)
6.	HDD	2 TB SATA-3 Hard drive @7200 rpm with Flash Cache of 64GB SSD. Provision for installing 4 more drives.
7.	Media drive	NO CD / DVD drive
8.	Network interface	10/100/1000 Mbps autosensing on board integrated RJ-45 Ethernet port.
9.	Audio	Line/Mic IN, Line-out/Spr Out (3.5 mm)
10.	Ports	Minimum 6 USB ports (out of that 2 in front),
11.	Keyboard	104 keys minimum OEM keyboard
12.	Mouse	2 button optical scroll mouse (USB)
13.	PTZ joystick controller (With 2 of the workstations in CC)	PTZ speed dome control for IP cameras Minimum ten programmable buttons Multi-camera operations Compatible with all the camera models offered in the solution. Compatible with VMS /Monitoring software offered
14.	Monitor	27" TFT LED monitor, Minimum 1920 x1080 resolution, 5 ms or better response time, TCO 05 (or higher) certified
15.	Certification	Energy star 5.0/BEE star certified
16.	Operating System	64-bit pre-loaded OS with recovery disc
17.	Security	BIOS controlled electro-mechanical internal chassis lock for the system.
18.	Antivirus feature	Advanced antivirus, antispyware, desktop firewall, intrusion prevention (comprising of a single, deployable agent) which can be managed by a central server. (Support, updates, patches and errata for the entire contract/ project period)

#	Parameter	Minimum Specifications
19.	Power supply	SMPS; Minimum 400-watt Continuous Power Supply with Full ranging input and APFC. Power supply should be 90% efficient with EPEAT Gold certification for the system.

Note:

1. Bidder shall be responsible to disable all ports/interfaces from all workstations installed at site.



1.11 Firewall

#	Parameter meter	Minimum Specifications
Performance		
1.	Firewall throughput	5 Gbps or more
2.	IPS throughput	Minimum 1 Gbps
3.	NGFW throughput	Minimum 1 Gbps
4.	Threat Protection throughput	Upto 145 Mbps
5.	Concurrent	10,00,000 or more
6.	IPsec VPN	2000 Mbps or more
7.	SSL decryption + Threat Protection	1000
Physical Interfaces		
8.	Storage	64 Gb SSD or more
9.	Ethernet interfaces	8 GbE copper or more, 1 SFP port
10.	I/O ports (rear)	2 x USB 2.0/USB 3.0
11.	Power	DC: 12/24V, 100-240VAC, 50-60 Hz
Environment		
12.	Power consumption	10-50W
13.	Operating temperature	0-40°C (operating) -10 to +70°C (storage)
14.	Humidity	10%-90%, non-condensing
Physical specifications		
15.	Mounting	Rackmount
16.	Dimension	Suitable for Network Rack
17.	Warranty	The proposed solution shall support 3 years Replacement and 24*7 TAC support.
18.	Support	The proposed solution should support Content filtering, Web Search Filtering, Intrusion Prevention, Threat Protection, Advanced Malware Protection and Active Directory Integration

1.12 Server Rack

#	Parameter	Minimum Specifications
1.	Type	<p>27 / 42 U racks mounted on the floor</p> <p>Floor Standing Server Rack – 27 / 42 U with Heavy Duty Extruded Aluminium Frame for rigidity. Top cover with FHU provision. Top & Bottom cover with cable entry gland plates. Heavy Duty Top and Bottom frame of MS. Two pairs of 19" mounting angles with 'U' marking. Depth support channels - 3 pairs with an overall weight carrying Capacity of 500Kgs.</p> <p>All racks should have mounting hardware 2 Packs, Blanking Panel.</p> <p>Stationery Shelf (2 sets per Rack)</p> <p>All racks must be lockable on all sides with unique key for each rack.</p> <p>Racks should have Rear Cable Management channels, Roof, and base cable access.</p> <p>The depth of the server rack should be 1200MM</p>
2.	Wire managers	Two vertical and four horizontals
3.	Power Distribution Units	<p>Two per rack</p> <p>Power Distribution Unit - Vertically Mounted, 32AMPS with 25 Power Outputs. (20 Power outs of IEC 320 C13 Sockets & 5 Power outs of 5/15 Amp Sockets), Electronically controlled circuits for Surge & Spike protection, LED readout for the total current being drawn from the channel, 32AMPS MCB, 5 KV AC isolated input to Ground & Output to Ground</p>
4.	Doors	<p>The racks must have steel (solid / grill / mesh) front / rear doors and side panels. Racks should NOT have glass doors / panels.</p> <p>Front and Back doors should be perforated with at least 63% or higher perforations.</p> <p>Both the front and rear doors should be designed with quick release hinges allowing for quick and easy detachment without the use of tools.</p>
5.	Fans and Fan Tray	<p>Fan 90CFM 230V AC, 4" dia (4 Nos. per Rack)</p> <p>Fan Housing Unit 4 Fan Position (Top Mounted) (1 no. per Rack) - Monitored - Thermostat based - The Fans should switch on based on the Temperature within the rack. The temperature setting should be factory settable. This unit should also include - humidity & temperature sensor</p>
6.	Metal	Aluminum extruded profile
7.	Side Panel	Detachable side panels (set of 2 per Rack)

1.13 Field Junction Box

#	Parameter	Minimum Specifications
1.	Size	Suitable size as per site requirements to house the field equipment
2.	Cabinet Material	Powder coated CRCA sheet/ Stainless steel
3.	Material Thickness	Min 1.2mm
5.	Number of Locks	Two
6.	Protection	IP 55, Junction Box design should ensure to keep the temperature within suitable operating range for equipment's and should also avoid intentional water splash and dust intake
7.	Mounting	On Camera Pole / Ground mounted on concrete base
8.	Form Factor	Rack Mount/DIN Rail
9.	Other Features	Rain Canopy, Cable entry with glands and Fans/any other accessories as required for operation of equipment's within junction box.

