

Limited RFP- Selection of System Integrator to implement & provide O&M services of ETC System at Toll Plazas on National Highways

Tender No. IHMCL/LTE-RFP/ ETC-Imp-O&M/2024/01

17-05-2024

Indian Highways Management Company Limited (IHMCL)

Regd. Office: NHAI HQ, G5&6, 1st Floor, NHAI HQ,

Sector-10, Dwarka, New Delhi-110075

(CIN- U74140DL2012PLC246662)

Website: www.ihmcl.co.in

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DISCLAIMER

The information contained in this Request for Proposal document (the “RFP”) or subsequently provided to prospective 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 and such other terms and conditions subject to which such information is provided.

This RFP does not constitute an Agreement between IHMCL or prospective Bidders or any other Party and is neither an offer nor invitation by IHMCL to the prospective Bidders or any other person. The purpose of this RFP is to provide interested & eligible parties with information that may be useful to them in preparation of Technical and Financial qualification and making their financial offers (the “Bids”) pursuant to this RFP. This RFP includes statements, which reflect various assumptions and assessments arrived at by IHMCL in relation to the project

The assumptions, assessments, statements and information contained in the RFP, may not be complete or adequate. 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.

Information provided in this RFP to the Bidder(s) is on a wide range of matters, some of which may depend upon interpretation of 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 applicable laws, regulations, guidelines followed by IHMCL. IHMCL accepts no responsibility for the accuracy or otherwise for any interpretation or opinion on law expressed herein.

IHMCL, its employees and advisors make no representation or warranty and shall have no liability to any person, including any Bidder under any law whether written or otherwise, 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 or otherwise, including the accuracy, adequacy, correctness, completeness or reliability of the RFP and any assessment, assumption, statement or information contained therein or deemed to form part of this RFP 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 reliance of any Bidder upon the statements contained in this RFP. 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.

The issue of this RFP does not imply that IHMCL is bound to select a Bidder or to award the project to any bidder.

PART-I: NOTICE INVITING TENDER

- 1.1 Bids are invited for the selection of System Integrator to implement & provide O&M services of ETC System at 03 Toll Plazas and to provide O&M services of existing ETC System at 06 Toll Plazas on National Highways. The details of 09 fee plazas are as per **Annexure-B**.
- 1.2 This tender is in continuation to RFE (Request for Empanelment) with Tender no. IHMCL/ETC/Empanelment/2021/01 released on 28.10.2021 in IHMCL online portal by Indian Highways Management Company Limited (IHMCL) for eligible Bidders who are empaneled with IHMCL.
- 1.3 The Terms and Conditions or any other information unless specifically mentioned in this Limited RFP ref: - IHMCL/LTE-RFP/ ETC-Imp-O&M/2024/01 published on 17-05-2024 shall be considered of previous RFE with ref. no. IHMCL/ETC/Empanelment/2021/01 published on 28-10-2021.
- 1.4 The complete Bidding documents can be viewed / downloaded from e-tender portal i.e., <https://etenders.gov.in>. The Bids shall be liable for summarily rejection unless accompanied by the requisite documents as specified in this RFP. No Bids submitted after the closing date/time shall be considered.
- 1.5 All clarifications/ corrigendum will be published only on the e-procurement portal <https://etenders.gov.in> and IHMCL website www.ihmcl.co.in.
- 1.6 IHMCL reserves the right to accept or reject any or all bids received before signing of Contract Agreement without thereby incurring any financial or other liability to the affected Bidders.

Address for communication:

Indian Highways Management Co. Ltd. (IHMCL)
1st Floor, NHAI Head Quarter (Old Building), G-5 & 6
Sector 10, Dwarka
New Delhi 110 075
Phone: +91-11- 28042710;
Email: tenders@ihmcl.com; Website: www.ihmcl.co.in

PART II: DEFINITIONS

In this document, the following terms shall have respective meanings as indicated:

- i. **“Applicable Law”** means the laws, rules or regulations and any other instruments, having the force of law in Republic of India, as in force from time to time.
- ii. **“Bidder”** means, a company which participates in the Bid process and submits its proposal pursuant to this RFP.
- iii. **“Commencement date”** means the date upon which the Service Provider receives the notice to commence the work issued by IHMCL.
- iv. **“Contract”** shall mean & include RFE, RFP, Notice for Inviting Tender (NIT), the tender documents, Letter of award and Letter of acceptance thereof and the formal agreement, to be executed between IHMCL and the Service Provider together with the complete documents referred to therein including the conditions with appendices and any special conditions, the specifications, designs, drawings, bill of quantities with rates and amounts. All these documents taken together shall be deemed to form one Contract and shall be complementary to each other
- v. **“IHMCL”** means Indian Highways Management Company Ltd.
- vi. **“Letter of Award (LOA)”** means the issue of a signed letter by IHMCL to Successful Bidder conveying its intention to accept the offer of Successful Bidder and awarding the work mentioning the total Contract Value.
- vii. **“Local Currency”** means the Indian Rupees
- viii. **“MoRTH”** means Ministry of Road Transport and Highways
- ix. **“NHAI”** means National Highways Authority of India.
- x. **“Party”** shall mean IHMCL or Bidder individually and “Parties” shall mean IHMCL and Bidder collectively.
- xi. **“Automatic Number Plate Recognition (ANPR) Camera”** means camera system that uses technology to read and recognize a vehicle’s license plate number automatically, without the need for human involvement.
- xii. **“Personnel”** means persons hired by the Service Provider as employees and assigned to the performance of the Services or any part thereof.
- xiii. **“RFP”** shall mean this Request for Proposal dated 17-05-2024, including the written clarifications & Corrigendum/Addendum issued by IHMCL in respect of the RFP from time to time.

- xiv. **“RFE”** shall mean Request for Empanelment document published by IHMCL dated **28-10-2021** on the website of IHMCL.
- xv. **“Services”** means requirements defined in this RFP including all additional services associated thereto to be delivered by the Successful Bidder.
- xvi. **“Successful Bidder”** means the Bidder, who, after the complete evaluation process, has been issued the Letter of Award by IHMCL
- xvii. **“Service Provider”** means 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.
- xviii. **“Operations and Maintenance (O&M)”** means operations and maintenance typically includes the day-to-day activities necessary for the keeping equipment and its allied systems to perform their intended function.
- xix. **“Uptime”** refers to the duration during which an ETC 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.
- xx. **“Downtime”** refers to the period during which an ETC 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.

Any other term(s), not defined herein above but defined elsewhere in this RFP shall have the meaning(s) ascribed to such term(s) therein and shall be deemed to have been included in this Section.

PART-III: SCHEDULE OF THE TENDER (KEY DATES)

S.No	Event Description	Date
1	Invitation of RFP	17-05-2024
2	Bid Due Date (Online Submission)	27-05-2024 (Up to 17:00 Hrs IST)
3	Bid Due date for physical submission of following documents at IHMCL office: - <ul style="list-style-type: none"> • EMD/Bid Security • Power of Attorney and Undertaking (refer Clause 7.2 and 7.3) 	27-05.2024 (Up to 17:00 Hrs IST)
4	Opening of requisite documents submitted Online and in physical form (like Bid form, PoA, Undertaking & Bid Security)	28-05-2024; at 17:00 Hrs IST
5	Opening of Financial Bids of Responsive Bids	To be intimated separately to responsive bidders
6	Issuance of Letter of Award (LoA)	Within 05 working days of financial opening
7	Submission of Performance Security	Within 07 working days of LoA issuance
8	Validity of Bid	180 days from Bid Due Date
9	Signing of Contract Agreement	Within 10 calendar days of LoA Issuance

PART-IV: INSTRUCTIONS TO BIDDERS

4.1 Eligibility to Bid

Only the bidders who are empaneled with IHMCL are eligible to participate in the Bid.

Bidders are required to submit letter of Empanelment as proof with the application (Letter issued from IHMCL). The Empaneled Bidders of IHMCL as on RFP release are as below: -

S.No.	Company Name
1	M/s Vaaan Infra Pvt. Ltd.
2	M/s Prakash Asphaltings and Toll Highways (India) Ltd
3	M/s Kent Intelligent Transportation System Pvt Ltd
4	M/s Comvision India Pvt Ltd
5	M/s Qualix Information Systems LLP
6	M/s. Ashoka Buildcon Limited
7	M/s Green Tech Intelligent Transportation System LLP and M/s Comnet Vision India Pvt Ltd (Consortium)
8	M/s Rajdeep Info Techno Pvt. Ltd.
9	M/s Tecsidel India Private Limited and M/s Intelliroute India Services LLP (Consortium)
10	M/s Arya Omnitalk Wireless Solutions Pvt. Ltd.
11	M/s Bisotech India Private Limited
12	M/s Superwave Communication and Infrsolution Pvt. Ltd.
13	M/s Metro Infrasys Pvt Ltd
14	M/s ParknSecure India Pvt. Ltd
15	M/s Efkon India Pvt. Ltd.
16	M/s LogicMo System Pvt Ltd and M/s Suroj Buildcon Pvt Ltd (Consortium)
17	M/s TrafikSol ITS Technologies Pvt. Ltd.
18	M/s Technova Software & Hardware Solution Private Limited and M/s Jai Buildcon Private Limited (Consortium)
19	M/s IBI Group India Private Limited
20	M/s Rudra Techno Care LLP and M/s Ashirwad Smart Infralink Pvt Ltd (Consortium)
21	M/s Innovinc Aspire Infratech Solutions Private Limited and M/s R K Chavan Infrastructure Private Limited (Consortium)
22	M/s VRS Intelligent Innovative System Pvt Ltd and M/s Speedway Industries Pvt Ltd (Consortium)
23	M/s Tollman International Pvt Ltd and M/s WORLDFA Exports Pvt Ltd (Consortium)
24	M/s Devaditya Technocrates LLP
25	M/s Techsture Technologies India Pvt Ltd and M/s Royal Infraengineering Pvt Ltd (Consortium)

**** Bidders who are under debarment or delisting from empanelment as of the Bid due date shall not be eligible to participate in the RFP.**

4.2 Content Of RFP

- a) The RFP should be read in conjunction with any addenda or clarifications issued subsequent to publication of RFP.
- b) Bidders are advised to study the RFP carefully. Submission of the Bid will be deemed to have been done after careful study and examination of all instructions, eligibility norms, terms and requirement specifications in the RFP with full understanding of its implications. Bids not complying with all the stipulations and requirements as set forth in this RFP are liable to be rejected at the sole discretion of IHMCL. Failure to furnish all information required in the RFP or submission of a bid not substantially responsive to the RFP in all respects will be at the Bidder's risk and may result in the rejection of the bid.

4.3 Cost Of Bidding

The Bidder shall bear all costs associated with the preparation and submission of the Bid and IHMCL will in no case, be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

4.4 Amendment Of RFP

At any time prior to the closure of time for submission of bids, IHMCL, for any reason, whether at its own initiative or in response to the clarifications requested by prospective Bidders may modify the RFP by issuing amendment(s) or Corrigendum.

Any Corrigendum /Addendum issued as aforesaid shall be part of the RFP and shall be displayed /communicated on e-tender portal. No separate information will be passed to any Bidder in this regard.

4.5 Language Of Bid

The Bid prepared by the Bidder, as well as all correspondence and documents relating to the Bid exchanged by the Bidder and IHMCL shall be written in English language only.

4.6 Bid Validity

- c) Bids shall remain valid for a period of 180 days from the last date of Bid due date. Any Bid valid for a shorter period shall be rejected as non-responsive. IHMCL has sole discretion to extend the period beyond 180 days.
- d) In exceptional circumstances, IHMCL may solicit Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing;

however, no modification to such bid shall be permitted.

4.7 Bid Security

- a) The Bidder shall furnish, as part of the Bid, Earnest Money Deposit (EMD) /Bid Security for an amount INR 6,50,000/-(Rupees Six Lakh Fifty Thousand only). The Successful Bidder's EMD will be returned, without any interest, upon the Successful Bidder signing the Contract and furnishing the Performance Security in accordance with the provisions thereof. IHMCL may, at the Successful Bidder's option, adjust the amount of EMD in the amount of Performance Security to be provided by him in accordance with the provisions of the Contract.
- b) The Earnest Money shall be in the form of a Demand Draft OR Bankers Cheque or NEFT/RTGS mode. The Demand Draft shall be drawn in favor of "Indian Highways Management Company Limited" whereas NEFT/RTGS shall be done in below mentioned IHMCL Bank Account:
A/c Holder Name = Indian Highways Management Company Limited
Bank Name = Canara Bank
A/c No. = 8598201006217
IFSC = CNRB0008598
Branch = Delhi NHAI Dwarka Branch New Delhi-110075
- c) Any bid not accompanied by an acceptable Earnest Money Deposit shall be rejected by IHMCL as non-responsive.
- d) The Earnest Money Deposit of unsuccessful bidders will be returned upon written request from the unsuccessful bidder, after expiry of the period of Bid Validity prescribed by IHMCL or Signing of Contract Agreement between IHMCL and successful bidder.
- e) The Bid Security / Earnest Money will be forfeited:
 - i. if the Bidder withdraws or modifies the Bid during the period of Bid validity;
 - ii. if the Bidder does not accept the correction of the bid price, pursuant to clause pertaining to imbalance bid;
 - iii. in the case of a Successful Bidder, if the Bidder fails within the specified time limit to -
 - iv. sign the Contract; and/or
 - v. Furnish the required Performance Security; or
 - vi. if the Bidder is found to be engaged in corrupt or fraudulent practices.

4.8 No alternative proposals By Bidders

Bidder shall submit only one bid/offer for this RFP that fully complies with the requirement of the RFP including conditions of Contract. Conditional offer or alternate offer will not be considered further in the process of tender evaluation.

