#	Uptime SLA (Monthly)	Penalty Clause
2	Uptime < 98%	(98%- Uptime %) % of Quarterly Capex Billing Amount. For example, if uptime of component is 95%, then penaltyimposed will be 98%-95% i.e., 3% of QuarterlyCapex Billing Amount.

2. SLAs for ANPR

• Capture rate: The number of Registration Number Plates detected and logged by an ANPR device in comparison with the total number of Registration Number Plates passing through the field of view that are visible to a camera / human. This is expressed as a percentage irrespective of whether they are correctly read or not.

Capture rate = (Number of Registrations Plates captured in the ANPR log / number of Registrations Plates known to pass the ANPR camera) X 100

• Read rate: The number of Registration Number Plates captured by an ANPR device that are accurately read in comparison with the total number captured expressed as a percentage.

Read rate = (Number of Registrations Plates correctly read / Number of Registrations Plates captured in the ANPR log) X 100

#	Uptime SLA (Monthly)	Penalty Clause
1	ANPR Capture Rate >=98%	> = 98 %--- NoPenalty < 98 % to >= 95 % --- 1% of QuarterlyCapex Billing Amount. < 95 --- additional 1 % of Quarterly Billing Amount at every percentage drop
2	ANPR Read Rate >=95%	> = 95 %--- NoPenalty < 95 % to >= 90 % user --- 1% of QuarterlyCapex Billing Amount. < 90 --- additional 1 % of Quarterly Billing Amount every percentage drop

3. SLAs for RFID Reader

#	Uptime SLA (Monthly)	Penalty Clause
1	Reading Rate >=98%	> = 98 %--- NoPenalty < 98 % to >= 95 % --- 1% of QuarterlyCapex Billing Amount < 95 --- additional 1 % of QuarterlyCapex Billing Amount at every percentage drop

Reading Rate shall be calculated based on ANPR read rate and for specific to vehicles registered for mineral transportation with Department.

4. SLAs for Connectivity for all equipment

#	Uptime SLA (Monthly)	Penalty Clause
1	Uptime >= 98%	No Deduction
2	Uptime < 98%	(98%- Uptime %) % of QuarterlyCapex Billing Amount / total number of check gates

5. SLAs for Handheld Device

#	Uptime SLA	Penalty Clause
1	Uptime 365 days	No Deduction
2	Uptime <356 days	Rs 1000 per day per device

6. SLAs for Software applications and Manpower

#	Major Area	Requirements	Penalty on Solution Cost
1.	Overall Application and Functionality available to user	Minimum 97% users	1. > = 97 %user --- 0 % < 97 % to >= 95 % user --- 1 % of QuarterlyCapex Billing Amount. 7.

			< 95 --- additional 1 % at every percentage drop in user from QuarterlyCapex Billing Amount.
2.	Manpower	Should be available during office hours of Directorate except public holidays	Absence of 01 Day in a month--- Penalty Rs 0 Absence of 02 to 03 Days in a month--- Penalty of Rs 500 per absence day Absence of more than 03 Days in a month--- Penalty of Rs 1000 per absence day

12.5 Other Terms:

I. The maximum penalty imposed shall be up to 10% of the total contract value. If the total value of the penalty is more than 10% of the total contract value; the contract may be terminated and the Performance Bank guarantee may be forfeited

II. Only recorded communication such as email or letter will be accepted as "Communication" for applicability of the above penalty clauses.

III. If there is disagreement, the matter may be resolved as per Section 'Settlement of Disputes' mentioned in the RFP.

IV. Penalties shall not be levied on the Bidder in the following cases:

- There is a Force Majeure event affecting the SLA which is beyond the control of the SI.
- The non-compliance to the SLA has been due to reasons beyond the control of the successful bidder.
- Theft cases by default/vandalism would not be considered as "beyond the control of SI". Hence, the SI should be taking adequate anti-theft measures, spares strategy, Insurance as required to maintain the desired Required SLA.