1.14 Edge Level Switch

#	Parameter	Minimum Specifications
1.	Type	Managed Outdoor Industrial grade switch
2.	Total Ports	1) Minimum 24 port 1 Gbps PoE/PoE+ and 2 No's fiber Uplink ports of 10G. 1) May require higher port density at some locations, depending upon site conditions. 2) May require fiber ports at some locations, depending upon site conditions/distances.
3.	PoE Standard	IEEE 802.3af/ IEEE 802.3at or better, 370 watts Power budget or more, Dynamic PoE allocation
4.	Protocols	1) IPV4, IPV6 2) Support 802.1Q VLAN 3) DHCP support
		0. IGMP 1. SNMP Management 2. Should support Loop protection and Loop detection. 3. Should support Ring protection. 4. End point Authentication 5. Should support NTP
5.	Access Control	1) Support port security 2) Support 802.1x (Port based network access control). 3) Support for MAC filtering
6.	PoE Power per port	Sufficient to operate the CCTV cameras/edge devices connected
7.	Enclosure Rating	IP 30 or equivalent Industrial Grade Rating (to be housed in Junction box)
8.	Operating Temperature	0 -55 C or better Industrial Grade Rating
9.	Multicast support	IGMP Snooping V1, V2, V3 MLD Snooping V1, V2
10.	Management	Switch needs to have RS-232/USB/RJ45 console port for management via a console terminal or PC. Web GUI NTP Syslog for log capturing.

#	Parameter	Minimum Specifications
		SNMP V1, V2, V3
11.	Compliance	UL/EN/IEC or equivalent
12	Power Supply	Inbuilt Dual Power Supply In built Dual Fan
13	Switching Capacity	30 Gbps or better



1.15 Core Switch

#	Parameter	Minimum Specifications
1.	Ports	2) 24 port 1G Ethernet ports, PoE/PoE+ port and 2 No's fiber Uplink ports of 10G. 3) All ports can auto-negotiate between all allowable speeds, half-duplex or full duplex and flow control for half-duplex ports.
2.	Switch type	Layer 3
3.	MAC	Support 32K MAC address.
4.	Backplane	Capable of providing wire-speed switching
5.	Switching Capacity	48 Gbps or better
6.	Port Features	Must support Port Mirroring, Port Trucking and 802.3ad LACSP Link Aggregation port trunks
7.	Flow Control	Support IEEE 802.3x flow control for full-duplex mode ports.
8.	Protocols	A. IPV4, IPV6 B. Support 802.1D, 802.1S, 802.1w, Rate limiting. C. Support 802.1X Security standards D. Support 802.1Q VLAN encapsulation, IGMP v1, v2 and v3 snooping. E. 802.1p Priority Queues, port mirroring, DiffServ F. DHCP support G. Support up to 1024 VLANs. H. Support IGMP Snooping and IGMP Querying I. Support Multicasting J. Should support Loop protection and Loop detection, K. Should support Ring protection
9.	Access Control	i. Support port security ii. Support 802.1x (Port based network access control). iii. Support for MAC filtering. iv. Should support TACACS+ and RADIUS authentication
10.	VLAN	<ul style="list-style-type: none"> Support 802.1Q Tagged VLAN and port based VLANs and Private VLAN The switch must support dynamic VLAN Registration or equivalent. Dynamic Trucking protocol or equivalent

#	Parameter	Minimum Specifications
11.	Protocol and Traffic	1) Network Time Protocol or equivalent Simple Network Time Protocol support 2) Switch should support traffic segmentation. 3) Traffic classification should be based on user-definable application types: TOS, DSCP, Port based, TCP/UDP port number
12.	Management	i. Switch needs to have a console port for management via a console terminal or PC. ii. Must have support SNMP v1, v2 and v3. iii. Should support 4 groups of RMON. iv. Should have accessibility using Telnet, SSH, Console access, easier software upgrade through network using TFTP etc. Configuration management through CLI, GUI based software utility and using web interface
13.	Resiliency	10 Dual load sharing AC and Primary power supplies 11 Redundant variable-speed fans

1.16 Enterprise Management System

- 1) To ensure that MLFF systems are delivered at the performance level envisaged, it is important that an effective monitoring and management system be put in Place. It is thus proposed that.
- 2) a proven Enterprise Management System (EMS) is proposed by the bidder for efficient management of the system, reporting, SLA monitoring and resolution of issues. Various key components of the EMS to be implemented as part of this engagement are.
 - I. Network Monitoring System
 - II. Server Monitoring System
 - III. Helpdesk System
- 3) The solution should provide a unified web-based console which allows role-based access to the users.
- 4) The Proposed EMS shall be capable to monitor all SLA defined in the RFP.
- 5) The Proposed EMS shall be able to provide reports in pdf, excel and CSV file format.

1.17 Video Wall & Controller

#	Parameter	Minimum Specifications
1.	Technology	Solid state LED illumination technology or LED based Technology or equivalent
2.	Display Unit	The Visual Display Unit / Rear Projection Module
3.	Screen Size	55" cubes in a 4 X 2 display
4.	Resolution	Full high definition (1920X1080)
5.	Brightness	Uniformity of 85%
6.	Contrast Ratio	Min. 1400 : 1
7.	Wall Uptime	Min. 60,000 hours of rated life (Expected to be operational 24X7)
8.	Viewing Angle	180 degree viewing angle
9.	Screen to Screen gap	The inter screen gap should be ≤ 1 mm
10.	Other Features	RS232 control (with loop-through) On Screen Display (OSD) IR remote control flicker free image on the Large Screen Graphics Wall
11.	Input	IP Based
12.	Same OEM for Controller and Display	Display Controller and management software shall be from the same OEM. The number of outputs shall be capable to drive number of cubes to achieve the resolution.

1. Functional Requirements of all MLFF Sub System

2.1 RFID Reader

The main function of automatic identification technology is to identify the vehicle passing through the road so that the toll can be collected through FASTag by reading the RFID Reader.

