CORRIGENDUM -1

Dated: 06.11.2024

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

RFP Reference No.: IHMCL/MLFF 001/2024/0111 published on dated 01.11.2024

Sl. No.	Section	Original Clause	Updated Clause (to be read as)
1	Clause 1.2, Fact Sheet, # 3	Pre-Bid meeting at specified venue 21/11/2024 at 11:00 am	Pre-Bid meeting at specified venue **12/11/2024 at 03:00 pm**
2	Clause 2.2, Bid Security, point (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 bidder shall furnish as part of its Bid, a Bid Security amounting to **Rs 30,00,000/- (Rs Thirty Lakh Only).**
3	NOTICE INVITING RFP, Clause 6.10.(b) INTEGRITY PACT FORMAT	RFP No. IHMCL/MLFF DWE/2024/XX dated XX/10/2024	**RFP Reference No.: IHMCL/MLFF 001/2024/0111 published on dated 01.11.2024**
4	NOTICE INVITING RFP, point (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.	Bidder should pay Tender Application Fee (non-refundable) of INR 25,000/- (Rupees Twenty-Five Thousand Only) inclusive of GST through online mode to **IHMCL** Bank account details as **provided in RFP Clause 2.1**. The bidder shall also upload the online payment receipt.
5	Clause 1.2.40, Exit Management, point 5	The bidder must provide notice (XX) months in advance before starting the exit management activities.	The bidder must provide notice **03 (Three)** months in advance before starting the exit management activities.
6	Form T-11 Undertaking for Compliance	S. No. 3 - Detector-Lidar or Radar	S. No. 3 - Detector-Lidar **AND** Radar
7	Form T-10, Bid Securing Declaration Form	Form T-10, Bid Securing Declaration Form	**Deleted**
8	Form-T:13 Letter of Authorization from Sub-Contractor (SI)	Form-T:13 Letter of Authorization from Sub-Contractor (SI)	Deleted

9	Form T-5 Undertaking from the Bidder, point 1)	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.	**Revised Form provided at Annexure -1**
10	Clause 1.2.3, Definitions	Clause 1.2.3, Definitions	**Clause 1.2.3, Definitions – Refer Annexure -1 of this Corrigendum**
11	Schedule B		Updated Schedule B provided at Annexure 2 of this Corrigendum
12	4.3 Appendix C - Letter of Acceptance submitted by the Bidder	4.3 Appendix C - Letter of Acceptance submitted by the Bidder	Deleted

Annexure -1

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 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).
2) 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.
3) 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.
4) 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.
5) That the proposed OEM is not blacklisted by any State / Central Government Department or Central /State PSUs as on bid submission date.
6) That each of the proposed OEM(s) has existing capability and infrastructure to provide 24x7x365 technical support in India.
7) 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)

1) 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.

Term	Definition
Trunkey	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

2) **Abbreviations**

S.No	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

Annexure -3

Schedule – B

1. 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:

a. 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 of not connected to thew 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.

b. 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 achieve as described below:

       i.   Maximum Gantry downtime, due to power failure or any other technical reason, to be not more than 4 hours per day at each gantry.

      ii.   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.

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

   a. **Operations Activities:**
    1. Data Management:

     i.   Transaction Records: Maintain detailed records of all toll transactions for auditing and reporting purposes.
    ii. Compliance Reporting: Generate reports to comply with regulatory requirements and provide insights for traffic management.

    2. Customer Support:

     i.   User Services: Provide support for vehicle owners regarding Toilets, Water facilities, complaint management and other facilities.
    ii. E-Notice Notifications: Send automated e-notices for toll violations or unpaid tolls to ensure timely compliance.

   b. **Maintenance Activities:**

    1. System Infrastructure:

     i.   Equipment Upkeep: Regular maintenance of RFID readers, cameras, and other tolling equipment to ensure optimal performance.
    ii. Software Updates: Implement updates and patches to the MLFF system software to enhance functionality and security.

    2. Network Management:

     i.   Connectivity Monitoring: Ensure continuous and reliable network connectivity for real-time data transmission.
    ii. Troubleshooting: Address and resolve any technical issues promptly to minimize system downtime.

    3. Security Measures:

     i.   Data Protection: Implement robust security protocols to protect financial and personal data from cyber threats.
    ii. Fraud Prevention: Monitor transactions for any fraudulent activities and take necessary actions to prevent them.

    4. Performance Monitoring:

     i.   System Audits: Conduct regular audits to assess the performance and reliability of the MLFF system.
    ii. Feedback Mechanism: Collect and analyze feedback from users to

identify areas for improvement and implement necessary changes.

    c. 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.