4.9 Deadline For Submission of Bid

- a) Complete Bid documents as specified in the RFP must be received as specified on or before the date and time specified under “Key Dates”. In the event of the specified date for the submission of Bids being declared a non-working day for IHMCL, the Bids will be received up to the specified time on the next working day.
- b) IHMCL may, at its discretion, extend the deadline for submission of Bids by issuing an amendment in which case all rights and obligations of IHMCL and the Bidders previously subject to the original deadline will thereafter be subject to the deadline extended.
- c) Offer by fax / e-mail will not be accepted and shall be treated as void ab-initio.

4.10 Late Submission

Bids received after the deadline shall not be considered and shall be rejected summarily. No representation or communication would be entertained in this regard from any Bidder.

4.11 Modification And Withdrawal of Bids

- a) Bidders may modify or withdraw their Bid before the deadline.
- b) The Bidder may modify, substitute or withdraw its e- Bid after submission prior to the Bid Due Date. No Bid can be modified, substituted or withdrawn by the Bidder on or after the Bid Due Date & Time.
- c) For modification of e-Bid, Bidder has to detach its old Bid from e-Tender portal and upload / resubmit digitally signed modified Bid. For withdrawal of Bid, a Bidder has to click on withdrawal icon at e-Tender portal and can withdraw its e-Bid. Before withdrawal of a Bid, it may specifically be noted that after withdrawal of a Bid for any reason, Bidder cannot re-submit e-Bid again.

4.12 Opening and Evaluation of Bids

a) Opening of Bids

- i. The bids shall be opened in 2 stages as per Key Timelines mentioned in RFP.
- ii. In the first stage, responsiveness of the bids received shall be evaluated based on

the documents submitted on e-tender portal and in physical form such as Bid Form, PoA (as applicable, in case of re- submission), Undertaking (as applicable, in case of re-submission) & Bid Security will be opened at G 5 & 6, Ground Floor, NHAI HQ Building, Sector-10, Dwarka, New Delhi-110075 as per schedule defined under “Key Dates”.

- iii. IHMCL will subsequently examine and evaluate the bid documents submitted as in (ii) above in accordance with the provisions set out in this RFP.
- iv. In the second stage, the financial bids of the responsive bids shall be opened at G 5 & 6, Ground Floor, NHAI HQ Building, Sector-10, Dwarka, New Delhi-110075 as per schedule defined under “Key Dates”.
- v. The processes are explained in details in subsequent sections as below.

b) Evaluation of Bids:

i. Stage -1: - Test of responsiveness

The Bidder shall have to submit all the requisite documents as per various formats provided in Annexures of this RFP. These documents will be examined w.r.t completeness in this stage. The following documents are required to be submitted by the bidders

- Bid Security
- Bid form
- Power of Attorney (To be submitted only in case of any change in the one submitted during empanelment vide RFE issued by IHMCL dated **28-10-2021**)
- Undertaking (To be submitted only in case of any change in the one submitted during empanelment vide RFE issued by IHMCL dated **28-10-2021**))

A bid shall be considered Responsive only if:

- Requisite documents are received as per the format provided under this RFP;
- Bid contains all the information as required (i.e., complete in all respects);
- Bid does not contain any condition or qualification.
- it is not non-responsive in terms hereof

If any documents are not submitted or not submitted in prescribed format, then the bids shall be summarily rejected.

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 thereof. Any non-responsive bid shall not be considered for financial evaluation.

IHMCL reserves the right not to proceed with the Bidding Process at any time without notice or liability and to reject any or all Application(s) without assigning any reasons.

ii. Stage-2:- Financial Bids evaluation

The Financial Bids of only those Bidders who are declared as Responsive in Stage 1 above will be opened and evaluated.

The Financial Bid Evaluation will be based on the “Total Bid Price” quoted by the bidder which would be the total payouts inclusive of all levies and taxes like Excise Duty, Custom Duty, packing, forwarding, freight and insurance, Octroi/Entry Tax, etc. or as applicable taxes, but exclusive of GST.

If any Bidder quotes NIL charges / consideration, the bid shall be treated as unresponsive and will not be considered.

If there is a discrepancy between the Quarterly Price & the Total Bid Price for O& M services, the Quarterly price shall prevail and IHMCL shall correct the Total Bid Price for O& M charges.

The Evaluation Committee shall determine if the financial bid is complete and without computational errors. The Bid with the lowest price will be selected.

4.13 Clarification

Bidders requiring any clarification on the RFP may notify IHMCL by e-mail (tenders@ihmcl.com) as schedule defined in Key Dates section under the RFP. They should send their queries in .xlsx format before as per schedule defined in Key Dates section under the RFP.

4.14 Imbalanced Bid

Further, in case where the Bid of the successful bidder is less than 85% of the average of all bids received, the Successful Bidder shall have to submit an Additional Performance Security (APS) in the form of a Bank Guarantee for 3% of Contract value. The other requirements of Additional Performance Security (APS) are the same as those of Performance Security. IHMCL may also require the bidder to produce detailed price analysis for all items of the bill of quantity, to demonstrate the internal consistency of the proposed system.

4.15 Process To Be Confidential

Information relating to the examination, clarification, evaluation, and comparison of Bids and recommendations for the award of a Contract shall not be disclosed to Bidders or any other persons not officially concerned with such process until the award to the Successful Bidder has been announced. Any attempt by a Bidder to influence IHMCL's processing of Bids or award decisions may result in the rejection of his Bid.

4.16 Award Criteria

IHMCL will award the Contract to the Bidder whose Bid has been determined to be responsive in terms of this RFP and the Bid price has been found to be lowest inclusive of all levies and taxes like Excise Duty, Custom Duty, packing, forwarding, freight and insurance, Octroi/Entry Tax, etc. or as applicable taxes, but exclusive of GST.

4.17 IHMCL'S Right to Reject Any or All Bids

Notwithstanding anything contained herein, IHMCL reserves the right to reject any Bid, and to annul the bidding process and reject all Bids at any time before signing of Contract Agreement, without thereby incurring any liability to the affected Bidder(s) or any obligation to inform the affected Bidder(s) of the grounds for such decision.

4.18 Notification Of Award of Contract

- a) Prior to the expiration of the Bid validity, IHMCL will notify the Successful Bidder that his Bid has been accepted. IHMCL will mention the contract value in the LOA. IHMCL will issue notice to commence the work after issuance of LOA.
- b) The Contract will incorporate all agreements between IHMCL and the Successful Bidder. It will be signed by IHMCL and the Successful Bidder after the performance security is furnished by the Successful Bidder.
- c) Upon furnishing of the Performance Security by the Successful Bidder, IHMCL will promptly notify the other Bidders that their Bids have been unsuccessful.

4.19 Confidentiality

- a) The Bidder shall keep confidential any information related to this tender with the same degree of care as it would treat its own confidential information. The Bidders shall note that the confidential information will be used only for the purposes of this tender and shall not be disclosed to any third party for any reason whatsoever.

- b) Information relating to the examination, clarification, evaluation and recommendation for the Bidders shall not be disclosed to any person who is not officially concerned with the process or is not a retained professional advisor advising IHMCL in relation to, or matters arising out of, or concerning the bidding process. IHMCL will treat all information, submitted as part of the Bid, in confidence and will require all those who have access to such material to treat the same in confidence. IHMCL may not divulge any such information unless it is directed to do so by any statutory entity that has the power under law to require its disclosure or as may be required by law or in connection with any legal process or such information which would be available in public domain.
- c) At all times during the performance of the Services, the Bidder shall abide by all applicable IHMCL, NHAI/ MoRTH's security rules, policies, standards, guidelines and procedures. The Bidder should note that before any of its employees or assignees is given access to the Confidential Information, each such employee and assignees shall agree to be bound by the term of this tender.
- d) The Successful Bidder should not disclose to any other party and keep confidential the terms and conditions of this Contract, any amendment hereof, and any Attachment or Annexure hereof.
- e) The obligations of confidentiality under this section shall survive termination of the Contract.
- f) Bidders shall not be under a declaration of ineligibility or blacklisting for corrupt and fraudulent practices by the Central Government, the State Government or any public undertaking, autonomous body, authority by whatever name called under the Central or the State Government.

4.20 Signing of Contract

IHMCL shall intimate the Successful Bidder for signing of Contract Agreement upon submission of Performance Security as per schedule defined in RFP.

4.21 Performance Security

- a) Within 07 (Seven) days of the receipt of the Letter of Award, the Successful Bidder shall submit a Performance Security amount in form of Demand Draft or an irrevocable and unconditional Bank guarantee issued in the name of IHMCL for an amount equal to 3% of the Total Bid Price (value of awarded work), issued by a Bank described under this RFP which shall be verified at any branch located in the National Capital territory of Delhi and through SFMS mode as performance security for the due performance of its obligations

under the Contract.

- b) The aforesaid Bank Guarantee shall be as per the format given in format provided in this RFP and will be valid for a period of 180 days after the expiry of Contract period and shall also have a minimum claim period of 1 year.
- c) In case of Contract Period extension after 03 years of Contract Signing, the successful bidder shall furnish the extended PBG.

4.22 Bank Guarantee (BG)

- a) The Bank Guarantee in the name of IHMCL issued by the following banks would only be accepted:
 - i. Any Nationalized Bank
 - ii. Any Scheduled Commercial Bank approved by RBI having a net worth of not less than Rs. 500 crores as per the latest Audited Balance Sheet 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 taken into account
 - iii. A Foreign Bank (issued by a branch outside India) with a counter guarantee from any Indian Nationalized Bank.
 - iv. Export Import Bank of India
- b) The acceptance of the Bank Guarantees shall also be subject to the following conditions:
 -
 - i. The capital adequacy of the Bank shall not be less than the norms prescribed by RBI
 - ii. The bank guarantee issued by a Cooperative Bank shall not be accepted.

4.23 Corrupt Or Fraudulent Practices

IHMCL will reject a proposal for award and appropriate the Performance Security, as the case may be, if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question.

IHMCL will declare the Bidder ineligible, either indefinitely or for a stated period of time, to be awarded a contract by IHMCL if it at any time determines that the Bidder has engaged in corrupt or fraudulent practices in competing for the contract, or during execution.

“Corrupt practice” means the offering, giving, receiving, or soliciting of anything of value to influence the action of a public official or employee of IHMCL in the procurement process or in Contract execution.

“Fraudulent Practice” means a misrepresentation of facts in order to influence a procurement

process or the execution of a contract to the detriment of IHMCL and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid process at artificial non- competitive levels and to deprive IHMCL of the benefits of free and open competition.

4.24 Miscellaneous

- a) The Bidding Process shall be governed by, and construed in accordance with, the laws of India and the Courts at New Delhi shall have exclusive jurisdiction over all disputes arising under, pursuant to and/ or in connection with the Bidding Process.
- b) IHMCL, in its sole discretion and without incurring any obligation or liability, reserves the right, at any time, to
 - 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 thereto;
 - ii. consult with any Bidder in order 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 any or all submissions or other information and/ or evidence submitted by or on behalf of any Bidder.
- c) 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 laws, any and all rights and/ or claims it may have in this respect, whether actual or contingent, whether present or in future.
- d) If the Bidder has committed a transgression under this RFP such as to put its reliability or credibility into question, IHMCL shall be entitled to blacklist and debar such Bidder for any future tenders/contract award process in its sole and absolute discretion.

4.25 Site visit and verification of information

- a) Applicants are encouraged to submit their respective Bid/Applications after visiting the Project site and ascertaining for themselves the site/fee plaza conditions, traffic, location, surroundings, climate, availability of power, water and other utilities for construction, access to site, handling and storage of materials, weather data, applicable laws and regulations, and any other matter considered relevant by them. The costs of visiting the

site or sites shall be at the Bidder's own expense.

- b) The Bidder shall be deemed to have examined the site or sites and obtain for itself, at its own responsibility and risk, all information that may be necessary for preparing the bid and entering into the Contract.
- c) Any bidder interested in carrying out a site visit may write to IHMCL. On receipt of request, IHMCL shall issue an Authorization letter for site visit to such bidder.

4.26 Number of Applications and costs thereof

- a) No Applicant shall submit more than one Application for the Project. An applicant applying individually or as a member of a Consortium shall not be entitled to submit another application either individually or as a member of any Consortium, as the case may be.
- b) The Applicants shall be responsible for all of the costs associated with the preparation of their Applications and their participation in the Bid Process. IHMCL will not be responsible or in any way liable for such costs, regardless of the conduct or outcome of the Bidding Process.

PART-V: PREPARATION AND SUBMISSION OF APPLICATION

- 5.1** Bid must be submitted online only at <https://etenders.gov.in> during the validity of registration with the e-Tender Portal being managed by National Informatics Centre (NIC), i.e. <https://etenders.gov.in>. To participate in e-tender, the intending participants shall register themselves in the website of URL.
- 5.2** Bidders/Applicants are advised to go through the FAQs, guidelines, instructions, manuals, policies, system setting procedures etc. as provided in the e-Procurement portal.
- 5.3** Tender form and relevant documents will not be sold /issued manually from offices.
- 5.4** Bidders are required to upload scanned copies of proof of Bid Security submission, Bid Form, Power of Attorney (In case of re-submission), Undertaking (In case of re-submission) and other relevant documents on the e-Tender portal.
- 5.5** The date and time for online submission as mentioned in the section RFP document shall be strictly followed in all cases. The bidder/Applicants should ensure that their tender is submitted online before the expiry of the scheduled date and time. No delay on account of any cause will be entertained. Tender(s) not submitted online will not be entertained.
- 5.6** If for any reason, any interested bidder fails to complete any online stages during the complete tender cycle, IHMCL shall not be responsible for that and any grievance regarding that shall not be entertained.