The RFID Reader should be located on the MLFF Gantries. The Reader should emit signals to scan and read FASTag. The RFID reader is used to process the information from the detected FASTag to further process the payments. One RFID reader may cover up to a maximum of two lanes.

The identification data from the FASTag is transmitted from vehicle to RFID reader through radio frequency and to roadside unit (RSU) through cables. RSUs may include antennas and readers.

- I. RFID system shall have the anti-collision function, such that it is able to read multiple FASTag at the same time.
- II. RFID Reader should authenticate and process the information from the FASTag.

- III. RFID Reader shall support minimum 4 radio channel to connect 4 Antenna. Not more than 4 antennas shall be connected to one RFID Reader. Channel switching should be done within 6m/s or faster.
- IV. To achieve accuracy one or multiple readers may take charge of one lane.
- V. The customization in RFID channel switching shall be done at the Highway Control Center level from the MLFF application. Any changes to the vehicle classification may be updated on the reader from the CC level itself. All tags that pass through the canopy must be stored in the reader's internal memory before being sent on the network.
- VI. Rugged housing for the RFID reader shall be designed such that it may be operated in adverse weather conditions and shall be tamper proof and must support data security including anti- copying and forgery. The RFID reader shall be able to withstand harsh climatic conditions whilst providing stable and consistent operational functions 24X7.
- VII. It is recommended that passive FASTag technology will be used for vehicle classification, FASTag ID and transaction time & date as tags are cheaper and may be provided to users for free, increasing the usage rate in a short period of time.
- VIII. According to ISO standards ISO-18000 6C (EPC Class 1 Gen 2), ISO-18000 6C in case the tag standard is ISO18000 6C/6E which is used regularly and operating normally, communication of Bit Error Rate must be lower than 10⁻⁶. Standard should apply to make sure that data transmission through air is correct.
- IX. The RFID reader shall be able to detect and read RFIDs of the vehicles running at least at a speed of 150 km/h.
- X. The RFID shall be used to exchange data between the MLFF application and the vehicle.
- XI. The range of the RFID reader for to detect a vehicle correctly should be min. 10-15 meters.

2.2 RFID Antenna

RFID Antenna refers to the conductive element that sends and receives FASTag data. The minimum height clearance for the RFID antenna should be based on Indian regulations regarding road construction.

- I. The RFID antenna should be designed for high-speed toll collection systems (the MLFF system in this case).
- II. RFID recommended frequency to be set at dedicated telecommunications license for MLFF, which allow use fixed frequency and conducting power to 13-33dbi or higher as required.
- III. Provide optimized read zones for Multi Lane Free Flow toll collection systems.
- IV. The frequency band approved for MLFF shall be at minimum 5.5MHz wide.
- V. There should be adequate guard bands between assigned usages, particularly in the case of very high-power transmitters.

2.3 ANPR and Application

The Automatic Number Plate Recognition (ANPR) system is designed to automatically read vehicle license plates using optical character recognition technology. This versatile system is used for surveillance in various toll applications.

- I. Integration: ANPR technology should be embedded within security cameras (also known as ANPR Cameras) to ensure accurate readings regardless of the shape and color of the license plates.
- II. Lighting Conditions: The ANPR cameras must be capable of reading license plates under varied lighting conditions, including day, night, and adverse weather conditions.
- III. High-resolution ANPR Camera for multi-lane coverage (5MP, CMOS), Global shutter.
- IV. High frame rate (50/60 fps) for traffic bursts and image sequence of speeding vehicles

#	System Parameter
General	
1.	ANPR system automatically captures the license plates of any vehicle(s) in the field of view (FOV) of a camera and stores them in database, so that details of the vehicles are available at any later point in time along with related video footage. It's OCR engine then converts captured license plate number into editable text, for ease of validation of vehicle details. OCR engines need to be designed and customized as per the multiple number plate and various Indian scripts apart from standard HSRP number plates
2.	If there is more than one vehicle in the camera FOV, then all of them are independently processed and their license plates are recognized irrespective of the type of vehicle like car, bus, truck, auto rickshaw, motorcycle, etc.
3.	The proposed ANPR system can detect vehicle make information along with vehicle registration number plate.
4.	The vehicle image produced by the system should be wide enough to give the exact position of the vehicles with respect to the virtually marked point.
5.	The system is capable to process and read number plate of vehicles with speed Upto 150km/hr. or higher.
6.	The system can capture vehicle color and label them as per predefined list of configured system colors. System allows option to search combination if vehicle color with vehicle registration number plate.
7.	The Evidence and ANPR camera should continuously record all footage in its field of view to be stored at the local base station. This should be extractable onto a portable device as and when required. The network should have the capability to provide the real time feed of the evidence camera to the CC at the best resolution possible on the available network.
8.	The system shall be equipped with IR Illuminator in-built as well as external to ensure clear images including illumination of the Number Plate and capturing the toll collection violation image under low light conditions and nighttime.
9.	The proposed system can identify Vehicle Registration Number (VRN) and classification of each passing vehicle into 2 & 3 wheelers, LMV and HMV, Light Commercial Vehicle, Multi axle, BUS / Truck etc. ANPR engine should provide the class of each vehicle and it should be able to filter out the non-tollable vehicles like Tractor, Two-wheeler, and Three-wheelers.
10	The system support reading accuracy Upto 99.5% of standard number plate vehicles number plates which are visible by human eyes.
11.	The system support API for integration with 3rd parties' application.
12.	Recording & display information archive medium
12a	The recording and display of information should be detailed on the snapshot of the infracting vehicle as follows: <ul style="list-style-type: none"> a) Computer generated unique ID. b) Date (DD/MM/YYYY) c) Time (HH:MM: SS) d) Equipment ID e) Location ID f) Lane Number of the vehicle g) Time into RFID and ANPR h) Registration Number of vehicle
13	ANPR Application with MLFF