3. Toll Collection from the MLFF system

    a. 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 Toll Plaza.
    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.

    b. Toll Collection Model

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

    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.
    2. The week shall be counted from Tuesday (00:00:00 Hrs.) to Monday (11:59:59 Hrs.)

    c. 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. The decision of the Authority on such matter shall be final and binding.

    4. For e-notices to be issued will be double the applicable toll charges for that category of vehicles. No e-notices shall be issued for exempted vehicles in

any circumstances. The share of the revenue 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.

d. 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.

e. 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.

f. 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 the agency fails to replenish the performance security and clear the dues in the 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.

g. **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.

4. **Obligations of 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. 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.

6. **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.

7. 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.

8. 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.
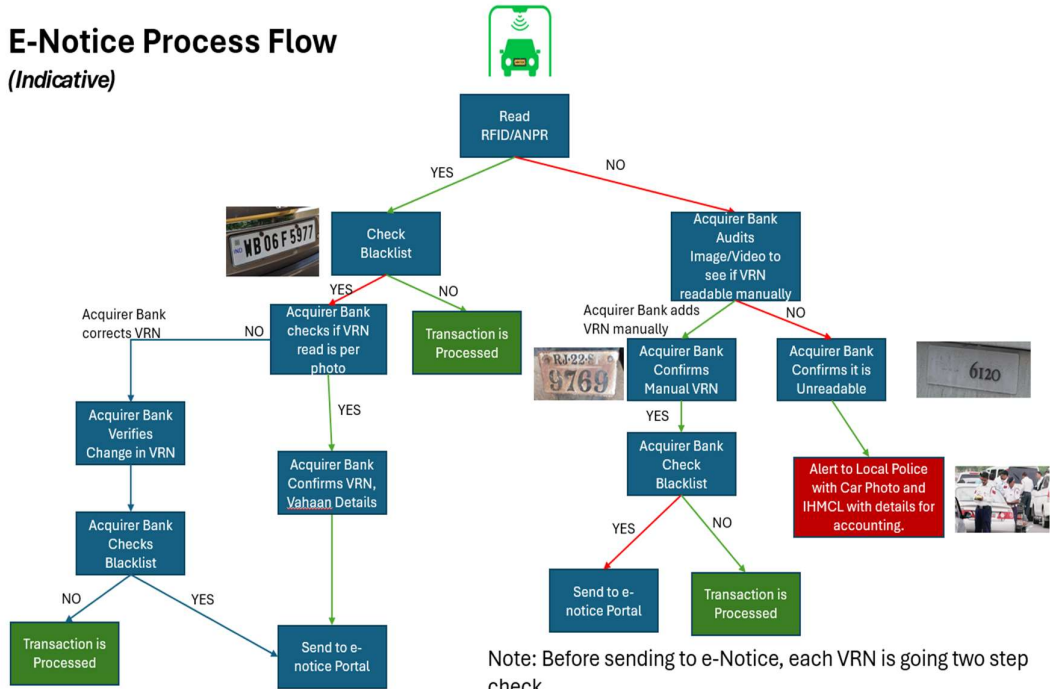
9. E-Notice Module

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.

3. 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.

4. 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.

5. 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.

6. 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.

7. 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)

Read RFID/ANPR

YES → **Check Blacklist**
NO → **Acquirer Bank Audits Image/Video to see if VRN readable manually**

Check Blacklist
YES → **Acquirer Bank checks if VRN read is per photo**
NO → **Transaction is Processed**

Acquirer Bank corrects VRN
NO → **Acquirer Bank Verifies Change in VRN** → **Acquirer Bank Checks Blacklist**
- NO → **Transaction is Processed**
- YES → **Send to e-notice Portal**

Acquirer Bank checks if VRN read is per photo
YES → **Acquirer Bank Confirms VRN, Vahaan Details** → **Send to e-notice Portal**

Acquirer Bank Audits Image/Video to see if VRN readable manually
Acquirer Bank adds VRN manually → **Acquirer Bank Confirms Manual VRN**
NO → **Acquirer Bank Confirms it is Unreadable**

Acquirer Bank Confirms Manual VRN
YES → **Acquirer Bank Check Blacklist**
- YES → **Send to e-notice Portal**
- NO → **Transaction is Processed**

Acquirer Bank Confirms it is Unreadable → **Alert to Local Police with Car Photo and IHMCL with details for accounting.**

Note: Before sending to e-Notice, each VRN is going two step check

10. 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.

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.