PART VI- CONDITIONS OF CONTRACT

6.1 CONDITIONS OF CONTRACT

These Conditions shall supplement or amend the other parts of the Bidding Documents and whenever there is a conflict; provision herein shall prevail over those in the other parts of the Bidding Documents.

6.2 GOVERNING LANGUAGE

All correspondence and other documents to be exchanged by the parties shall be written in the English language. The version written in English language shall govern its interpretation.

6.3 APPLICABLE LAW

Appropriate laws as in force in Republic of India shall apply.

6.4 INTERPRETATION

In interpreting these Conditions of Contract, singular also means plural, male also means female or neuter, and the other way around. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined.

The Bidders are expected to examine all terms and instructions included in the RFP Document. During preparation of the technical proposal, the bidders shall make their own assessment of staff to undertake the assignment.

6.5 RIGHT TO VARY QUANTITY

- a) At the time of award of contract or during the Contract Period, the quantity of goods, works, scope or services originally specified in the bidding documents may be changed by IHMCL by a written order to the Successful Bidder. It shall be without any change in the unit prices or other terms and conditions of the Bid and the bidding documents.
- b) If IHMCL does not procure any line item(s) as specified in the Bill of Materials for procurement or procures less than the quantity specified in the RFP Document due to change in circumstances, the Successful Bidder shall not be entitled for any claim or compensation except otherwise provided in the bidding document.
- c) Repeat orders for extra items or additional quantities may be placed on the rates and conditions given in the contract.
- d) IHMCL may choose to procure additional material for any of the line item specified in Bill of Materials of the quantities per line item during the Contract Period. The Successful Bidder shall hold the same prices quoted herewith.

6.6 RIGHT TO AMEND PROJECT SCOPE

IHMCL retains the right to amend the list of Toll Plazas provided in **Annexure-B** upto 20% (Increase/Decrease) without assigning any reason at any time during the Contract Period. IHMCL makes no commitments, express or implied, that the full scope of work as described in this RFP will be commissioned.

6.7 COMPENSATION

In case of the descoping of toll plazas before expiry of Contract Agreement, IHMCL shall release the pending Capex amount of the toll plaza. However, O&M payment shall be made as per actual till descoping date. No compensation shall be given for unused quarterly O&M services.

6.8 PAYMENT TERMS

- a) Payments will be made in Indian Rupees only.
- b) **For Fee Plazas (Implementation & O&M services of ETC system, refer (Annexure-B))**
 - i. Payment to be made to the System Integrator for System Design, Engineering, Supply, installation, System Integration, Testing & Commissioning and O&M shall be made to the as per the following: -

Payment Milestones		
Sr. No.	Milestone Description	Payment Amount
Milestone 1	Upon delivery of equipment at site location (Refer point (iv) below)	20% of Total Price for the Toll Plaza
Milestone 2	After successful installation and commissioning of complete ETC system and integration with Central Clearing House (CCH) including Go Live and completion of Integration with TMCC application. (Refer point (v) below)	10% of Total Price for the Toll Plaza
Milestone 3	On successful acceptance of Site Acceptance Test (SAT) (Refer point (vi) below)	10% of Total Price for the Toll Plaza
Milestone 4	Quarterly Payments during O&M period	60% of Total Price for the Toll Plaza shall be paid in equal

Payment Milestones		
Sr. No.	Milestone Description	Payment Amount
	(Refer point (vii) below)	quarterly instalment from date of Go-Live of the plaza but after completion Milestone 3

- ii. Payment may be claimed for any particular site, on achievement of above said milestones.
- iii. IHMCL shall issue the instruction for the supply & installation of main component as per BOQ for each toll plaza, basis which service provider shall be responsible to deliver and install the equipments and accordingly payment shall be released.
- iv. **In Milestone -1: -**
- List of BOQ items supplied should be certified by IHMCL/ PIU before submission of invoices to IHMCL. Material Verification report shall be submitted with IHMCL on delivery of BOQ items.
 - Service provider shall also submit Technical System Specification Delivery Compliance Report as per format mentioned in **Annexure-E** along with equipment specification sheet from OEM.
 - No payment shall be released on the basis of partial delivery of equipment as specified in **Annexure-A** except for special case at IHMCL discretion.
- v. **In Milestone 2:-**
- Go-Live confirmation from NPCI/bank with ICD 2.5.
 - Plaza integration with TMCC application.
 - Functionality testing for processing of FASTag transaction through ANPR camera.
 - Request received for conducting Site Acceptance Test by Service Provider.
- vi. **In Milestone 3: -**
- Site Acceptance Test has to be conducted and certified by concerned official IHMCL/NHA1 upon completion of all Punch Points before submission of invoices to IHMCL.
- vii. **Milestone 4/ Quarterly Payments during O&M period**
- Defect Liability Period (DLP) shall be for a period of two years (24 month) start from date of Go Live with CCH server.
 - The O&M period shall commence from completion of Milestone 2 for the Toll Plaza. IHMCL shall release the quarterly payment to the Successful Bidder from Go Live date but after completion of SAT.

- viii. **Salvage Value of Existing ETC system at Fee plazas-** Prospective bidders shall conduct a survey of the toll plaza and evaluate the existing hardware equipment at the fee plazas and quote the salvage value of the same as per financial bid format. Bidder has to provide the salvage value of only equipment as listed in **Annexure A except DG set**. The cost associated with the survey shall be borne by the bidder. Bidder shall consider factors such as wear and tear, damage to the equipment if any during the time of bid and the actual allocation of the plaza to the shortlisted bidder. IHMCL will not entertain any changes to the salvage cost after the work has been awarded to the successful bidder. Payment will be made after deducting the amount quoted by the bidder as the Salvage Value. The Service Provider must submit milestone invoices, deducting the Salvage Value of old ETC equipment as quoted in the financial bid. If an invoice is submitted without deducting the salvage value, IHMCL will deduct it from the milestone payment to the bidder until the quoted salvage value is recovered. After award of contract, bidder has to ensure that these old equipment are appropriately dismantled and taken away from the site without causing any damage or hinderance at the plaza. Bidder shall ensure that the dismantled equipment are taken away from the site within 10 days of go-live of the new setup at the respective plazas. If any equipment listed in Annexure A is found at the fee plaza but is not owned by NHAI/IHMCL, the successful bidder shall not consider the salvage value of such equipment in the bid and such equipment shall not be taken away the successful bidder.
- ix. The quantities of some items may increase or decrease depending upon individual plaza conditions. Payments would be made for actual quantities of items used at unit price indicated in the Financial Bid.

c) For Fee Plazas (Providing O&M services of existing ETC system, refer(Annexure-B))

- i. IHMCL shall release the payment on a quarterly basis for O&M services.
- ii. The Successful Bidder shall submit invoice to IHMCL on a quarterly basis in hardcopy with a forwarding letter with all supporting documents as per requirement. The invoice shall be processed only after receipt of physical copies, unless specified otherwise by IHMCL. The invoices should be submitted at IHMCL office after completion of the quarter and not later than 7th of subsequent month of the quarter.
- iii. Quarterly Payment for a toll plaza shall be derived as per formula below –

$\text{Quarterly Payments} = (A * B) - C$

Where,

A = Quarterly rate per lane for providing O&M services of ETC system installed at toll plaza (In Rs.) as per Quoted Value submitted in the financial bid.

B = No. of lanes at the fee plaza where O&M services of ETC system are in effect by the Bidder (at the beginning of the Quarter)

C = Penalty amount, or deductions, if any

- iv. IHMCL shall release the payment on a quarterly basis for O&M services.
 - v. Additional Equipment (For equipment which are Not available at the fee plaza as per status mentioned in **Annexure-C**), 100 % payment shall be released upon delivery, Installation and Commissioning of equipment at site location. The work completion shall be verified by representative from concerned PIU/IHMCL. No payment shall be released for partial delivery of additional equipment. Service provider shall also submit Technical System Specification Delivery Compliance Report as per format mentioned in **Annexure-E** along with equipment specification sheet from OEM.
 - vi. To claim the Quarterly O&M payment, the Service Provider must notify IHMCL/concerned PIU upon completion of work at the respective fee plazas in accordance with the Contract Agreement. Subsequently, IHMCL/Concerned PIU will conduct a visit to the fee plaza to verify the status of equipment as outlined in **Annexure-F**. The O&M services will be considered commencement once all equipment/criteria specified in the format are confirmed to be compliant by the Service Provider.
- d) Service Provider shall submit the following reports to claim for Quarterly O&M Service payment: -

S.No	Report Type	Duration	To be Shared with	Report Format
1	Preventive Maintenance report along with photographs	Monthly	Concerned and IHMCL PIU	PDF
2	Fault Summary Report (Duly verified by respective Toll Operating Agency) as per Format placed at Annexure-D	Monthly	Concerned and IHMCL PIU	PDF
3	Lane Wise AVC Accuracy Report (System Generated)	Monthly	Concerned and IHMCL PIU	PDF and Excel
4	Attendance Record of deployed manpower through Aadhar Based geo-fenced Smart attendance system	Monthly	Concerned and IHMCL PIU	PDF
5	Equipment Downtime Report	Monthly	Concerned and IHMCL PIU	PDF

- e) IHMCL shall verify SLA for Equipment uptime as per TMCC software, equipment downtime report shared by SI and Fault summary report. Upon verification of, Quarterly O&M services payment shall be released to the Service Provider.
- f) Service Provider shall ensure that the correct IP address of ETC equipment are configured on TMCC dashboard. In case incorrect IP address of ETC equipment are found on TMCC dashboard, necessary action as per RFP Clause 6.21.(c) (vii) shall be taken.
- g) Invoices shall be raised within one month of completion of quarter/Milestone achievement.
- h) All payments shall be made subject to adjustment of applicable penalties.
- i) All Payments will be processed within 60 days of submission of undisputed invoice.

6.9 PRICES

- a) GST as applicable, which will be levied on the goods and services invoiced by the Service Provider to IHMCL, will be reimbursed on actual basis.
- b) IHMCL reserves the right to ask the Service Provider to submit proof of payment against any of the taxes, duties, levies indicated.
- c) All payments shall be made subject to adjustment of applicable damages.
- d) No amount or cost shall be payable for holding discussion, as considered necessary by IHMCL, for any purpose with IHMCL’s Officials at IHMCL’s Head Office or elsewhere, prior, during or after the conduct of an assignment.
- e) Prices quoted by the bidder shall be excluding GST and fixed for the entire Contract period.

6.10 ASSIGNMENT MILESTONE & TIMELINES

- a) **For Fee Plazas (Implementation & O&M services of ETC system, (refer Annexure-B))**

The following table captures the key events and their associated timelines.

Sl. No.	Milestone Description	Timelines
1.	Submission of design document of each toll plaza including but not limited to following:- <ul style="list-style-type: none"> • Plaza layout • Network Architecture • Equipment installation 	Within 20 days from the date of Issuance of Letter of Award (LoA), or date of issuance of instruction for commencement notice issued by IHMCL, whichever earlier.

	layout <ul style="list-style-type: none"> • Conduit layout • User guide Report should be prepared based on actual site condition with supporting images and schematic diagram.	
2.	Supply, install and commission all the items including Go-Live with CCH	<ul style="list-style-type: none"> • In case Site is FIT for Implementation: - Within 60 days* (inclusive of Sl. no. 1 from the of date of signing of Contract Agreement or date of issuance of instruction for commencement notice issued by IHMCL, whichever is earlier. SI shall have to carry out site survey and report site-readiness status to IHMCL. • In case Site is not FIT for Implementation: - Within 60 days* (inclusive of Sl. no. 1) from date of intimation for site readiness by IHMCL/concerned PIU

*Non-fulfillment of this requirement or delay in Assignment Timelines would attract penalties.

b) For Fee Plazas (Providing O&M services of existing ETC system, (refer Annexure-B))

The Service Provider shall ensure to start the Operation & Maintenance activity (Software and Hardware) within 30 days from date of signing of Contract Agreement/commencement instruction given by IHMCL at all allocated toll plazas which includes Software Migration in all lanes, repair/replacement of existing faulty/damaged equipment, completion of installation & commissioning work of additional equipment which are not available at the fee plazas as per **Annexure-C**.

6.11 DAMAGES (Applicable for fee plazas of Implementation & O&M services as per Annexure-B)

a) Failure of the service provider to install and commission the ETC system within the timelines specified in the RFP shall attract liquidated damages @ 0.1 % of the Total Price of the toll plaza (as per financial proposal submitted by the bidder) for each day of delay in implementation. The total levied penalty, however, shall not exceed 10% of the

assignment cost.

- b) Once the liquidated damages reach maximum limit, IHMCL may terminate the contract and forfeit the performance bank guarantee. IHMCL also reserves the right to debar the Service Provider from further participation in IHMCL's subsequent tenders due to its non-performance.
- c) Upon termination of the Agreement due to service defaults, IHMCL may choose to allocate the said site to any other Service Provider, at its sole discretion and at the risk and cost of the defaulting Service Provider.
- d) In case IHMCL is of the view that the delay is due to reasons beyond the control of the Service Provider, suitable extension of time may be granted to the Service Provider with or without imposing any Damages on such Service Provider in the absolute discretion of IHMCL.
- e) Damages shall be payable by the Service Provider within 5 days of imposition thereof by IHMCL, failing which the same shall be deducted from the payments to be made to the Service Provider or from the Performance Security as deemed appropriate by IHMCL.