	<p>The ANPR application should be a tightly coupled system with the MLFF software deployed on the servers. The ANPR application should only be accessible through the MLFF Software.</p> <ul style="list-style-type: none"> a) The system should have secure access mechanism for validation of authorized personnel. b) Deletion or addition and transfer of data should only be permitted to authorized users. c) A log of all user activities should be maintained in the system. d) Roles and Rights of users should be defined in the system as per the requirements of the client. e) The system should have the capability to transfer the data to CC (Control Centre) through proper encryption in real time and batch mode for verification of the processing of E-Notice/SMS by the MLFF software. f) If connectivity to server is not established due to network/connectivity failures, then all data shall be stored on site on the Edge system / LPU and will be transferred once the connectivity is re-established automatically. There shall also be a facility of physical transfer of data on portable device whenever required. There should be a provision to store minimum one week of data at each site on a 24x7 basis.
14	Mounting structure
a.	<ul style="list-style-type: none"> a) It will be Mounted on the Canopy/Pole. b) The ANPR camera shall be placed in such a way that it should be able to view the edge shoulders as well as the service lanes to capture the vehicle license plates and process the same for deduction of toll.

2.4 IR Illuminator

The illuminator should be equipped with ANPR Camera will be able to provide complete coverage for image capture. Under Multi-Lane Free Flow, the IR Illuminator should also be able to handle different driving behavior in MLFF environment including lane switching, high speed, tailgating, low speed, etc. The light given off by the illuminator should be set to minimize potential distraction to motorists.

- i. High power, compact and lightweight
- ii. Up to 75 Hz for traffic bursts and image sequences
- iii. Near-infrared (invisible), white, or blue
- iv. Rugged IP66 enclosure
- v. Long life, low total cost of ownership

2.5 Audit Surveillance Camera

- a) The Audit Surveillance Camera shall be installed at each MLFF canopy (one for RHS and one for LHS on both side canopy) at the suitable height where all the lanes on the one side can be covered and each vehicle can be captured passing the canopy. Audit Surveillance camera shall be fixed camera and to be installed on the best Places where whole side (RHS or LHS) including shoulder could be captured up to 6 lanes. Required illumination i.e., IR flasher to be installed for better accuracy of the camera in Nighttime. Image quality of the camera should be clear enough to count and distinguish the vehicles and its type passing the canopy and shall be able to capture video with clear number plate within range of 30-meter. Audit surveillance Camera shall have local storage to record minimum 30 Days 24X7 recording.
- b) Camera shall work 24X7 in all weather conditions. Camera and IR Flasher housing shall be weatherproof with IP67 Rating. Can be operated on 220 Volt 50Hz. Suitable power converter or adjustment device can be used. International communication protocols including TCP/IP shall be part of the Camera specifications. Camera shall have ONVIF S&G or better Profile feature.

- c) The Audit surveillance camera shall be placed in such a way that it should be able to view the edge shoulders as well as the service lanes to capture the vehicle details to process the same for necessary information by the MLFF server.
- d) Multi Lane Free Flow Tolling system is based on various functional requirements and two major components like infrastructure with passive components and the MLFF software with report/ MIS/ Analytics.
- e) The decisions, approvals, and status updates of the project must be routed through IHMCLs key designated officials.
- f) The solution shall be highly customizable as per IHMCLs requirements.
- g) All the proposed functional components (business processes, integrated platform, etc.) and technical components (infrastructure, hardware, software, communication, network, equipment, etc.) for the project shall be configured such that they can be operated in an integrated environment and to coordinate with each other for day-to-day activities as well as for incident management.
- h) A Centralized Dashboard shall be designed for real time monitoring and management of functioning and performance of each location from the Centralized Highway Control Centre.
- i) Standard Operating Procedures and Escalation Procedures shall be designed by bidder and approved by IHMCL for workflow management, event management, incident management, customer services, helpdesk management, and security breach management.
- j) The bidder must provide status reports on daily, weekly and monthly basis highlighting key parameters such as project status, activities performed, deliverables, potential risks, next steps, etc. The exact timelines, parameters, and audience for reporting shall be validated and approved by IHMCL.
- k) The infrastructure and passive components include:
 - i. RFID Reader
 - ii. RFID Antenna
 - iii. ANPR and Application
 - iv. IR Illuminator
 - v. Audit Surveillance Camera
 - vi. Detectors-Lidar and Radar
 - vii. Communication
 - viii. MLFF Application
 - ix. Control Centre

2.6 Detector- LIDAR & RADAR

1. The bidder shall propose appropriate technical solution/ product to check speed, count the number of vehicles and classification of the passing vehicle at each lane. The output of the detectors should be to indicate the presence/ passage of vehicles and shall be used to trigger the MLFF toll revenue collection and to generate counts, vehicle classification, and speed at each lane. Means shall be provided so that a detector may be connected to ANPR and RFID to deduct the Toll as per classification.
2. The vehicle should passage detection consists of Lidar/ Radar scanner mounting overhead scanning the road surface for vehicles when the vehicle passes through the capture zone. When the vehicle passes through the toll area, Detector should trigger the vehicle which sets of the vehicle passage capture. The vehicle detector for this system should take into the consideration of maintainability during operation. Image capture and tag detection should be done.
3. Consider high reliable vehicle detection sensor to prevent missed detection of vehicle.

4. Device can also operate under various weather conditions such as sunshine, heavy rain, fog...etc.
5. The Bidder shall clearly specify the Placement of the detector (Count, Classification as per Axle, Speed) for each lane.
6. The detector shall be able to Count and Classification of vehicles in non-lane based mixed traffic flow conditions and differentiate between different vehicle types (two-wheeler, three-wheeler, car, HGV, etc.). The accuracy of counts shall be 100% over all light and weather conditions. The Bidder shall clearly specify in their technical proposal how this will be accomplished.
7. The Bidder shall give an estimate of the total number of vehicles detected at Toll and vehicle detectors required and the type of detection system recommended.
8. A detector that does not change its status at least once during a stage execution shall be notified to the Server (in MLFF) at the termination of the associated stage.
9. Powerful, efficient 2D / 3D /4D LiDAR sensor
10. Excellent performance even under unfavorable weather conditions due to multi-echo technology
11. Compact housing up to enclosure rating IP 67 and integrated heating for outdoor devices
12. Easy installation
13. Service line should also be cover under the solution design for the project.
14. The detector shall be placed in such a way that it should be able to detect vehicles at the edge shoulders as well as the service lanes to capture the vehicle speed, Count and classification to process the same for necessary information by the MLFF server.