12.6 Reporting Procedures

SI representative shall prepare and distribute Service level Performance Reports in a mutually agreed format by the 5th working day of subsequent month. The Reports shall include “actual versus target” Service Level Performance, a variance analysis and discussion of appropriate issues or significant events. Performance Reports shall be distributed to Authority management personnel as directed by Authority. The tools for SLA measurements, reporting, ticketing shall be responsibility of the bidder.

13 Payment Schedule with Delivery Milestones

Sr.No.	Milestone	Deliverables	Timelines	Payment Terms
1.	Site Survey, System Study, and Report	Report on System study, Site Survey Report, assist with documentation, coordination to Directorate to seek permissions from NHAI and related agencies and permissions from all concerned authorities for Smart Enforcement System Installations on roads	T + 2 Month	10% of Capex
2.	SITC of 3 Check Gates at Pilot Locations, District control centers of these pilot locations , SITC of Weigh in motion system at 2 Pilot locations, State Command Center , All software Applications, Mobile Application ,Integrations and UAT of Deliverables	03 Check Gate at Pilot locations with respective 03 District Control Centers, 02 Weigh in motions system, States Command and Control Center, All software Applications , Mobile Application and Integrations	T + 5 Months	30 % of Capex
3.	SITC of remaining 37 Check Gates and 27 District Control Centers and UAT of Deliverables	37 Check Gates and 27 District Control Centers	T + 8 Months	30 % of Capex
4.	Final Acceptance Testing Training, Security Certifications and Go Live	Fixing bugs errors during UAT, Final Acceptance Testing,all documentation, staff training, Security Certification from STQC emapanneledagencyand GoLive.	T + 10 Months	15 % of Capex
5.	Successful Operations for the period of three years Post Go Live	SLA Reports, Monthly Project Reviews, System performance, and Stability	T1 + 36 Months	15 % of Capex Note : This Payment would be quarterly in 12 equal installments during this 36 months period
6.	Manpower Deployment	Manpower at State CCC and District Control Center	T1 + 36 Months	Quarterly billing of Manpower deployed

 # Notes:T is the date of issuance of Work Orderand T1 is the date of Go Live

I. The charges of RFID Tag's for registered Vehicles, shall be paid by transporter for respective vehicle.

II. Payment would be made in Indian Rupees only based on Deliverable Milestones and Payment Schedule

III. Manpower payment shall be based on actual resource deployed by the agency.

IV. Invoices shall have to be raised to Directorateas per milestone / delivery schedule and in case of manpower services on quarterly basis. Payments shall be subject to deductions of any amount for which the SI is liable as per the penalty clause of this RFP document. Further, all payments shall be made subject to deduction of TDS (Tax Deduction at Source) as per the applicable Acts & Laws.

V. Payment to the agency shall be paid by Directorate

VI. No interest/charges shall be paid on delayed payments.

VII. The SI shall not be paid any extra charges (or any out-of-pocket expense) against such items which are required for performing proper and efficient working.

14 Period of Contract

Contract for empanelment will be signed with the successful agency initially for a **period of 3 (Three) years** and extendable up to1+1 year basis.

15 Working Language

SI shall deliver all documents in English only. The Proposal, and all correspondence and documents related to the Proposal exchanged by the bidder and the DIRECTORATE should be in English only. Supporting documents and printed literature furnished by the bidder may be in any language other than English provided they are accompanied by an accurate translation of the relevant passages in English language. Supporting material, which is not translated in English, will not be considered for evaluation. For the purpose of evaluation and interpretation of the proposal, the English language translation shall prevail.

16 Reporting

All correspondences by the SI shall be addressed to the Director, Directorate of Geology and Mining.