11. Implementation Plan

a. The bidder/bank is required to submit the implementation plan for MLFF System at the 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 vehicles. The Database shall be synced with MLFF System software. The bidder/bank shall ensure to update the database in Realtime.

12. 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 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.		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 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 -		Any pending dues on the FASTag will trigger the	If the timelines for issuance of e-notice

Type of Transactions	Processing Cases	Timelines to be settled	Action to be taken	Outcome
	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.		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.	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, • 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.
	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	e-Notice shall be issued in such cases within 24 hours of violation. • 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:

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

13. 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 of 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	a) In case of non-availability of manpower flat 3000 Rs per person/ Day shall be applicable. 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

Control Centre Equipment and Software				
#	Parameter	Basis of measurement	Accuracy	Penalties
3.	Availability of all Equipment/ Software in Control center	The uptime availability of all equipment of MLFF system shall be 99.9% per lane per month through EMS tool. 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: • MLFF Server including Software. • Network Switch • All Lanes communication down with MLFF server	Maximum permissible downtime for all Equipment shall be 44 minutes per lane per month. Scheduled downtime is defined as a period of time when the system will remain unavailable for conducting necessary preventive maintenance, urgent repairs, etc. The maximum scheduled downtime for any Site shall be 4 hours per month for plaza system.	Within 44 minutes: No penalty • 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 and may take necessary actions. . If system availability is below than 98%, then IHMCL may consider as a breach and take necessary actions

Lane Equipment

#	Parameter	Basis of measurement	Accuracy	Penalties
4.	Availability of all components in Lane	The uptime availability of equipment shall be a minimum 99.5% per lane per month. 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: 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	The permissible downtime for all Equipment shall be 4 hours per lane per month.	Within 4 hours: No penalty • 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. If system availability is below than 98%, then IHMCL may consider as a breach* and take necessary action.
5.	Lane Down Time	The uptime availability of each lane shall be 99.9% per lane per month. 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. In case the lane is down, Bidder should close the down lane and shift to redundant lane immediately within 10 minutes incident.	The permissible downtime for lane shall be 44 minutes per lane per month.	Within 44 minutes No penalty Beyond 44 minutes per hour per lane, a penalty of Rs 10,000 shall be applicable. 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. • Beyond that, IHMCL may consider it as a case of breach and may take necessary actions. If system availability is below than 98%, then IHMCL may consider as a breach* and IHMCL may take necessary action.
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	Within twenty four-hour: No penalty After that per hours- per instance a penalty of Rs 1000/- shall be applicable.

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%	• 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%	• 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. IHMCL reserves right to validate the accuracy through third party agency audit.

System Accuracy – Instance Wise

#	Parameter	Basis of measurement	Accuracy	Penalties
9.	Un availability of Images and video	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. 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.	Per instance	Per Instance penalty shall be Rs 10000 is applicable along with revenue loss incurred from unidentified vehicles.
10	Remote video Check	NHAI should be able to access any remote access through third party software or overview through IP and authentication details provided by NHAI/IHMCL.	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

		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.		
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	A penalty of Rs 100000 per instance shall be applicable on each manual entry. IHMCL reserves right to validate the accuracy through third party agency audit
13	Wrong e-notices	In case of any wrong e-notices issued and admitted by bidder	Per instance	A penalty of Rs 100000 per instance shall be applicable on each wrong e-Notices issue and admitted by bidder. IHMCL reserves right to validate the accuracy through third party agency audit
14	Transaction (remittances)	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. SLA shall be calculated on Monthly basis .SLA Penalty settlement will happen in first week of every month.	Every Tuesday	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. 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 NHAI 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.
	Cash Performance security shall be replenished by the bidder within 3 working days from the date of such recovery. Immediate/real time credit in the prescribed account after the completion of week,			

Spare Availability

#	Parameter	Basis of measurement	Accuracy	Penalties
14	Availability of 10% spare (RFID Reader & Antenna, Lidar 1 Radar 2 Audit Surveillance Camera 3 ANPR Camera and Application 4 IR Illuminator	Audit at any point of time. IHMCL conduct surprise inspection for validation/ verification of spares	100%	Each violation/instance shall attract the penalty of Rs. 3,00,000/-.

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 the 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.

13.1 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.)

14. 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
1.	Project Manager (Dedicated On-site) – (1 Nos.)	1
2.	Field Engineer (8 No. s)	2 in each shift + 2 reliever
3.	Auditor/Transaction Validator	4 in each shift + 2 reliever
4.	Security Guard	4 in each shift + 2 reliever
5.	Cleaner	2 in each shift + 2 reliever

(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.