2.7 Firewall

Firewall should have unrivalled visibility into risky users, unknown and unwanted apps, advanced threats, suspicious payloads, encrypted traffic.

To protect the network from ransomware and advanced Threat Protection, Phishing Email Protection etc.

1. Firewall installed at the Gantry level shall have minimum following functions,
2. Firewall Block Access to Unapproved Websites, address, URLs
3. Protect the Network, Data, and machine from Malicious Code
4. Firewalls shall have Control of Internet content connected to the gantry equipment.
5. Shall have Limits set options on Bandwidth Usage
6. Shall Secure Network when using remote sessions or Remote Monitoring from Anywhere
7. Shall Work 24/7, Monitoring the Network and Protecting It from Harmful codes, sites, malware, ransomware attacks.
8. The firewall shall have the ability to manage multiple firewalls and shall be capable of integrating/ managing multiple firewalls of different vendors, both virtual and physical.

2.8 Communication

Function of the Communication network is for remote monitoring and management. Real time data (like RTC time, timing, mode, events, etc.) from the detector, RFID and ANPR are required to be sent to the Computer in Control Centre. Computer running the MLFF application shall compute and send e-Notice in the Vahan as a payment fee. The Bidder shall clearly specify the bandwidth requirements and the type of network recommended for the MLFF.

The Bidder shall specify the networking hardware requirements at the Highway Control Centre and remote intersections for establishing the communication network.

2.9 Input and Output facilities

The facilities used at both Highway Control Centers and at Portacabin shall be of the below requirements:

- 1) **Communication Interface:** The Equipment shall support Ethernet interface to communicate with the MLFF server.
- 2) **Power Saving:** BIDDERS are requested to propose appropriate energy saving mechanisms and approaches.
- 3) **Real Time Clock:** The system should maintain a real-time clock of the system and sync with all the field equipment. The real time clock shall be based on Network Time Protocol (NTP) or Simple Network Time Protocol (SNTP). This shall maintain the transaction time and become an integral part of the system.
- 4) The Detector, RFID and ANPR shall update the date, time and day of the week automatically from FASTag and Vehicle
- 5) Date, time and day of week shall be synced from the NTP/ SNTP services for setting the Detector, RFID and ANPR date time settings.
- 6) It shall be possible to set the RTC from the Central Server (CC) when networked.

2.10 MLFF Application Software

- 1) The Multi Lane Free Flow system will provide real time vehicle flow to calculate vehicle count and classification. The Application software or platform will be able to charge dues through E-Notice. The MLFF application will provide real count and classification.
- 2) MLFF application shall be heart of the MLFF system which shall process the transaction and payments using the business rules logics. MLFF Application shall be deployed on two locations namely gantry and the Control Center (CC). The core application shall be deployed on the Server which shall control the MLFF Applications of the Gantry application. The MLFF Gantry application shall have dedicated connectivity with the core MLFF application on the server and shall sync the configuration parameters from the server application. MLFF application at the gantry shall work on independent basis even in case of loss of connectivity with the server application and store the transactions (settled/ unsettled/ requiring manual validation) locally till the connectivity is established with the core MLFF application at the server. All the transactions generating from the gantry application shall get assimilated in the Core MLFF Software hosted on the server infrastructure.
- 3) At the gantry location, all the field equipment like detector, cameras, RFID readers, shall be connected directly with the MLFF application and send the details of the detection to the MLFF Server application for generating the transaction file. Here the MLFF application shall take the decision of sending the file for transaction based on the confidence of the RFID and ANPR camera read accuracy.
- 4) The settled and unsettled transactions get assimilated at the MLFF application which is sent to the core MLFF application. The unsettled transactions shall be processed by the core application for issuance of e-Notice.
- 5) The MLFF core application controls all the interface of the MLFF application and receives all transaction as well as heartbeat of the gantry equipment through the gantry application. MLFF Core application and MLFF application synchronizes time, configuration, transactions. The core MLFF application shall be accessible at the Control Centre (CC) based on the user rights and roles. For example, the Manual Validation Team shall access the pending transaction meant for manual validation only. The Auditor/validator of the Manual Validation shall only be able to access the transactions which has been assigned after manual validation by the team for approving the transaction.



MLFF Gantry Application

The broad functionalities of the MLFF application software shall be as follows:

- 1 Shall provide a decision support tool for assessing strategies to minimize congestion and emergency response time to events via RFID and ANPR linked with real time data fusion and control of enforcement infrastructure on ground.
- 2 Shall collect continuously information about current observed transaction conditions from a variety of data sources (like RFID Reader, Antenna, ANPR Camera data etc. Bidders can propose alternate data sources that could be integrated) and of different kind (Speed states, Classification states, Count states, incidents work etc.)
- 3 Shall have a *Graphical User Interface* (GUI) to be able to display Gantry locations state along the observed and unobserved parts of the network through GIS maps.
- 4 Shall have the ability to forecast the toll enforcement pattern across the Gantry locations over the near-term future (e.g., Blacklisted, Hot listed, Whitelisted, Theft, Exempted etc.)
- 5 Shall include a transaction data warehouse (for minimum 3 years) for all historic transaction and enforcement information gathered from the hardware installed on the road network bidder to propose how data storage requirements could be minimized using consolidation techniques.
- 6 Shall operate in real time that is continuously updating the estimates on the state of the network and the travel times based on data collected continuously over time.
- 7 Maintain database for time plan execution and system performance.
- 8 Maintain error logs and system logs.
- 9 The MLFF shall generate standard and custom reports for planning and analysis.
- 10 The Application Software should work in a web-based environment.
- 11 It should be possible to integrate payment gate way operator with the system for facilitation of payment.
- 12 The application software should be user friendly, easy to operate.
- 13 The software must provide comprehensive data back-up and restoration capability.
- 14 The application software should maintain the logs of user activities to facilitate the audit trail.
- 15 Database server should be able to handle the activities of all the payment and transaction enforcement at one time simultaneously with huge database size of prosecution, ownerships, etc. without affecting the performance.
- 16 The software should be able to generate various periodical reports, summaries, MIS reports, query reply etc. as per the requirements of IHMCL.
- 17 All database tables, records etc. required for various dropdown menus etc. shall also be created by the vendor.