6.12 SCOPE OF WORK

The scope of work as specified in Clause 05 of RFE Tender No. IHMCL/ETC/Empanelment/2021/01, dated 28-10-2021 shall remain same. However, following additional activities are added under the scope of Service Provider: -

- a) For Fee Plazas (Implementation & O&M services of ETC system, refer Annexure-B)**
 - i. Service provider shall ensure to integrate the Automatic Number Plate Capture (ANPR) Camera with Lane software and Plaza software.
 - ii. Service Provider shall ensure for automatic capturing of vehicle registration number (VRN) of each vehicle through ANPR camera installed in lanes. A functionality shall be developed in lane application to process FASTag transaction based on VRN captured by ANPR camera and the same shall be used as secondary option whenever FASTag is not read through fixed RFID reader.
 - iii. Service Provider shall ensure to keep a proper inventory of the ETC infrastructure installed at fee plazas throughout the Contract period.
 - iv. Service Provider shall ensure to install Lane Monitoring Camera/Incident Capture Camera in all lanes at toll plaza which will record the video and also capture the

incidents. This camera shall be mounted on the pole at a location (to be decided by Service Provider) whereby proper video recording can be made of the lane and incidents can be captured in TMS software. This camera shall be integrated with TMS software to capture the incidents and also connected with Network Video Recorder. Following Cameras are required to be connected with Network Video Recorder with minimum 30 Days of video Backup: -

- Lane Monitoring Camera/Incident Capture Camera
 - Booth Monitoring Camera
 - Plaza Building Camera
 - PTZ Camera
- v. The Service shall diligently implement the Electronic Toll Collection (ETC) system at the fee plazas, adhering to the prescribed business rules. In the event of an entry-exit concept being utilized at the fee plazas, the Service shall responsibly develop a suitable solution and successfully execute the required tasks within the specified timeline outlined in the Request for Proposal (RFP).
- vi. In case of staggered fee plazas, the Service Provider shall ensure to make arrangement of network connectivity among fee plazas and ensure for smooth functioning of ETC system. The cost of network connectivity management shall be the part of Cabling/Networking/Installation/ Commissioning as mentioned in **Annexure-A**.
- vii. In the case of fee plazas with pre-existing ETC systems, the selected Service System shall dismantle the old ETC system. The handover/takeover activity for old ETC equipment, whether in working or non-working condition, should be diligently carried out by the successful bidder. The Service Provider shall be responsible for the complete dismantling of the existing ETC equipment from the toll plaza.

b) For Fee Plazas (Providing O&M services of existing ETC System, refer Annexure-B)

- i. Service Provider shall take over all **Available**¹ ETC equipment on As-Is basis at the allocated toll plazas and carryout proactive and reactive maintenance, repair and replacement of defective components (IT and Non-IT/ Hardware, UPS with Batteries, Software etc.), or replacement as required to maintain the SLAs in the RFP throughout the Contract Period. The cost for repair and replacement of existing ETC equipment shall be borne by the Service Provider and shall be deemed to be factored in the quoted

¹ Available – Shall mean that equipment/software which are pre-existing at the toll plaza as per status of equipment provided in this RFP-Annexure-C. This equipment/software may be in functional/faulty/damage condition.

value by the Service Provider. The list of existing ETC equipment at the fee plazas is as per **Annexure-C**.

- ii. The equipment that are **Not-Available**² at the fee plazas as mentioned in **Annexure-C** shall be supplied, installed, and commissioned by the Service Provider at the lowest equipment rates quoted in this tender by the Service Provider for the implementation and O&M services of the ETC system at the fee plazas.
- iii. Any replacement/new supply of equipment by Service Provider shall be as per equipment Specification mentioned in this RFP and RFE Tender No. IHMCL/ETC/Empanelment/2021/01, dated 28-10-2021.
- iv. Service Provider shall ensure to start Operation & Maintenance of ETC system at fee plazas with their own ETC software within 30 days from issuance of Letter of Award which includes repair/replacement of existing faulty/damaged equipment and provision for additional equipment which are not available at the fee plazas.
- v. The O&M services shall be considered as started from the date when following processes are completed at the fee plaza: -
 - Smooth roll over of ETC system at Fee Plaza (confirmation from Acquirer Banks/NPCI required)
 - Repair/replacement of all faulty/damaged equipment (refer **Annexure-C**) as handed over by previous System integrator (To be verified by IHMCL/representative from PIU)
 - Installation & commission work of additional equipment which are not available at the fee plazas as per status mentioned in **Annexure-C**(To be verified by IHMCL/representative from PIU)

Upon completion of above-mentioned processes, Service Provider shall notify IHMCL to verify the same. Upon Verification if all equipment are found to be functional, IHMCL shall consider the O&M start date as of notification received from Service Provider. The O&M services shall not be treated as started unless above mentioned processes are completed and informed by Service Provider.

- vi. Service Provider shall ensure to integrate all existing ETC equipment of the fee plazas. Any requirement to integrate existing ETC equipment like arrangement of protocol, Integration software etc. shall be the responsibility of Service Provider.

a) **Common Scope of Work**

² Not-Available – Shall mean that equipment/software which are not currently installed/present at the toll plaza as per status of equipment provided in this RFP-Annexure-C

- i. Post Hand Over Take Over process of ETC system at Fee plazas, the service provider shall be fully responsible for the safety of ETC equipment. Any equipment gets non-functional after certification due to any reason whatsoever, excluding scenarios covered under Force Majeure then Successful bidder shall replace/repair as per SLA. The Service Provider should keep spare items of critical ETC equipment such as RFID Reader, Boom Barrier, AVCC system, etc. for quicker turnaround time.
- ii. Ongoing maintenance, repair and replacement of all hardware, software, peripherals and sub-components of all BOQ items shall be the responsibility of Service Provider without any financial implication to IHMCL. Any ETC hardware item shall be replaced within SLA period as defined.
- iii. The Service Provider shall provide minimum 03 Site Engineers (03 shifts) at each fee plazas to ensure 24*7 onsite support. The site engineer shall be at least Graduate or Diploma in Engineering, preferably in Electrical/Electronic/IT/Computer Science or equivalent. Service Provider shall submit the CV and qualification documents of Site Engineers such as Graduation Degree/ Diploma Certificate with IHMCL prior to deployment at toll plaza. Service Provider shall provide the Site Engineer contact details such as Name, Contact No. etc.
- iv. Service Provider shall ensure to comply to all applicable statutory requirements such as minimum wages, EPF, ESI etc. for the site engineers deployed at fee plazas. Service Provider shall submit the necessary proof/supporting evidence as and when sought by IHMCL. Service Provider shall indemnify IHMCL/NHAI in case of any claim or grievance raised by these site engineers.
- v. The Service Provider shall adhere to the maintenance of ETC & TMS Equipment, Periodic Preventive Maintenance of equipment, Timely Corrective Maintenance, Software Maintenance, Remote Software support for the ETC & Toll System.
- vi. Service Provider shall be responsible for repair/ replacement of equipment as per SLA for the equipment which get faulty due to reasons like Short Circuit, Thundering/Lightening and Voltage Fluctuation throughout the Contract Period. Service Provider shall take all preventive measures to upkeep the equipment.
- vii. Service Provider shall be responsible for providing Pest Control services at the toll plaza to prevent equipment for getting faulty. Service Provider shall be responsible for repair/ replacement of equipment within the defined SLA which have got faulty due to cable/equipment damaged by Rodent. The cost of the same is the part of O&M Price

- of the plaza.
- viii. Service Provider shall ensure to maintain and provide (02) internet services with static IP addresses, ensuring a minimum bandwidth equivalent to 02 Mbps per lane throughout the entire Contract period. For e.g. a plaza with 10 lanes shall have the minimum internet bandwidth of 20 Mbps. The primary purpose of these internet services is to facilitate the sharing/receiving of the ETC system data with entities such as the acquirer bank, TMCC vendor etc. Additionally, the same internet services will be utilized to transmit live feeds from cameras, including PTZ camera, Lane Camera, Plaza Camera, etc., to the Command Control Centre established by NHAI/IHMCL. For fee plazas of O&M services of existing ETC system, the Service Provider must include the recurring costs associated with the provision of internet services in the overall cost of O&M services, as quoted in the tender, for the duration of the Contract. Furthermore, as part of the contingency plan, the Service Provider is obligated to ensure internet connectivity through a dongle device as a backup mechanism, without imposing any additional costs on IHMCL.
 - ix. The Service Provider shall take prior approval from respective PIU/IHMCL before updating any version of Lane / Plaza application, for which, a software modification request shall be submitted to PIU/ IHMCL for seeking approval.
 - x. The Service Provider shall take adequate measures to protect ETC system from any Malware/Ransomware attack at fee plazas.
 - xi. The Service Provider shall ensure to upkeep the existing equipment and newly delivered equipment throughout the Contract period. Any equipment which gets damaged/faulty due to any reason except case of force majeure should be repaired/replaced by service provider on immediate basis in order to maintain the SLA defined in the RFP.
 - xii. The Service Provider shall be responsible for implementation of ICD 2.5 at all allocated toll plazas which includes provision of all certificates like SSL, firewall etc. The Service Provider shall ensure to complete the ICD 2.5 implementation work within 10 days from takeover of fee plazas for providing O&M services.
 - xiii. Service Provider shall provide full support in plaza handover to new Service Provider as and when in future engaged by IHMCL at the allocated toll plazas during the O&M period. The Service Provider shall be involved in the transition process till toll plaza take over by new Service Provider.

- xiv. Service Provider shall ensure to keep the image backup captured through ANPR/LPIC and ICS/Lane Monitoring camera for a period of minimum 06 months. In case of insufficient space in the server, the Service Provider shall provide an external media device to keep the image backup for a period of minimum 06 months. The Service Provider shall factor the cost of external media device into the originally quoted O&M amount. IHMCL will not make any additional payments for the same.
- xv. The successful bidder shall assist and extend required support, at no additional cost to IHMCL, in integration or migration to the Unified tolling software (Centralized TMS) as mandated by IHMCL from time to time.
- xvi. Service Provider shall be responsible for conducting audits of manually processed FASTag transactions before forwarding them to the Acquirer bank. These audits will rely on image evidence obtained through Automatic Number Plate Capture Cameras/AVCC data. The Service Provider must ensure that all manually processed transactions are sent only after a comprehensive audit has been performed. The audit for each manual transaction should be completed within 24 hrs of transaction generation. Daily report of manual transaction shall be shared with IHMCL.
- xvii. Service Provider shall strictly ensure provisioning of necessary arrangement including but not limited to proper network infrastructure, mapping of correct IP address etc. for reflection of correct uptime of equipment on TMCC dashboard. In the event of non-compliance, penalties, as specified in the Contract Agreement, shall be imposed based on data recorded in the TMCC software.
- xviii. System Integrators shall ensure that the Automatic Vehicle Counter cum Classifier (AVCC) system at all respective fee plazas should accurately count and classify the vehicles crossing from the lanes. The AVC accuracy should comply with the SLA parameters defined in the RFP. Necessary measures to achieve the desired accuracy level should be ensured by the System Integrator in close coordination with the respective toll operating agencies. In case of any non-compliance, applicable penalties shall be imposed in accordance with the RFP.
- xix. Service Provider shall be responsible for taking a complete backup of the database from the previous System Integrator and storing all fields of data in their system application. This activity shall be carried out in coordination with the previous System Integrator. The old data shall be generated through software application as provisioned by Service Provider. Whenever there is a need to share the old data with IHMCL/PIU,

the Service Provider must ensure its timely provision.

xx. Service Provider shall ensure to maintain some spare quantity of critical ETC equipment (Lane level) at the fee plaza, strictly adhering to the SLA parameters outlined in the RFP document. In the event of any damage/fault occurring to the equipment, regardless of the cause, the Service Provider must promptly replace the affected equipment with prior intimation to concerned PIU and IHMCL using the spare quantity. The spare quantity of critical ETC equipment should be no less than 50% of the total number of lanes at the fee plaza to ensure timely corrective actions. These critical equipment components encompass: -

- RFID reader
- Toll Lane Controller
- Automatic Vehicle Counter and Classifier system
- License Plate Image Capture Camera/Automatic Number Plate Recognition Camera
- Automatic Barrier Gate
- Lane UPS with batteries

It is important to note that the Service Provider shall maintain the spare quantity at its own cost to adhere the SLA. IHMCL will not make any additional payments for the provision of the spare equipment.

xxi. Service provider shall provide Aadhar enabled Geofenced smart attendance system with time and face recognition for all deployed staff at fee plazas. Any change in personnel has to be reported by the System Integrator to IHMCL in writing before the change has taken place. If any staff other than reported staff is found present in the toll plaza, it will lead to penalties pertaining to absence of expected staff. The system should be designed to ensure that the attendance of service provider representative is monitored, and the attendance is verifiable on real time basis by IHMCL using a centralized software as provided by Service Provider for all their respective fee plazas under Contract Agreement. In case of non-availability of operator/personnel at the lane/plaza, applicable penalty shall be imposed on the service provider as per provision under the RFP and RFE.

6.13 COMPENSATION

In case of any descoping of toll plaza, IHMCL shall pay the remaining capex cost of equipment provided by Service Provider. No compensation shall be given for unused quarterly O&M services.