17 Instructions to Bidders

17.1 Pre-Proposal Meeting/ Clarifications

Any prospective proposer may, in writing, seek clarifications from DIRECTORATE in respect of the RFP document.

i. A pre-proposal meeting shall also be scheduled by DIRECTORATE as per the details mentioned in the RFP and to clarify doubts of potential proposers in respect of the RFP.

ii. The prospective bidder requiring any clarification on the tender shall contact DIRECTORATE through email by sending their queries at **dirgeomn@nic.in**,in the format as per **Annexure-1**. DIRECTORATE will provide clarifications to only those queries which would be received as specified in "Schedule of RFP". All future correspondence/corrigendum shall be published on https://mptenders.gov.in/.

17.2 Changes in RFP Document:

At any time prior to the deadline for submission of proposal, Directoratemay amend the RFP document by issuing suitable corrigendum. Any corrigendum issued in this regard shall be uploaded on https://mptenders.gov.in/. To give reasonable time to the vendors, so that they can take corrigendum into account in preparing their proposals, Directorate shall (if necessary) extend the deadline for submission of proposals.

17.3 Period of Validity of Proposals

The proposals submitted by bidders shall be valid for a period of 180 days from the date of submission of the proposal. On completion of the validity period, in case required, Directoratewould solicit the bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing by post or email.

17.4 Cost of RFP

The proposer shall bear all costs associated with the preparation and submission of their proposal and DIRECTORATE shall not be responsible or liable for those costs regardless of the conduct or outcome of the bid process.

17.5 Currency of the Proposal and Payment

The currency of the proposal offers and the payments made (commercial transactions) shall be in Indian Rupees (INR).

17.6 Alternative/ Multiple Proposals

Alternative/ Multiple Proposals shall not be considered at all.

17.7 Withdrawal, Substitution, and Modification of Proposal

i. The bidder may modify, substitute or withdraw proposal after its submission, prior to the lastdate prescribed for submission of proposals.
ii. No proposal will be modified or substituted subsequent to the last date for submission of proposal.
iii. No proposal may be withdrawn in the interval between the last date for submission of proposals and the expiration of the period of proposal validity.
iv. Bidder needs to follow the MP Tender portal processes during withdrawal, substitution, and modification of proposal.

18 Submission of Proposal

The proposal shall be submitted as per the schedule given in the "Schedule of RFP".The PQ cum Technical Proposal and Financial Proposal shall be submitted online on MP Tender portal separately as follows under the specified areas as follows:

Part 1: PQ Proposal

Part 2: Financial Proposal

18.1 PQ Proposal

The PQ Proposal shall contain the following information:

i. Covering letter as per **Annexure-2**
ii. Checklist for Eligibility / Qualification Criteria Compliance in **Annexure-3**
iii. Compliance Sheet for Minimum Functional and Technical Requirement in **Annexure-4**
iv. Project details strictly as per **Annexure-6**
v. Agency/ Company Information as per **Annexure-7**
vi. Contact Details of officials for correspondence during proposal process as per **Annexure-8**.
vii. Any additional information that the bidder may think fit but not included elsewhere in the proposal, which will help DIRECTORATE to assess the capabilities of the Agency.
viii. Any other document if required.

Note:

1. The PQ cum Technical Proposal shall not include any financial proposal information. If mentioned, the proposal shall be rejected.
2. During PQ cum technical evaluation, clarification / additional documents may be sought by DIRECTORATE, through written communication, to which the bidder should respond within the timelines given.

18.2 Financial Proposal

i. After verifying the eligibility criteria, DIRECTORATE shall notify the shortlisted bidders indicating the date, time and place for financial proposal opening. The gross Financial Proposal of eligible

Bidders shall be opened in the presence of Bidders /authorized representatives who choose to attend.

ii. The Financial proposal shall be submitted in the format given on https://mptenders.gov.inas per **Annexure 9**and should not have any deviations, restrictive statements, etc. therein. Otherwise, such proposal is liable to be rejected at the sole discretion of DIRECTORATE.

iii. All the prices shall be entered in Indian Rupees ONLY (% values are not allowed).

iv. If any difference in the figures or words is found, then the value in words shall prevail.