- 18 The application software is to be provided by the vendor to handle various processes of the prosecution required by the office of IHMCL, Courts etc.
- 19 The application should have feature to query and retrieve user vehicle data for each vehicle passing through the MLFF gantry.
- 20 All the required integrations for achieving the functionalities as mentioned in the RFP need to be done by BIDDER. In case of any additional third- party integrations envisaged by IHMCL at a Later stage, same shall be done by bidder without any additional cost to IHMCL.
- 21 The bidder and IHMCL may use the user interface with account/password login and authorization controls to retrieve relevant information based on sets of queries.
- 22 Any changes in the rates/ tariff by NHAI for the toll to be collected from the user, shall be automatically updated in the system/ application for collection without hindering the operations.
- 23 The IHMCL/BIDDER can enter the date to query the traffic information of the specified vehicle.
- 24 The MLFF software and equipment should be capable enough to identify all vehicle count and classifications of vehicles irrespective of components installed by the bidder.
- 25 The MLFF software shall be automated system with limited or no manual interventions involved. Any disputed image/video wherein e-notice is generated and un-settled shall not be deleted from the MLFF system till the end of contract.
- 26 The system shall store the data in unified storage devices (in the form of images and video recording with 15 FPS) for a period of 30 days. In addition, the data shall further push to central server for period of 15 days in case of reconciliation or verifications.
- 27 Any type of licenses/renewal/patches/storage requirement shall be borne by the bidder.

2.11 Accuracy on Application and Component

- 1 The main function of automatic vehicle identification technology is to identify the vehicle passing through a road so that the toll can be collected. On the non-stop MLFF vehicle lanes, RFID shall be used for exchange of data between the lane and the vehicle.
- 2 The minimum distance range of the card RFID reader for running vehicle when the system can correctly detect the vehicle should be less than 8-12 meters.
- 3 Must be able to immediately record and collect statistics of vehicle passage time and traffic volume.
- 4 Should have the function to determine the direction of the vehicle travel (such as forward or reverse).
- 5 Can distinguish the direction to prevent error data in the event of a vehicle reversing in a lane.
- 6 The equipment should be capable of distinguish tollable and non-tollable vehicles (two-wheelers, 3-wheelers, etc.) without any human intervention.

Enforcement requirement on MLFF Software:

- 1 The system must be able to capture the speed of the vehicles passing through the gantry with maximum speed upto 150 km/h and provide a well-exposed image.
- 2 The application software should have the functionality to issue e-Notice for the vehicles having not paid the toll. The details of the e-Notice module are described in E-notice Functional Requirement.
- 3 MLFF system should have integration feature with Vahan to provide alerts to related authorities related to the stolen vehicles.

2.12 Reports/ Dashboard/ Alerts

System shall have the feature of dashboard with alert system as well as an elaborate reporting and MIS generation system. The application software shall generate the following reports, but not limited to the below. All the reports shall be possible for selected dates.

- 1) **Equipment Health Dashboard & Alert** – To provide alerts of the health of the equipment in real-time. In case of any equipment downtime, the dashboard shall immediately alert the CC support staffs.
- 2) **Equipment Details**-The report shall provide details of the equipment installed location-wise.
- 3) **Network Uptime**- The report shall provide network link and network uptime from each location with the MLFF Server

- 4) **Event Report** - The report shall show events generated by the RFID Reader, Detector, ANPR and MLFF Software with date and time of event.
- 5) **Compliance Reports:** Shall provide all reports on time and in the frequency.
- 6) **Data Match Report**-The client shall generate the report to capture the match / Mismatch between Tags data read by the gantries and corresponding Plaza Data
- 7) **Power on & down**- The report shall show time when the Component is switched on, and last working time of all Component.
- 8) **Range Change** - The report shall show the Range of the Component is changed according to the length either manually through keypad or automatically by Component (Lidar/ Radar/ Antenna) with time stamp.
- 9) **Equipment Report (Uptime)** - This report shall provide details of the equipment installed at each location including the uptime report of them.
- 10) **Real-time Health Report** - This report shall be a part of the dashboard which shall continuously analyze the device health status heartbeats and alert the CC monitoring team on any failure or device disconnection status.
- 11) **Gantry Transaction Detailed Report**- This would provide details of the transactions undertaken at the filed level (gantry equipment's). This shall include successful and reconciled MLFF transactions as well as transactions requiring manual validation and sending e-Notice.
- 12) **Monitoring & Control Report** - This report shall provide the details of the alerts generated at the CC and the actions taken by the CC monitoring team.
- 13) **Antivirus Report** - Antivirus Report shall generate the list of active nodes connected to the antivirus system and its status report of latest virus definitions, perioding scan summary and alerts of any infection detected at any node.