6.14 SERVICE LEVEL AGREEMENT(SLA)

The SLA, as originally outlined in Clause 5.7 of RFE Tender No. IHMCL/ETC/Empanelment /2021/01, dated 28-10-2021, shall remain unchanged, with modifications to some existing SLA parameters and the inclusion of new SLA parameters as defined below: -

a) Plaza Building Equipment

- i. The uptime availability of all Critical equipment of Plaza Building shall be 99% per lane per month. The permissible downtime for all critical Equipment shall be 7 hours per critical plaza equipment per month.
- ii. The downtime shall be calculated at a cumulative level when any of the critical plaza equipment as mentioned below is non-operational for that specific lane:
 - ETC Server including Software
 - Network Video Recorder
 - Master Intercom
 - 24 Port Network Switch
 - Plaza UPS
 - All Lanes communication down with ETC server
- iii. 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.
- iv. For all other equipment of the plaza building, the uptime availability shall be 98% per lane per month.
- v. The formula for the calculation of plaza building system availability shall be as follows:
System Uptime = $[1 - \{A/(B - C)\} * 100]$, where
A = Time for which system is down per month basis scenarios in Hrs
B = Total time in a month
C = Scheduled downtime and Permissible downtime basis section 6.14 (a) (i) & (iii)
- vi. The Service Provider shall maintain adequate inventory/spares to ensure the service levels prescribed in clause 6.14(a) (i) & (iv) are adhered.
- vii. For non-adherence to service levels as defined in clause 6.14 (i) & (iv), the penalty for deficiency of services shall be imposed as follows:

- Upto 1 hr - 1% of the monthly O&M charges per plaza
- >1 hr to ≤ 2 hrs - 2% of the monthly O&M charges per plaza
- >2 hrs to ≤ 3 hrs - 3% of the monthly O&M charges per plaza
- >3 hrs to ≤ 5 hrs - 5% of the monthly O&M charges per plaza
- >5 hrs to ≤10 hrs - 10% of the monthly O&M charges per plaza
- >10 hrs to ≤ 20 hrs - 25% of the monthly O&M charges per plaza
- >20 hrs - 50% of the monthly O&M charges per plaza

b) Lane System

- i. The uptime availability of all Critical equipment of ETC system shall be 99% per lane per month. The permissible downtime for all critical Equipment shall be 7 hours per lane per month.
- ii. The downtime for a toll lane shall be calculated cumulatively when any of the critical equipment, as mentioned below, is non-operational for that specific lane:
 - RFID Reader
 - Toll Lane Controller System
 - Automatic Vehicles Classification Controller and Sensor
 - Automatic Barrier Gate
 - License Plate Image Capture Camera
 - Incident Capture Camera
 - Lane Application
- iii. For all other lane equipment, the uptime availability shall be 98% per lane per month.
- iv. 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 lane per month.
- v. The formula for the calculation of plaza building system availability shall be as follows:
System Uptime = $[1 - \{A/(B - C)\} * 100]$, where
A = Time for which system is down per month basis scenarios
B = Total time in a month
C = Scheduled downtime and Permissible downtime basis section 6.14 (b)(i) & (iv)
- vi. The Service Provider shall maintain adequate inventory/spares to ensure the service levels prescribed in clause 6.14(b)(i) & (iii) are adhered.
- vii. For non-adherence to service levels as defined in clause 6.14 (b) (i)& (iii), the penalty

for deficiency of services shall be imposed as follows:

- Upto 1 hr - 5% of the monthly O&M charges per lane
- 1 hr to <=2 hrs - 10% of the monthly O&M charges per lane
- 2 hrs to <=5 hrs - 15% of the monthly O&M charges per lane
- 5 hrs to <=10 hrs - 25% of the monthly O&M charges per lane
- 10 hrs to <=24 hrs - 50% of the monthly O&M charges per lane
- Greater than 24 hrs - No monthly O&M charges shall be paid for that lane

6.15 Others

a) **Delay in Takeover of Fee Plaza(Fee plazas for O&M services of existing ETC system)**

: -

The Service Provider shall start operation and maintenance of ETC system at all allocated toll plazas within 30 days of Issuance of LoA including repair/replacement of faulty/damaged existing equipment (incl. Sub-equipment & Consumables) and installation, commissioning & integration of additional equipment which are not available at the fee plaza as per **Annexure-C**.

Failure of the Service Provider to complete the above work within 30 days shall attract a penalty as below:-

- Up to 10 days of delay - Rs 1,000/- for each day of delay (per fee plaza)
- After 10 days of delay – Rs. 2,000/ for each day of delay (per fee plaza)

The total levied penalty for this SLA, however, shall not exceed Rs 5,00,000/- for each toll plaza.

b) **Non-functioning of Fee plaza with ICD 2.5 specification or latest: -**

The Service Provider shall ensure to comply with ICD 2.5 specification document or latest for processing the transactions to respective Acquirer Bank at all allocated fee plazas. Failure of the Service Provider to comply with ICD 2.5 specification or latest at any allocated fee plaza, following penalty shall be imposed:-

- Up to 05 days - Rs 1,000/- for each day (per fee plaza)
- After 05 days of delay – Rs. 2,000/ for each day (per fee plaza)

The total levied penalty for this SLA, however, shall not exceed Rs 30,000/- for each toll plaza per month.

6.16 Hardware Specification

The Toll Plaza equipment as specified in Annexure-A of RFE Tender No. IHMCL/ETC/Empanelment/2021/01, dated 28.10.2021 shall remain the same. The specifications for Automatic Number Plate Capture Camera and Lane Monitoring Camera are

as below:-

a) Automatic Number Plate Recognition (ANPR) Camera

- i. ANPR Cameras shall be installed in each lane to detect and recognize the Vehicle Registration Number (VRN) and classification of each passing vehicle.
- ii. ANPR Cameras should also be capable to detect and recognize the vehicle classification of each passing vehicle with accuracy more than 95%.
- iii. The Lane computer should have an active integration with ANPR camera system to get the live Vehicle Registration number of each passing vehicle.
- iv. In case of Cash transaction, TC should get the Vehicle Registration Number automatically in Lane application through ANPR Camera.
- v. In case of FASTag Transaction, ANPR camera shall be used as a backup of RFID reader, if RFID reader fails to read the TAG or RFID reader is down, Lane system should have an option to fetch the FASTag details using the Vehicle Registration Number detected by ANPR System.
- vi. ANPR Recognition system shall have count accuracy of 99.50% for all types of vehicles.
- vii. ANPR Recognition Accuracy shall be > 98% for all HSRP Plates and > 90% for all Non-HSRP plates.
- viii. 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.
- ix. ANPR Camera should have the following minimum specifications:
 - A camera of 4 MP at 25 FPS shall be provided. The IP camera shall be POE powered bullet type with inbuilt IR of 100 meters with illumination at 0.1 lux for colour image and black & white at 0 lux with IR.
 - ANPR Camera should have High-performance embedded processor to auto recognize vehicle number plate and should not rely on external software or processing resources for recognizing the number plate.
 - The lens shall be of 5-50 mm motorized varifocal with true WDR (120 dB), 3D DNR, BLC, HLC, AGC and triple simultaneous streaming.
 - The Camera shall have inbuilt SD card slot and shall be provided with at least 128 GB class 10 SD card. The shutter speed of the camera shall be 1/3 second to 1/100000 seconds for capturing the motion detection even during low light condition

and provide proper image. The housing shall be IP 67 & NEMA-4X rated with IK10 protection against vandalism. The camera shall support one alarm I/O port and audio I/O.

- The camera shall also detect any object addition, object removal, and lane crossing.
 - e. Whenever any event is triggered, the camera shall record the event on SD card.
 - f. ONVIF (S, G & T) Supports. Compression: H.264, H.265 & MJPEG
 - The Camera shall have applicable CE, UL, and IEC 62368-1 certifications.
- x. The ANPR Camera should have functionality to address the Alpha numerical character of irregular font sizes.
- xi. The night vision should not affect the accuracy.
- xii. In case of Non-FASTag transaction and ANPR camera is unable to read/recognize the number plate, the system shall create an incident and send an alert to the Lane Application.
- xiii. ANPR Camera should have functionality to assess the confidence level for recognition of Vehicle Registration Number and share the same to the lane application as per below details: -
- Confidence level - Good (100% Accuracy)
 - Confidence level - Average (95% to 99.99%)
 - Confidence level - Poor (<95%)
- For case, where FASTag is not read through Fixed RFID reader, transaction shall be processed based on VRN no. as recognised by ANPR camera and Confidence level >95%.
- xiv. ANPR Camera should have features of Bad Pixel Correction (BPC) and Edge Enhancement. BPC algorithms should detect the problematic pixels for maintaining image quality and ensuring that these faulty pixels do not affect the accuracy and reliability of the images or data captured by the camera.

b) **Lane Monitoring Camera/Incident Capture Camera System** (Specification shall remain same as provided in the RFE Tender No. IHMCL/ETC/Empanelment/2021/01, dated 28.10.2021).

c) **Pan Tilt Zoom (PTZ) Camera**

Camera shall be for industrial use, capable of continuous operation under harsh environment on the highway. The camera shall be IP based full HD color type with 1/1.9" image sensor

(CMOS) or better. It shall have frame rate of up to 60 frames per second in all compression mode and shall have 3 simultaneous streams and live view for more than 5 users.

Hardware specifications:-

Feature	Specification
Image Sensor	1/3" or better
Active Pixels	1280(H) x 960(V) or better (2 MP)
Resolution	Minimum 2 MP
Sensitivity	0.005 lux (B/W), less than 0.06 lux (Colour) or better
Focus	3.5mm to 129mm or better
Optical Zoom	35x or better
Digital Zoom	16x
Night Vision	up to 100m
Signal to Noise	> 54 dB
AGC	Automatic
White Balance	Automatic
Electronic Shutter	Auto/Manual, 1/1 ~ 1/30,000s
Iris Control	Automatic
Encoding	H.264 or H.265 or JPEG
Video Output	Ethernet 10/100 Base-T
Pan Range	0 to 360 degrees, Auto flip at 180 degrees
Pan Speed	variable 0.2 degrees per sec. to 80 degrees per sec.
Tilt Range	+10 to -90 degrees
Tilt Speed	variable 0.2 degrees per sec. to 40 degrees per sec.
Pre-set Positions	255 minimum
Housing	IP66 or better
Power	230V, 50 Hz domestic supply
Protection Class	D for data/signal lines and class B for power

i. Lens

Motorized zoom lens with minimum 35x or better Optical zoom and minimum 16x digital zoom having optical defog feature and auto focus covering suitable range of focal length shall be provided and mounted on the camera. The lens size shall be approx. 5.7-205 mm suitable to achieve the required optical zoom.

ii. Night vision capability

Cameras shall have inbuilt IR illuminator of 500 meters for night vision functionality. The camera shall be capable of recording black and white video even in 0 lux with IR up to a distance of 500 meters.

iii. Image enhancement capability

Camera shall have electronic image stabilization, hue light compensation, back light compensation, and three-dimensional digital noise reduction features. The camera

shall support true wide dynamic range of minimum 120 dB.

iv. Camera Housing

The camera shall be housed in 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 nor any of the housing components. which shall automatically park out of view. Picture quality or optical performance shall not be degraded by the housing. The Housing shall have IP-66 or higher rating for Weather-proof, and NEMA 4X-rating or IK10 or higher rating for Vandal-proof. The housing shall have inbuilt heater and blower function.

v. Pan-tilt Head

Camera housing shall be mounted on a motorized pan-tilt head. The angles of the head and rotating and tilting speed shall be as follows: Rotating angle: 360 degrees endless with pre-set pan and tilt speed of 200° per second faster.

vi. Camera Control

The following control functions shall be provided to the system to cover wider area and longer distance:

- Pan (right – left)
- Tilt (up – down)
- Zoom (wide – telescope)
- Focus (near – far)

The HES Contractor shall state the angle range of pan and tilt movements and their speed.

The PTZ Camera shall support H.264/H.265 video compression and shall support latest ONVIF S&G protocol. The camera shall have auto motion detection and shall be capable of auto tracking the moving object, wrong direction detection, stationary object detection, face detection, 300 plus pre-set, patrolling mode, audio I/O ports, alarm I/O, privacy masking features.