v. Please note that the detailed financials shall not be submitted under this Cover-2 else the bid may be liable to be rejected at this stage.

vi. In case any bidder has failed to quote for any/all the items in the Detailed Financial Bid Formats, the bid submitted by that bidder will be rejected and its EMD will be forfeited.

vii. Bidders are advised to exercise adequate care in quoting the prices. No excuse for corrections in the quoted figures will be entertained after the proposals are submitted to DIRECTORATE

18.3 Instructions for Online Bid Submission

The bidders are required to submit soft copies of their bids electronically on the MP TENDERS Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the MP TENDERS Portal, prepare their bids in accordance with the requirements and submitting their bids online on the MP TENDERS Portal.

More information useful for submitting online bids on the MP TENDERS Portal may be obtained at: https://mptenders.gov.in/nicgep/app

18.4 Registration

I. Bidders are required to enrol on the MP e-Tender module of the Central Public Procurement Portal (URL: https://mptenders.gov.in/nicgep/app) by clicking on the link "**Online bidder Enrolment**" on the MP TENDERS Portal **which is free of charge.**

II. As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.

III. Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the MP TENDERS Portal.

IV. Upon enrolment, the bidders will be required to register **their valid Digital Signature Certificate (Class III Certificates with signing key usage)** issued by any Certifying Authority recognized by CCA India (e.g. Sify / nCode / eMudhra etc.), with their profile.

V. Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.

VI. Bidder then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC / e-Token.

18.5 Searching for Tender Documents

I. There are various search options built in the MP TENDERS Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Organization Name, Location, Date, Value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as Organization Name, Form of Contract, Location, Date, Other keywords etc. to search for a tender published on the MP TENDERS Portal.

II. Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective 'My Tenders' folder. This would enable the MP TENDERS Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.

III. The bidder should make a note of the unique Tender ID assigned to each tender; in case they want to obtain any clarification / help from the Helpdesk.

18.6 Preparation of Bids

I. Bidder should take into account any corrigendum published on the tender document before submitting their bids.

II. Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.

III. Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF/JPG formats. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.

IV. To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use "My Space" or ''Other Important Documents'' area available to them to upload such documents. These documents may be directly submitted from the "My Space" area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

18.7 Submission of Bids

I. Bidder should log into the site well in advance for bid submission so that they can upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.

II. The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.

III. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BoQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BoQ file, open it and complete the white coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be rejected.

IV. The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.

V. All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128-bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid opener's public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.

VI. The uploaded tender documents become readable only after the tender opening by the authorized bid openers.

VII. Upon the successful and timely submission of bids (i.e. after Clicking "Freeze Bid Submission" in the portal), the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.

VIII. The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meetings.

18.8 Assistance to Bidders

I. Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.

II. Any queries relating to the process of online bid submission or queries relating to MP TENDERS Portal in general may be directed to the 24x7 MP TENDERS Portal Helpdesk.

19 Opening of Proposals

I. Initially the PQ cum technical proposal containing "**Part 1: PQ Proposal** "shall beopened online in the first instance in the presence of representatives of the bidders at the time and place as mentioned in the Section Important Dates.

II. Bids would be evaluation with respect to Eligibility criteria's. The bidders who would be found to be eligible, shall be evaluated as per the evaluation criteria's.

III. Financial proposal of only those bidders, whose proposalsqualify after PQ and TQ evaluation, will be opened through online portal at DIRECTORATEin the presence of the bidder's representative subsequently for further evaluation as per "Schedule of RFP".

IV. One authorized representative of each of the bidders would be permitted to be present at the time of aforementioned opening of the proposal.

20 Proposal Evaluation

20.1 Pre-Qualification and Technical Evaluation

I. Directorate will constitute a Proposal evaluation committee to evaluate the responses of the bidders. The Proposal evaluation committee constituted by Directorateshall conduct a preliminary scrutiny of the opened Proposals to assess the prima-facie responsiveness and ensure that the: -

   a. Proposal is as per the requirements listed in the RFP document.
   b. Proposal is valid for the period, specified in the RFP document.