2.13 Summary Report

- 1) **Reconciliation Report** – This report shall provide the details of the successful transaction reconciled between the Acquiring bank/ NPCI and the Issuing bank.
- 2) **Network Status Report** – The report shall provide the network status and uptime of each site location. The report shall have capability to generate as per the time chosen by the user.
- 3) **e-Notice Report** – This module shall generate the reports of the e-Notices issued through the system as well as display the status of any transaction like paid/ pending/ legal sub-judice etc.
- 4) **Vehicle Count Report** – The report shall generate the broad class-wise counting of the vehicle passing through the gantry (Total Tollable and Non Tollable vehicle classification) individually with date and timestamp during a period as chosen by the user.
- 5) **ANPR Accuracy Report** – ANPR Accuracy Report shall be able to display the accuracy of capturing of vehicle number plate as well as exceptions due to which the number plates could not be read.
- 6) **RFID Reader Accuracy Report** – RFID Reader Accuracy Report shall be able to display the accuracy of capturing of FASTag as well as exceptions due to which the FASTag could not be read.
- 7) **Revenue Report** – The system shall be capable to generate the revenue report based on a customizable option like highway stretch (a contiguous set of gantries), each gantry location for a specific period.
- 8) **Violation Report** – The system shall be able to generate violation report like over speeding for necessary communication to the enforcement authorities. The system shall also be able to provide alert on continuous movement of a vehicle on a specific stretch of a highway for which its toll charges are pending for payments.
- 9) **Rejected Transaction Report** – This report module shall provide the list of rejected transaction for which the payment has not been settled with the necessary reasons (like blacklisted, blocked, etc.) for a specific stretch of the highway or a specific location within a customized period of days.

10) **Exempt Transaction Report** – This report module shall provide the details of transactions for the exempted vehicles passing through a specific stretch of the highway or a specific location within a customized period of days.

11) **Real Time & Historic Data** – including but not limited to transactions and revenue collections.

2.14 Analytics

The system shall have features of generating analytical results on various parameters using either an in-built analytical engine or a customized tool which shall have predictive and intuitive feature to provide insights of the tolling operations to the authority. A non-exhaustive list of analytical features is listed below for reference:

- i. Predictive vehicle movement across a stretch of the highway during a specific period of the day.
- ii. Speed of different type of vehicles passing through contiguous stretch of a highways
- iii. Wrong detection of vehicles
- iv. Predict the toll revenue for a specific period which can include weekends, weekdays, holidays etc.
- v. Predict the equipment or network fault based on the frequency of downtime.
- vi. Analytical Alerting the CC operations teams for preventive maintenance

2. Indicative Minimum BOQ

Please note:

1. This is indicative minimum BoQ. The Successful/Selected Bidder shall be entirely responsible for proposing the Solution which satisfies all features, functions and performance as described in this RFP. The Successful/Selected Bidder shall be responsible for design, development, and implementation of the required MLFF solution, as well as providing comprehensive support to the Purchaser.
2. The RFP contains indicative technical requirements for MLFF solution, Bidders are expected to use their technical expertise to size the system adequately and reflect the same in the technical and commercial offer so that performance criteria of system are met. Successful/Selected Bidder will be fully responsible for deploying the MLFF solution.
3. Bidders are requested to do a comprehensive site survey before bidding. Bidders are allowed to use any component pertaining to MLFF solution already installed at site without compromising desired SLA.

MLFF BOQ (for 1 Location)				
	Development Phase		16 Lanes	
S. No.	Description of work	Unit Rate	Nos. / Lot /Lumpsum	Remarks
MLFF Toll Plaza				
A	Field Equipment			
1.	RFID Antenna		32	
2.	RFID Reader		16	
3.	Detector -Radar		16	
4.	Detector – LiDAR		8	

MLFF BOQ (for 1 Location)				
	Development Phase		16 Lanes	
S. No.	Description of work	Unit Rate	Nos. / Lot /Lumpsum	Remarks
5.	ANPR Camera (Including Housing and Mounting) +Controller+ Pole/Canti lever		32	8 Nos for Front and 8Nos for Back VRN
6.	Audit Surveillance Camera and Mounting + Pole/Canti Lever		16	
7.	IR Illuminator		32	
8.	Field Junction Box with Surge Protector Device		2	
9.	Edge Level switch (24 Port)		5	
10.	Switch (Layer 3) – 24 Port (HA Mode)		1	
11.	Any additional Component		Lumpsum	
B	Toll Plaza Control Room Equipment			
1.	MLFF Local Server (HA mode)		1	
2.	Workstation with Display 27"		5	
3.	Storage (Minimum 125 TB)		1	
4.	Server Rack (27U)		1	
5.	Junction Box with Surge Protector Device		1	
6.	Firewall		Lumpsum	
7.	Redundant Internet Connectivity (1 Gbps)		OFC + Wireless	
8.	Video Wall and Controller		1	
C	Network & Cabling			

MLFF BOQ (for 1 Location)				
	Development Phase		16 Lanes	
S. No.	Description of work	Unit Rate	Nos. / Lot /Lumpsum	Remarks
1.	Armored OFC		Lumpsum	
2.	Electrical Cable		Lumpsum	
3.	Cat-6 A cable		Lumpsum	
D	Toll Plaza Software Application (CC & Field)			
1.	Multi Lane Free Flow Software with portal and Dashboard and two license		16	Perpetual Licenses /Open source
2.	ANPR Application Per Channel		32	Perpetual Licenses /Open source
3.	Video Management Software Base License		1	Perpetual Licenses /Open source
4.	Video Management Software Per Channel license		48	Perpetual Licenses /Open source
5.	Detector -Radar applications		1	Perpetual Licenses /Open source
6.	Detector -LiDAR applications		1	Perpetual Licenses /Open source
7.	RFID Reader and Antenna Application		1	Perpetual Licenses /Open source
8.	Video Analytics (Camera/ Application)		48	Perpetual Licenses /Open source
9.	Firewall at CC (Control Centre)		Lumpsum	Lumpsum
10.	Enterprise Management Software (EMS)		Lumpsum	1 (Master License +

MLFF BOQ (for 1 Location)				
	Development Phase		16 Lanes	
S. No.	Description of work	Unit Rate	Nos. / Lot /Lumpsum	Remarks
				Nodes=60)
11.	Integration with VAHAN		Lumpsum	
12.	Operating System		Lumpsum	Licensed version
13.	Any additional		Lumpsum	
E	Manpower Required			
1.	Project Manager		1	
2.	CC Transaction Validator/Auditor at CC		14	4 per shift + 2 Reliever
3.	Field Engineer at Field Location		8	2 Engineer per shift + 2 Reliever
4.	Security Guard (Gun Man) at Field Location		14	4 Security Guard per shift plus reliever
5.	Cleaner		8	2 per shift plus 2 relievers

Note:

1. The bidder must ensure that the MLFF application can be hosted on a MeITY-empaneled cloud service provider, allowing the system to scale both horizontally and vertically.
2. The cloud solution provided by bidder shall be on Pay-As-You-Go model. .
3. If IHMCL withdraws the required cloud services during the project, the services will be migrated to IHMCL cloud servers at no additional cost.
4. The cloud-based solution for hosting MLFF applications, data, and related storage, including the Data Centre (DC) and Disaster Recovery (DR) facility, must be located within India.
5. The Cloud Service Provider must be one of the providers empaneled by the Government of India.