The Camera shall have applicable CE, UL and FCC class A certifications.

vii. Quality

- PTZ camera system shall be designed to operate 24 hours a day and 7 days a week without shutdown. Thus, high reliability and availability shall be achieved.
- Design target of MTBF shall be 3×10^4 hours or better except the mechanical part of pan-tilt head. Expected MTBF shall be calculated based on the announced reliability of parts and component, or operation record of similar products.
- Availability of the system and each camera shall be 99% or better.

viii. PTZ Camera Pole

Camera pole design shall adhere to site requirements and conditions, featuring a Hot Dipped Galvanized finish, an octagonal shape, and a length of 8 meters (may vary as per toll plaza size), complete with appropriate mounting arrangements. Additionally, ensure that separate pole earthing is included to mitigate the risk of lightning incidents.

ix. Surge Protector

The surveillance systems i.e, camera, video, data and power signal shall be fully surge protected at camera as well as on the NVR.

x. Cabinet

The cabinet shall be installed near the camera pole and shall accommodate the camera power supply, surge protector and other field equipment.

xi. Communication

There shall be Point-to-point (P2P) communication via RF devices between the PTZ camera and the Network Video Recorder for data communication. The cost of RF devices shall be included in the cost of PTZ Camera.

xii. Camera Location

The placement of the PTZ Camera shall be communicated by IHMCL in coordination with Service Provider. The Service Provider shall obtain written confirmation from IHMCL to ascertain the specific location of the PTZ camera.

xiii. Video Analytical

The camera shall be used for analytical functions, including monitoring traffic congestion in lanes and counting vehicles.

xiv. Other Miscellaneous Works (Civil/Electrical)

Any additional civil, electrical arrangement, and networking work required to complete the installation and commissioning of the PTZ Surveillance System is the responsibility of the Service Provider. This includes tasks such as trenching, erection, ducting, laying cables, installing power sources, and any necessary construction or electrical work.

d) Aadhar enabled Geofenced smart attendance system with time and face recognition: -

- i. Aadhar enabled Geo-fencing Capability to define geographical boundaries within which attendance can be marked.
- ii. The system should ensure accuracy in tracking attendance based on location.
- iii. System should be capable of utilizing advanced algorithms for reliable face detection and recognition.
- iv. System should ensure security and accuracy in identifying individuals.
- v. Implement encryption protocols to secure attendance data.
- vi. The system should be tamperproof and should have necessary controls to prevent

- unauthorized usage or tampering.
- vii. System should seamlessly integrate local as well as central system including TMCC.
- viii. Real-time Monitoring and Reporting:
 - ix. Provide administrators with real-time attendance tracking system through central application.
 - x. Generate comprehensive reports on attendance trends, tardiness, etc.
 - xi. Send notifications to employees for attendance reminders or updates.
 - xii. Alert administrators of any anomalies or suspicious activities.
- xiii. Scalability and Customization.
- xiv. Backup and Redundancy:
 - xv. Adhere to industry standards and best practices for technology and security.
- xvi. Any type of license/renewal/patch upgrade/storage requirement etc shall be borne by the service provider.

e) Diesel Generator Set (03 Phase)- 60 kVA

- i. The Diesel Generator Set shall be noiseless and shall be housed typically in the generator room of the Substation at the toll plaza.
- ii. It shall be provided with a control panel having all measuring and protection equipment.
- iii. It shall have an auto/manual start feature along with an auto/manual changeover switch.
- iv. The output from the generator shall be connected through a suitable LT cable to a dedicated (for the ETC Toll Plaza system) control panel located at the substation.
- v. DG set shall be connected to lane system and toll plaza system with proper earthing.
- vi. Door Locks and Door Hinges: Special designed Stainless steel Door Locks and doors hinges ensuring for smooth operation and long life.
- vii. The generator set, control panel, as well as the neutral of the generator shall be effectively earthed.
- viii. Diesel will be provided by the Toll Operating Agency.
- ix. Onsite Warranty upto 03 years.

6.17 CONTRACT PERIOD

The initial period of engagement shall be 03 years from date of signing of Contract Agreement. The period of engagement may be further extendable by additional 1 year at the sole discretion of NHAI/IHMCL.

6.18 INSURANCE

The Service Provider shall effect and maintain the insurance of ETC system at its own cost, during the Contract period, such insurances for such maximum sums as may be required under the

Applicable Laws, and such insurances as may be necessary or prudent in accordance with Good Industry Practice to cover third party claims, theft, accidental damage, vandalism, fire, flood, and Force Majeure events. The insurance document shall be submitted after the completion of implementation work at each toll plaza.

6.19 FORCE MAJEURE

- a) Neither party shall be responsible to the other for any delay or failure in performance of its obligations due to any occurrence of a Force Majeure event which is beyond the control of any of the Parties, including, but without limited to, fire, flood, explosion, acts of God or any governmental body, public disorder, riots, embargoes, or strikes, acts of military authority, epidemics, strikes, lockouts or other labour disputes, insurrections, civil commotion, war, enemy actions.
- b) If a Force Majeure arises, the Service Provider shall promptly notify IHMCL in writing of such condition and the cause thereof. Unless otherwise directed by IHMCL, the Service Provider shall continue to perform his obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event. The Parties shall be excused from performance of their respective obligations in whole or part as long as such Force Majeure event continues to prevent or delay such performance by the Parties. However, in case such Force Majeure event lasts for a continuous period of 60 days, either Party may terminate the Contract.

6.20 INDEMNIFICATION

- a) The Service Provider shall indemnify, defend, save and hold harmless, IHMCL, NHAI and MoRTH and their officers, servants, agents (hereinafter referred to as the "IHMCL Indemnified Persons") 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, as such fees and expenses are 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 Service Provider's obligations under this Contract or any other related agreement or otherwise, any fraud or negligence attributable to the Service Provider or its Agents 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 on the part of IHMCL Indemnified Persons.

- b) The Service Provider shall indemnify IHMCL Indemnified Persons from all legal obligations in respect of professionals deployed by the Service Provider. IHMCL Indemnified Persons also stand absolved of any liability on account of death or injury sustained by the Service Provider's staff during the performance of their work and also for any damages or compensation due to any dispute between the Service Provider and its staff.
- c) In addition to the aforesaid, the Service Provider shall fully indemnify, hold harmless and defend IHMCL Indemnified Persons from and against any and all direct loss, damage, cost and expense of whatever kind and nature (including, without limitation, legal fees and other expenses incurred in connection with any suit, action or proceeding or any claim asserted, as such fees and expenses are incurred), joint or several, that arise out of, or are based upon any demands, claims, suits or proceedings arising out of claims of infringement of any domestic or foreign patent rights, copyrights or other intellectual property, proprietary or confidentiality rights with respect to any materials, information, design or process used by the Service Provider or by the Agents in performing the Service Provider's obligations or in any way incorporated in or related to this Contract. If in any such suit, action, claim or proceedings, a temporary restraint order or preliminary injunction is granted, the Service Provider shall make every reasonable effort, by giving a bond (of the type and value as required) or otherwise, to secure the revocation or suspension of the injunction or restraint order and continue to perform its obligations hereunder. If the Service Provider is unable to secure such revocation within a reasonable time, it shall, at its own expense, and without impairing the Specifications and Standards, shall rectify such defaults and shall also be liable for damages to IHMCL for the corresponding loss during the interim period on this account.
- d) The provisions of this Clause shall survive Termination.
- e) The remedies provided under this Clause are not exclusive and shall not limit any rights or remedies that may otherwise be available to IHMCL Indemnified Persons at law or in equity.

6.21 TERMINATION

- a) ON EXPIRY OF THE CONTRACT: Subject to the condition mentioned under Clause 6.17, the Agreement shall be deemed to have been automatically terminated on the expiry of the Contract Period unless IHMCL has exercised its option to further renew the Contract Period in accordance with the provisions, if any, of the Contract.
- b) ON ACCOUNT OF FORCE MAJEURE: Either party shall have the right to terminate the

Contract on account of Force Majeure, as set forth in Clause 6.19.

- c) ON BREACH OF CONTRACT: IHMCL may terminate the Contract if the Service Provider causes a fundamental breach of the Contract. Fundamental breach of Contract includes, but shall not be limited to, the following:
- i. The Service Provider fails to carry out any obligation under the Contract.
 - ii. The Service Provider without reasonable excuse fails to commence the work in accordance with relevant clauses.
 - iii. Repetitive complaints are received for deficiencies in ETC system services from respective PIU/NHAI without any resolution.
 - iv. Has failed to furnish the required securities or extension thereof in terms of the Contract.
 - v. the Service Provider stops work and the stoppage has not been authorized by IHMCL;
 - vi. the Service Provider at any time during the term of the Contract becomes insolvent or makes a voluntary assignment of its assets for the benefit of creditors or is adjudged bankrupt.
 - vii. In case the downtime of 25% or more lanes in a plaza exceeds 24 hours per month consecutively for a period of 03 months
 - viii. If the Service Provider, in the judgment of the Employer, has engaged in the corrupt or fraudulent practice in competing for or in executing the Contract.
- d) The Service Provider sub-contracts any assignment under this Agreement without approval of IHMCL.
- e) Any other fundamental breaches as specified in the RFP.
- f) 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. No compensation shall be provided for unused O&M services. However, remaining Capex value(equipment cost) shall be released to the Service Provider.
- g) Upon Termination (except on account of expiry of Term of this Agreement and Force Majeure), IHMCL shall be entitled at the sole discretion to:
- i. Appropriate the entire Performance Security or part thereof as Damages; and
 - ii. Debar/Blacklist the Service Provider from participating in any other project/assignment/work of IHMCL for a period as determined by IHMCL at its sole discretion.

6.22 ARBITRATION/ 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 set forth in Clause 6.22(d).
- 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, as the case may be, 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, in accordance with the procedure specified in Clause 6.22(d) and Clause 6.22(e).

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 in accordance with the provisions of Clause 6.22(e).

e) Arbitration

Any Dispute which is not resolved amicably by conciliation, as provided in Clause 6.22(d), shall be finally settled by arbitration as set forth below:

- i. 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 Page 33 of 53 Arbitration & Conciliation Act, 1996, as amended from time to time.
- ii. The seat of Arbitration shall be New Delhi and the language for all documents and

communications between the parties shall be English.

- iii. The expenses incurred by each party in connection with the preparation, presentation, etc., of arbitral proceedings shall be borne by each party itself.
- f) The arbitrators shall make a reasoned award (the "Award").
- g) The Service Provider and IHMCL agree that an Award may be enforced against the Service Provider and/or IHMCL, as the case may be, and their respective assets wherever situated.
- h) 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 in accordance with this Clause.

6.23 Appropriation of Performance Security

- a) Upon failure of the Service Provider to commence the services, for any reason whatsoever, within the period set forth in this Contract or the extended period thereunder, IHMCL shall, without prejudice to its other rights and remedies hereunder or in law, be entitled to levy Penalty/Damages as per provision under this RFP.
- b) IHMCL shall, without prejudice to its other rights and remedies hereunder or in law, be entitled to encash and appropriate the relevant amounts from the Performance Security as Damages or any other amounts payable to IHMCL under this Contract as and when such Damages or other amounts become due and payable. Upon such encashment and appropriation from the Performance Security, the Service Provider shall, within 10 days thereof, replenish, in case of partial appropriation, to its original level of the amount guaranteed under the Performance Security, and in case of appropriation of the entire Performance Security, provide a fresh Performance Security, as the case may be failing which IHMCL shall be entitled to terminate this Agreement in accordance with clause 6.21 hereof.

6.24 MISCELLANEOUS

a) Standard of Performance

The Service Provider shall undertake to perform the services with the highest standards of professional and ethical competence and integrity which are, amongst others, ESSENCE of this assignment. Keeping in view the sensitivity involved in such assignments, the personnel deployed should maintain confidentiality/integrity at all times and should work in a professional manner to protect the interest of IHMCL. The firm shall promptly replace any

personnel deployed under this contract that IHMCL considered unsatisfactory.

b) Representations and Warranties of the Parties

The Parties represents and warrants to the each other that:

- i. It is duly organized and validly existing under the applicable laws, and has full power and authority to execute and perform its obligations under this Contract and to carry out the transactions contemplated hereby;
- ii. It has taken all necessary corporate and other actions under applicable laws to authorize the execution and delivery of this Contract and to validly exercise its rights and perform its obligations under this Contract;
- iii. This Contract constitutes its legal, valid and binding obligation, enforceable against it in accordance with the terms hereof, and its obligations under this Contract will be legally valid, binding and enforceable obligations against it in accordance with the terms hereof;
- iv. The information furnished in the Bid and as updated on or before the date of this Contract is true and accurate in all respects as on the date of this Contract;
- v. The execution, delivery and performance of this Contract will not conflict with, result in the breach of, constitute a default under, or accelerate performance required by any of the terms of its Memorandum and Articles of Association [or those of any member of the Consortium] or any Applicable Laws or any covenant, contract, agreement, arrangement, understanding, decree or order to which it is a party or by which it or any of its properties or assets is bound or affected;
- vi. There are no actions, suits, proceedings, or investigations pending or, to its knowledge, threatened against it at law or in equity before any court or before any other judicial, quasi-judicial or other authority, the outcome of which may result in the breach of this Contract 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;

c) Waiver of immunity

Each Party unconditionally and irrevocably:

- i. Agrees that the execution, delivery, and performance by it of this Contract constitute commercial acts done and performed for commercial purpose;
- ii. Agrees that, should any proceedings be brought against it or its assets, property or revenues in any jurisdiction in relation to this Contract or any transaction contemplated by this Contract, no immunity (whether by reason of sovereignty or otherwise) from such proceedings shall be claimed by or on behalf of the Party with respect to its assets;)
- iii. Waives any right of immunity which it or its assets, property or revenues now has, may

acquire in the future or which may be attributed to it in any jurisdiction; and

- iv. Consents generally in respect of the enforcement of any judgment or award against it in any such proceedings to the giving of any relief or the issue of any process in any jurisdiction in connection with such proceedings (including the making, enforcement or execution against it or in respect of any assets, property or revenues whatsoever irrespective of their use or intended use of any order or judgment that may be made or given in connection therewith).

d) Waiver

- i. Waiver, including partial or conditional waiver, by either Party of any default by the other Party in the observance and performance of any provision of or obligations under this Contract:
 - Shall not operate or be construed as a waiver of any other or subsequent default hereof or of other provisions of or obligations under this Contract;
 - Shall not be effective unless it is in writing and executed by a duly authorized representative of the Party; and
 - Shall not affect the validity or enforceability of this Contract in any manner.
- ii. Neither the failure by either Party to insist on any occasion upon the performance of the terms, conditions and provisions of this Contract or any obligation there under nor time or other indulgence granted by a Party to the other Party shall be treated or deemed as waiver of such breach or acceptance of any variation or the relinquishment of any such right hereunder.

e) Liability for review of Documents

Except to the extent expressly provided in this Contract:

- i. no review, comment or approval by IHMCL, any document submitted by the Service Provider
- ii. nor any observation or inspection of the Services performed by the Contractor nor the failure to review, approve, comment, observe or inspect hereunder shall relieve or absolve the Contractor from its obligations, duties and liabilities under this Contract, the Applicable Laws and applicable permits; and
- iii. IHMCL shall not be liable to the Service Provider by reason of any review, comment, approval, observation or inspection referred to in Sub-clause above.

f) Exclusion of implied warranties etc.