4. Appendices

Appendix A	Copy of Financial Bid of the Bidder
Appendix B	Letter of Award issued by IHMCL.
Appendix C	Letter of Acceptance submitted by the Bidder
Appendix D	Copy of the Performance Security submitted by the Bidder including copies of confirmation provided by the respective bank.
Appendix E	Copy of the Technical Bid and/or any subsequent correspondence of the Bidder/ IHMCL
Appendix F	Copy of RFP Document and subsequent amendment / addendum including Minutes of Pre-bid Meeting if any

4.1 Appendix A – Copy of Financial Bid of the Bidder

Refer to Form F-1 & Form -2 in the RFP.

4.2 Appendix B - Letter of Award issued by IHMCL.



4.3 Appendix C - Letter of Acceptance submitted by the Bidder.

To,

Chief Operating Officer,
Indian Highways Management Company Limited,
G 5&6, Sector-10, Dwarka,
New Delhi – 110075

Sub.:RFP for Selection of Acquirer Bank for Multi Lane Free Flow (MLFF) based Toll collection at Dwarka Expressway

Ref: RFP No. on above subject.

Dear Sir,

Your Bid quoting a Transaction percentage (%) of for engagement as the user fee collecting agency for collection of User Fee based on competitive bidding for Selection of Acquirer Bank for MLFF System at Dwarka Expressway (hereinafter referred to as the said section of the Dwarka Expressway) has been accepted by the competent authority of the IHMCL on the terms and conditions of Contract forming part of the Bidding Documents.

You are required to submit a Performance Security within 7 (Seven) days.

The Bid Security shall be forfeited by the Authority, in case you fail within the specified period to furnish the required Performance Security. You shall also be required to sign the contract within 3 (Three) days from the date of receipt of the Performance Security and after signing the contract, successful bidder shall take over the fee plaza and start the implementation of MLFF system within 2(Two) days of signing the contract agreement, on failure to do so, the entire Performance Security including Bid Security and bank guarantee shall be liable to be forfeited and invoked.

In the event of your failure to submit the Performance Security, the Letter of Acceptance for award of contract in your favor shall automatically be terminated without further notice. In such a case, your engagement shall forthwith automatically stand terminated and thereupon, without prejudice to any other rights and remedies of the Authority, the Authority shall be entitled to appoint another Contractor at your risk as to costs and consequences.

Please convey your unconditional acceptance by signing on the original of this letter and submit the required Performance Security within the specified period so that the Contract could be signed within the specified period.

Thanking you,

Yours faithfully
For IHMCL

(Signature)

Name:-
Designation:
Place:- & Dated

Accepted unconditionally including the draft of the contract. (Signature)**

Name:-
Name of the regd. partnership firm/company/limited company/co-operative society/proprietary firm/individual (whichever is applicable).

Designation:
Place & Date:

* Please affix common seal.

5. Annexures

5.1 Schedule I – Manpower requirements and Qualifications

#	Manpower Designation	Minimum Qualifications
1.	Project Manager (Dedicated On-site)	Minimum Education: B.E/B.Tech/MCA along with MBA is required.
		Total experience: 12 years and above.
		Languages known (Read, Write and Speak): Hindi and English
		Prior project management experience of at least 10 years of handling ETC based Toll Plaza projects.
		Excellent writing, communication, time management and multi-tasking skills
		Project Experience of managing components
2.	Field Engineer	B. E/ B. Tech/ MCA/ MTech with minimum five years of experience in Systems/Software Quality Assurance
		2 Engineer for each shift (8Hrs) and 2 relievers
3.	CC Auditor/ Transaction Validator	Graduate in any discipline with at least 2 years of relevant experience in citizen contact service.
		Minimum 4 auditors/Validator per shift(8hrs) per MLFF plaza and 2 relievers. Number of auditors may be dependent on the volume of traffic which is to be decided by the bidder.
4.	Security Guard (Armed Gunman)	10+2/ Graduate in any discipline with at least 2 years of relevant experience. Ex service in Central Government/ Defence/ Retired army man are preferable.
		Minimum 4 guard per shift (8hrs) and 2 relievers.
5.	Cleaning Person	10+2/ Graduate in any discipline with at least 2 years of relevant experience.
		Minimum 2 cleaner per shift(8hrs) and 2 relievers.

5.2 Schedule II – Sample Format for Monthly User Fee Collection Statement

#	Type of Vehicles as per notifications provisions	Amount of User Fee collected through MLFF (Settled Transactions)		Amount of User Fee pending through MLFF (For Un-settled Transactions)		Total Amount (Settled + Un-Settled)		Total Amount deposited to NPCI	
		For Month	Cumulative	For Month	Cumulative	For Month	Cumulative	For Month	Cumulative
1	CAR, JEEP, VAN OR LIGHT MOTOR VEHICLE								
2	LIGHT COMMERCIAL VEHICLE, LIGHT GOODS VEHICLE OR MINI BUS								
3	BUS (Axle wise)								
4	TRUCK (TWO AXLES)								
5	THREE AXLE COMMERCIAL VEHICLES								
6	OVERSIZED VEHICLES (SEVEN OR MORE AXLES)								

Note:

1. Collection data shall be supported by Bank portal / NPCI and TMS portal. Valid report generated from portal to be submitted.