This Contract expressly excludes any warranty, condition or other undertaking implied at

law or by custom or otherwise arising out of any other agreement between the Parties or any representation by either Party not contained in a binding legal agreement executed by both Parties.

g) Survival

i. Termination shall:

- not relieve the Contractor or IHMCL, as the case may be, of any obligations hereunder which expressly or by implication survive Termination hereof; and
- except as otherwise provided in any provision of this Contract expressly limiting the liability of either Party, not relieve either Party of any obligations or liabilities for loss or damage to the other Party arising out of or caused by acts or omissions of such Party prior to the effectiveness of such Termination or arising out of such Termination.

ii. All obligations surviving Termination shall only survive for a period of 3 (three) years following the date of such Termination

h) Entire Agreement

This Contract, the RFP and the Sections hereto together constitute a complete and exclusive statement of the terms of the agreement between the Parties on the subject hereof and no amendment or modification hereto shall be valid and effective unless such modification or amendment is agreed to in writing by the Parties and duly executed by persons especially empowered in this behalf by the respective Parties. All prior written or oral understandings, offers or other communications of every kind pertaining to this Contract are abrogated and withdrawn. For the avoidance of doubt, the Parties hereto agree that any obligations of the Contractor arising from the Request for Proposals shall be deemed to form part of this Contract and treated as such.

i) Severability

If for any reason whatever any provision of this Contract 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 or otherwise.

j) No partnership

This Contract 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 to act as or be an agent or representative of, or to otherwise bind, the other Party.

k) Third parties

This Contract is intended solely for the benefit of the Parties and their respective successors and permitted assigns and nothing in this Contract shall be construed to create any duty to, standard of care with reference to, or any liability to, any person not a Party to this Contract.

l) Successors and assigns

This Contract shall be binding upon and inure to the benefit of the Parties and their respective successors and permitted assigns.

m) Notices

Any notice or other communication to be given by any Party to the other Party under or in connection with the matters contemplated by this Contract shall be in writing and shall:

- i. In the case of the Contractor, be given by facsimile or e-mail and by letter delivered by hand to the address given and marked for attention of the person set out below or to such other person as the Contractor may from time to time designate by notice to IHMCL; provided that notices or other communications to be given to an address outside Delhi may, if they are subsequently confirmed by sending a copy thereof by registered acknowledgement due, air mail or by courier, be sent by facsimile or e-mail to the number as the Contractor may from time to time designate by notice to IHMCL;
- ii. In the case of IHMCL, be given by facsimile or e-mail and by letter delivered by hand and be addressed to the [•] of IHMCL with a copy delivered to the Authority Representative or such other person as IHMCL may from time to time designate by notice to the Contractor; provided that if the Contractor does not have an office in Delhi it may send such notice by facsimile or e-mail and by registered acknowledgement due, air mail or by courier; and
- iii. Any notice or communication by a Party to the other Party given in accordance herewith shall be deemed to have been delivered when in the normal course of post it ought to have been delivered and in all other cases, it shall be deemed to have been delivered on the actual date and time of delivery; provided that in the case of facsimile or e-mail, it shall be deemed to have been delivered on the working day following the date of its delivery.

n) Sub-Contracting

The Service Provider shall not sub-contract any assignment (excluding minimum civil work) to a third party. The Service Provider shall remain solely responsible for all works under this Agreement.

o) Confidentiality of the Assignment/Findings

The agency shall not, during the term of assignment and within two years after its expiration, disclose any propriety or confidential information relating to the services, this assignment or IHMCL's business or operations without prior written consent of IHMCL.

p) Modification

Modification of the terms and conditions of this Contract, including any modification of the scope of the Services, may only be made by written agreement between the Parties as the case may be, has been obtained.

q) Language

All notices required to be given by one Party to the other Party and all other communications, Documentation and proceedings which are in any way relevant to this Contract shall be in writing and in English language.

Part VII – ANNEXURES AND FORMS

7.1 BID FORM

(In the Bidder's Letter Head)

Date: _____

From,

To,

(Name & Address of the Bidder)

Chief Operating Officer

Indian Highways Management Co. Ltd. 1st
Floor, NHAI Building, Sector –10,

Dwarka

New Delhi

110 075

Subject: _____

Ref.: Tender No. _____ Dear Sir/Madam,

After examining/reviewing the Bidding Documents for _____ etc. the receipt of which is hereby duly acknowledged, we, the undersigned, are pleased to bid to execute the whole of the Job for the item in conformity with, the said RFP Documents, including Corrigendum / Addenda Nos. _____.

We confirm that this bid is valid for a period of 180 days from the date of opening of Bid, and it shall remain binding upon us and may be accepted by any time before the expiration of that period.

If our bid is accepted, we will provide the required performance guarantee as per the tender document.

We further confirm that the bid submitted by us is after conducting the site survey of all toll plazas. Until a final Contract is prepared and executed between us, the bid together with your written acceptance thereof in your notification of award shall constitute a binding Contract between us.

We undertake that, in competing for (and, if the award is made to us, in executing) the above Contract, we will strictly observe the laws against fraud and corruption in force in India namely "Prevention of Corruption Act 1988" and other applicable law. We understand you are not bound

to accept any Proposal you receive.

Yours sincerely,

(Signature of the Authorized signatory):

Name and Designation of the Authorized signatory: Name and Address of Bidder: Phone, Fax & E-Mail

7.2 UNDERTAKING

Bidders are required to resubmit the undertaking only if there have been changes in the statements asserted in the RFE No. IHMCL/ETC/Empanelment/2021/01, dated 28-10-2021. Bidders may refer to the same RFE for the format of the undertaking.

7.3 POWER OF ATTORNEY

Bidders are required to resubmit the Power of Attorney only if there have been changes in the statements asserted in the RFE No. IHMCL/ETC/Empanelment/2021/01, dated 28-10-2021. Bidders may refer to the same RFE for the format of the same.

7.4 FORM OF PERFORMANCE SECURITY (BANK GUARANTEE)

(In the Bidder's Letter Head)

To

Indian Highways Management Co. Ltd. 1st Floor, NHAI Building, Sector
10, Dwarka, New Delhi 110 075

WHEREAS _____

(Name and

address of Contractor) (hereinafter called "the Contractor")* has undertaken, in pursuance of Contract No. _____ dated _____ to execute _____ (Name of contract and brief description of works) (hereinafter called the "the Contract").

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with his obligations in accordance with the Contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee; NOW THEREOF we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Contractor up to a total of _____ (amount of Guarantee)** __ (in words) , such sum being payable in the types and proportions of currencies in which the Contract Price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of _____ (amount of Guarantee) as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed there under or of any of the Contract documents which may be made between you and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

The liability of the Bank under this Guarantee shall not be affected by any change in the constitution of the contractor or of the Bank.

Notwithstanding anything contained herein before, our liability under this guarantee is restricted to Rs. _____ (Rs. _____) and the guarantee shall remain valid till _____. Unless a claim or a demand in writing is served on us on or before _____ all our liability under this guarantee shall cease.

Signature and seal of the Guarantor _____ In presence of

Name and Designation _____ 1. _____

(Name, signature & Occupation)

Code no. of the officer(s) signing the guarantee(s) Name of the Bank _____

Address _____ 2. _____

(Name, signature & Occupation)

Date _____

Controlling Office of the Bank:

Contact Person: _____

Tel. No :

Note:

** An amount is to be inserted by the Guarantor, representing the percentage of the contract price specified in the Contract and denominated in Indian Rupees.

7.5 FORMAT FOR FINANCIAL BID SUBMISSION

(To be submitted in the excel format as available on the e-procurement portal)

In case of any change in the number of lanes for a particular Toll Plaza, pro-rata calculation shall be made based on lowest unit rate of lane equipment/lowest O&M rate quoted by the Bidder as per its Financial Bid.

7.6 Annexure-A

The key items to be covered within the project include the following table: -

S.No	Equipment Description	Unit	Qty
Lane Level			
1	RFID ETC transceiver near Pay-axis – (mounted on canopy/Pole as per site feasibility)	No	(1 per lane)
2	Electronics Enclosure	No	(1 per lane)
3	Lane Controller with Industrial PC	No	(1 per lane)
4	AVC including sensors & Controller	Set	(1 per lane)
5	User Fare Display with mounting pole	Set	(1 per lane)
6	Automatic Barrier Gate	No	(1 per lane)
7	Overhead Lane Status light (OHLS)	No	(1 per lane)
8	Traffic light with mounting pole	Set	(1 per lane)
9	Loop with detector	Set	(2 per lane)
10	Incident Capture Camera/Lane Monitoring Camera with mounting pole	Set	(1 per lane)
11	TFT Monitor	No	(1 per lane)
12	Customized industrial grade keyboard	No	(1 per lane)
13	Thermal Receipt Printer	No	(1 per lane)
14	Violation light & Alarm (on existing pole) and Foot switch in booth	No	(1 per lane)
15	Booth CCTV camera with voice recording	No	(1 per lane)
16	Cabling/Networking/Installation/Commissioning for entire ETC system (Lump sum)	LS	1
17	Software – Lane Level	No	(1 per lane)
18	Intercom Slave unit in booth	No	(1 per lane)
19	UPS including Batteries	No	(1 per lane)
20	Automatic Number-Plate Recognition Camera	No	(1 per lane)
Plaza Level			
21	ETC Server (Plaza)	No	1
22	Workstations for MIS, Cash-up, Audit, LSDU system	No	4
23	24 Port Network switch (Layer 3)	No	2
24	Software – Plaza level	Job	1
25	Broadband/Dedicated Internet Lease Line (02 Static IP per connection) with minimum bandwidth equivalent to 02 Mbps per lane for CCH connectivity	Facility	2
26	UPS system as required for complete ETC system (10	No	2

S.No	Equipment Description	Unit	Qty
	KVA or above) including Batteries		
27	32 Ch Network Video Recorder (NVR) for CCTV (Booth Camera, Lane Monitoring Camera, Plaza Building Camera & PTZ Camera) recording with minimum 30 days of storage	No	2
28	CCTV cameras for Plaza building surveillance (server room, control room, cash room & admin room)	No	6
29	Master Intercom System	No	1
30	Servo Stabilizer (60 KVA -03 phase)	No	1
31	Firewall Hardware	No	1
32	PTZ Camera	No	2
33	Aadhar enabled Geo-fenced smart attendance system with timing and face recognition	No	1
34	Deisel Generator Set (03 Phase) -60 kVA	No	1
Operation and Maintenance per Toll Plaza			
35	Quarterly O&M Charges for ETC system	Quarter	12

7.7 Annexure-B

The subsequent table captures the toll plazas under this RFP: -

S.No	RO	PIU	Plaza Name	No. of Lanes	Remarks
1	Vijayawada	Amravati	Undri	6	Fee plazas for providing O&M services of existing ETC system
2	Kerala	Thiruvananthapuram	Thiruvallam	10	
3	Vijayawada	Tirupati	Thanepalli	4	
4	Vijayawada	Tirupati	Mahasamundaram	10	
5	Chennai	Krishnagiri	Krishnagiri	16	
6	Hyderabad	Khammam	Yekaram	8	
7	Mumbai	Chandrapur	Kharbi	6	Fee plazas for implementation & O&M services of ETC system
8	Chennai	Chennai	Pattaraiperumbudur	6	
9	Vijayawada	Rajamahendravaram	Gollapralu	10	

7.8 Annexure-C (Fee plazas to provide O&M services of existing ETC system, refer Annexure-B))

The existing Status of ETC system equipment at the fee plazas is as below: -

a) Yekaram

SL No	Equipment Name	Total Qty to be available	Equipment Status	Year Of Installation
A	Lane Level Equipment			
1	RFID ETC transceiver near Pay-axis - mounted on canopy	8	Available	2021
2	Lane Controller with Industrial PC	8	Available	2021
3	AVC including sensors. Loop & detectors	8	Available	2021
4	User Fare Display with mounting pole	8	Available	2021
5	Automatic Barrier Gate	8	Available	2021
6	Overhead Lane Status light (OHLS)	8	Available	2021
7	Traffic light with mounting pole	8	Available	2021
8	Loops with detector	16	Available	2021
9	Incident Capture Camera with mounting pole	8	Available	2021
10	License Plate Image Capture Camera with mounting poles	8	Available	2021
11	Customized industrial grade keyboard	8	Available	2021
12	TFT Monitor	8	Available	2021
13	Thermal Receipt Printer	8	Available	2021
14	Violation light & Alarm (on existing pole) and Foot switch in booth	8	Not-available	
15	Booth CCTV camera	8	Available	2021
16	Intercom Slave unit in booth	8	Available	2021
17	Lane Level UPS	8	Available	2021
B	Plaza Level Equipment			
1	Intercom Master unit	1	Available	2021
2	CCTV cameras for Plaza building surveillance (server room, control room, cash room, admin)	4	Available	2021
3	ETC Server (Plaza)	1	Available	2021
4	Workstations for MIS, Cashup, Audit & LSDU	3	Available	2021
5	24 Port Network switch (Layer 3)	2	Available	2021
6	UPS system as required for complete ETC system (10 KVA or above)	2	01 Available & 01 Not Available	2021
7	Network Video Recorder (NVR)	1	Available	2021
8	Firewall	1	Available	2021
9	Servo Stabilizer (60 KVA -3 phase or as available at the plaza)	1	Not Available	
10	Geo-fenced smart attendance system with timing and face recognition	1	Not Available	

b) Undri

SL No	Equipment Name	Total Qty to be available	Equipment Status	Year Of Installation
A				
1	RFID ETC transceiver near Pay-axis - mounted on canopy	6	Available	2021

SL No	Equipment Name	Total Qty to be available	Equipment Status	Year Of Installation
2	Lane Controller with Industrial PC	6	Available	2021
3	AVC including sensors. Loop & detectors	6	Available	2021
4	User Fare Display with mounting pole	6	Available	2021
5	Automatic Barrier Gate	6	Available	2021
6	Overhead Lane Status light (OHLS)	6	Available	2021
7	Traffic light with mounting pole	6	Available	2021
8	Loops with detector	6	Available	2021
9	Incident Capture Camera with mounting pole	6	Available	2021
10	License Plate Image Capture Camera with mounting poles	6	Available	2021
11	Customized industrial grade keyboard	6	Available	2021
12	TFT Monitor	6	Available	2021
13	Thermal Receipt Printer	6	Available	2021
14	Violation light & Alarm (on existing pole) and Foot switch in booth	6	Available	
15	Booth CCTV camera	6	Available	2021
16	Intercom Slave unit in booth	6	Available	2021
17	Lane Level UPS	6	Available	2021
B	Plaza Level Equipment			
1	Intercom Master unit	1	Available	2021
2	CCTV cameras for Plaza building surveillance (server room, control room, cash room, admin)	3	Available	2021
3	ETC Server (Plaza)	1	Available	2021
4	Workstations for MIS, Cashup, Audit & LSDU	3	Available	2021
5	24 Port Network switch (Layer 3)	2	Available	2021
6	UPS system as required for complete ETC system (10 KVA or above)	2	Available	2021
7	Network Video Recorder (NVR)	1	Available	2021
8	Firewall	1	Available	2021
9	Servo Stabilizer (60 KVA -3 phase or as available at the plaza)	1	Available	2021
10	Geo-fenced smart attendance system with timing and face recognition	1	Not Available	

c) Krishnagiri

SL No	Equipment Name	Total Qty to be available	Equipment Status	Year Of Installation
1	RFID ETC transceiver near Pay-axis - mounted on canopy	16	Available	Jun-21
2	Lane Controller with Industrial PC	16	Available	Jun-21
3	AVC including sensors. Loop & detectors	16	Available	Jun-21
4	User Fare Display with mounting pole	16	Not Available	Jun-21
5	Automatic Barrier Gate	16	Available	Jun-21

SL No	Equipment Name	Total Qty to be available	Equipment Status	Year Of Installation
6	Overhead Lane Status light (OHLS)	16	Available	Jun-21
7	Traffic light with mounting pole	16	Available	Jun-21
8	Loops with detector	16	Available	Jun-21
9	Incident Capture Camera with mounting pole	16	Available	Jun-21
10	License Plate Image Capture Camera with mounting poles	16	Available	Jun-21
11	Customized industrial grade keyboard	15	Available	Jun-21
12	TFT Monitor	16	Available	Jun-21
13	Thermal Receipt Printer	16	Available	Jun-21
14	Violation light & Alarm (on existing pole) and Foot switch in booth	16	Not Available	
15	Booth CCTV camera	16	Available	Jun-21
16	Intercom Slave unit in booth	16	Available	Jun-21
17	Lane Level UPS	16	Not Available	
B	Plaza Level Equipment			
1	Intercom Master unit	1	Available	Jun-21
2	CCTV cameras for Plaza building surveillance (server room, control room, cash room, admin)	16	Available	Jun-21
3	ETC Server (Plaza)	3	Available	Jun-21
4	Workstations for MIS, Cashup, Audit & LSDU	4	Available	Jun-21
5	24 Port Network switch (Layer 3)	2	Available	Jun-21
6	UPS system as required for complete ETC system (10 KVA or above)	2	Available	Jun-21
7	Network Video Recorder (NVR)	1	Available	Jun-21
8	Firewall	1	Available	Jun-21
9	Servo Stabilizer (60 KVA -3 phase or as available at the plaza)	1	Available	Jun-21
10	Geo-fenced smart attendance system with timing and face recognition	1	Not Available	

d) Thiruvallam

SL No	Equipment Name	Total Qty to be available	Equipment Status	Year Of Installation
A	Lane Level Equipment			
1	RFID ETC transceiver near Pay-axis - mounted on canopy	12	Available	2021
2	Lane Controller with Industrial PC	12	Available	2021
3	AVC including sensors. Loop & detectors	12	Available	2021
4	User Fare Display with mounting pole	12	09 Available & 03 Not Available	2021
5	Automatic Barrier Gate	12	10 Available & 02 Not Available	2021
6	Overhead Lane Status light (OHLS)	12	11 Available & 01 Not Available	2021

7	Traffic light with mounting pole	12	11 Available & 01 Not Available	2021
8	Loops with detector	24	Available	2021
9	Incident Capture Camera with mounting pole	12	Available	2021
10	License Plate Image Capture Camera with mounting poles	12	Available	2021
11	Customized industrial grade keyboard	12	Available	2021
12	TFT Monitor	12	11 Available & 01 Not Available	2021
13	Thermal Receipt Printer	12	11 Available & 01 Not Available	2021
14	Violation light & Alarm (on existing pole) and Foot switch in booth	12	08 Available & 04 Not Available	2021
15	Booth CCTV camera	12	Available	2021
16	Intercom Slave unit in booth	12	Available	2021
17	Lane Level UPS	12	09 Available & 03 Not Available	2021
B				
1	Intercom Master unit	1	Available	2021
2	CCTV cameras for Plaza building surveillance (server room, control room, cash room, admin)	4	Available	2021
3	ETC Server (Plaza)	1	Available	2021
4	Workstations for MIS, Cashup, Audit & LSDU	4	Available	2021
5	24 Port Network switch (Layer 3)	3	Available	2021
6	UPS system as required for complete ETC system	2	01 Available & 01 Not Available	2021
7	Network Video Recorder (NVR)	1	Available	2021
8	Firewall	1	Available	2021
9	Servo Stabilizer (60 KVA -3 phase or as available at the plaza)	1	Available	2021
10	Geo-fenced smart attendance system with timing and face recognition	1	Not Available	

e) Thenepalli

SL No	Equipment Name	Total Qty to be available	Equipment Status	Year Of Installation
A Lane Level Equipment				
1	RFID ETC transceiver near Pay-axis - mounted on canopy	4	Available	2021
2	Lane Controller with Industrial PC	4	02 Available and 02 Not Available	2021
3	AVC including sensors. Loop & detectors	4	Available	2021
4	User Fare Display with mounting pole	4	Available	2021
5	Automatic Barrier Gate	4	02 Available and 02 Not Available	2021
6	Overhead Lane Status light (OHLS)	4	Available	2021
7	Traffic light with mounting pole	4	Available	2021

SL No	Equipment Name	Total Qty to be available	Equipment Status	Year Of Installation
8	Loops with detector	4	Not Available	
9	Incident Capture Camera with mounting pole	4	Available	2021
10	License Plate Image Capture Camera with mounting poles	4	Available	2021
11	Customized industrial grade keyboard	4	Not Available	
12	TFT Monitor	4	Available	2021
13	Thermal Receipt Printer	4	Available	2021
14	Violation light & Alarm (on existing pole) and Foot switch in booth	4	Available	201
15	Booth CCTV camera	4	Available	2021
16	Intercom Slave unit in booth	4	Available	2021
17	Lane Level UPS	4	02 Available and 02 Not Available	2021
B	Plaza Level Equipment			
1	Intercom Master unit	1	Available	2021
2	CCTV cameras for Plaza building surveillance (server room, control room, cash room, admin)	2	Available	2021
3	ETC Server (Plaza)	1	Available	2021
4	Workstations for MIS, Cashup, Audit & LSDU	2	Available	2021
5	24 Port Network switch (Layer 3)	2	Available	2021
6	UPS system as required for complete ETC system (10 KVA or above)	2	01 Available and 01 Not Available	2021
7	Network Video Recorder (NVR)	1	Available	2021
8	Firewall	1	Available	2021
9	Servo Stabilizer (60 KVA -3 phase or as available at the plaza)	1	Available	2021
10	Geo-fenced smart attendance system with timing and face recognition	1	Not Available	

f) Mahasamudram

SL No	Equipment Name	Total Qty to be available	Equipment Status	Year Of Installation
A	Lane Level Equipment			
1	RFID ETC transceiver near Pay-axis - mounted on canopy	10	Available	2021
2	Lane Controller with Industrial PC	10	09 Available and 01 Not Available	2021
3	AVC including sensors. Loop & detectors	10	Available	2021
4	User Fare Display with mounting pole	10	05 Available and	2021

SL No	Equipment Name	Total Qty to be available	Equipment Status	Year Of Installation
			05 Not Available	
5	Automatic Barrier Gate	10	09 Available and 01 Not Available	2021
6	Overhead Lane Status light (OHLS)	10	Available	2021
7	Traffic light with mounting pole	10	Available	2021
8	Loops with detector	10	Available	2021
9	Incident Capture Camera with mounting pole	10	Available	2021
10	License Plate Image Capture Camera with mounting poles	10	09 Available and 01 Not Available	2021
11	Customized industrial grade keyboard	10	Available	2021
12	TFT Monitor	10	09 Available and 01 Not Available	2021
13	Thermal Receipt Printer	10	Available	2021
14	Violation light & Alarm (on existing pole) and Foot switch in booth	10	Available	201
15	Booth CCTV camera	10	Available	2021
16	Intercom Slave unit in booth	10	Available	2021
17	Lane Level UPS	10	09 Available and 01 Not Available	2021
B	Plaza Level Equipment			
1	Intercom Master unit	1	Available	2021
2	CCTV cameras for Plaza building surveillance (server room, control room, cash room, admin)	3	Available	2021
3	ETC Server (Plaza)	1	Available	2021
4	Workstations for MIS, Cashup, Audit & LSDU	3	Available	2021
5	24 Port Network switch (Layer 3)	2	Available	2021
6	UPS system as required for complete ETC system (10 KVA or above)	2	01 Available and 01 Not Available	2021
7	Network Video Recorder (NVR)	1	Available	2021
8	Firewall	1	Available	2021
9	Servo Stabilizer (60 KVA -3 phase or as available at the plaza)	1	Available	2021
10	Geo-fenced smart attendance system with timing and face recognition	1	Not Available	

7.9 Annexure-D - Fault Summary Report

Month: -									Reporting
Date: -									
S.No	Equipment Name	Equipment Location	Equipment Category (Critical/Non-Critical)	Fault Description	Fault Date (DD/MM/YYYY HH:MM)	Remedial Action Description	Remedial Action Date ((DD/MM/YYYY HH:MM))	Total Downtime in Hrs	Remarks
1									
2									
3									
4									

7.10 Annexure-E - Technical System Specification Delivery Compliance Report

Technical System Specification Delivery Compliance Report					
S.No	Name of Equipment	Specification Parameters	Specification Details	Complied as per Contract Agreement(Yes/NO)	Remarks(if any)
1	e.g. Toll Lane Controller	e.g. Type			
		e.g. Power Supply			

We do hereby confirm and undertake that equipment delivered at toll plaza comply with specification mentioned in Contract Agreement/RFP. Further, we acknowledge that in case of any deviation found, we shall replace the equipment with those which comply with specifications.

Yours sincerely,
 (Signature of the Authorized signatory):
 Name and Designation of the Authorized signatory:
 Name and Address of Bidder:
 Phone, Fax & E-mail

7.11 Annexure-F - Compliance for Commencement of O&M services

Lane Level Equipment					
S.No	Equipment Description	Lane 1	Lane 2	Lane 3	Lane..n
1	RFID ETC transceiver near Pay-axis – (mounted on canopy/Pole as per site feasibility)				
2	Lane Controller with Industrial PC				
3	AVC including sensors, Controller, loop and detector				
4	User Fare Display with mounting pole				
5	Automatic Barrier Gate				
6	Overhead Lane Status light (OHLS)				
7	Traffic light with mounting pole				
8	Loop with detector				
9	Incident Capture Camera/Lane Monitoring Camrera with mounting pole				
10	TFT Monitor				
11	Customized industrial grade keyboard				
12	Thermal Receipt Printer				
13	Violation light & Alarm (on existing pole) and Foot switch in booth				
14	Booth CCTV camera with voice recording				
15	Intercom Slave unit in booth				
16	Lane Level UPS including Battries				
17	Automatic Number-Plate Recognition Camera				
Plaza Level Equipment					
S.No	Equipment Name	Status			
1	ETC Server (Plaza)				
2	Workstations for MIS, Cashup, Audit & LSDU System (in control room)				
3	24 Port Network switch (Layer 3)				
4	Provision for Internet services (02 Qty) with static IP addresses, ensuring a minimum bandwidth equivalent to 02 Mbps per lane				
5	UPS system as required for complete ETC system (10 KVA or above) including Battries				
6	Network Video Recorder (NVR) for CCTV (Booth Camera, Lane Monitoring Camera and Plaza Building Camera) recording with minimum 60 days of storage				
7	CCTV cameras for Plaza building surveillance (server room, control room, cash room, admin)				
8	Master Intercom System				
9	Servo Stabilizer (60 KVA -03 phase)				
10	Firewall Hardware				
Status of Supplied, Installation & Commissioning of Not Available Equipment					
S.No	Equipment Name	Qty	Status	Specification as per Contract Agreement(Yes/ No)	
1					
2					
S.No	General Cheklist	Status			
1	ANPR Functionality in all lanes using existing LPIC Camera Camera				
2	ICD 2.5 migration				
3	Software Migration in Lane System and Plaza System				
4	Installation and commissioning of additional equipment				
5	Performance of RFID Reader i.e., Manual Transaction Count >10% of Total FASTag transaction				
6	AVC Accuracy >98% in all lanes				
7	Taking a complete backup of the database from the previous System Integrator and storing all fields of data in the system application by Service Provider				