II. The Proposal Evaluation Committee constituted by the Directorateshall evaluate the responses to the RFP and all supporting documents / documentary evidence. Inability to submit requisite supporting documents / documentary evidence, may lead to rejection.

III. Post Pre-Qualification , the Pre-Qualifiedbidders shall be evaluated on technical parameters . The decision of the Evaluation Committee in the evaluation of responses to the RFP shall be final. No correspondence will be entertained outside the process of evaluation with the Committee.

IV. The Evaluation Committee reserves the right to reject any or all proposals on the basis of any deviations.

V. Each of the responses shall be evaluated as per the criterions and requirements specified in this RFP. No enquiry shall be made by the bidder(s) during the course of evaluation of the tender, after opening of proposal, till final decision is conveyed to the successful bidder(s).

VI. However, the Committee/its authorized representative and DIRECTORATE Bhopal can make any enquiry/ seek clarification from the bidders, which the bidders must furnish within the stipulated time else the bids of such defaulting bidders will be rejected.

VII. Submission of false/forged documents will lead to forfeiture of EMD and blacklisting of agency for a minimum period of 3 years from participating in DIRECTORATE tenders.

VIII. Financial proposal evaluation will be done only for those bidders who have been found to be in compliance with the PQ and TQ Evaluation.

20.2 Evaluation of Financial Proposal

i. The Financial Proposal of only those bidders who qualify the PQ Evaluation will be opened on a specified date and time to be intimated to the respective bidders by DIRECTORATE, and the same will be evaluated by a duly constituted Committee.
ii. The financial bid shall include all duties, levies, taxes except for GST, which shall be payable as per extra on the basis of the prevailing tax rates.
iii. If there is any discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and will be considered for further calculations.
iv. The amount (Grand Total Cost) shall be evaluated for financial bid, thus the lowest price bidder shall be declared as L1 bidder.

21 Execution of Proposal/Disqualification

DIRECTORATE may exclude or disqualify a proposal if:

I. The information submitted, concerning the qualifications of the proposer, was false or constituted a misrepresentation; or
II. The information submitted, concerning the qualifications of the proposer, was materially inaccurate or incomplete; and
III. The proposer is not qualified as per pre-qualification/ eligibility criteria mentioned in the bidding document, even after seeking clarifications/ additional documents by committee;
IV. The proposal materially departs from the requirements specified in the proposal or it contains false information;
V. The proposer submitting the proposal, his agent or any one acting on his behalf, gave or agreed to give, to any officer or employee of the DIRECTORATE or other governmental authority a gratification in any form or any other thing of value so as to unduly influence the Tender Process;
VI. A proposer, in the opinion of the DIRECTORATE, has a conflict of interest materially affecting fair competition.
VII. A proposal shall be excluded/ disqualified as soon as the cause for its exclusion/disqualification is discovered.
VIII. Any attempt by a bidder to influence DIRECTORATE in the evaluation of the proposal or contract award decisions may result in the rejection of its proposal.

22 Information and Publication of Award

Information of award of contract shall be communicated to all participating proposers through MP Tender portal.

23 DIRECTORATE's Right to Accept OR Reject any OR All Proposals

DIRECTORATE reserves the right to accept or reject any proposals, and to annul (cancel) the RFP process and reject all proposals at any time prior to award of contract, without thereby incurring any liability to the proposers.

24 Selection of Agency

Directoratewill sign the engagement agreement with the successful bidder(s) for the period stated in the RFP document.

25 Late Proposal

Proposal submitted after due date and time shall not be accepted.

26 Cancellation of Tender Process

I. If any bidding process has been cancelled, it shall not be reopened but it shall not prevent DIRECTORATE from initiating a new proposal process for the same subject matter of procurement, if required.

II. DIRECTORATE may, for reasons to be recorded in writing, cancel the process of procurement initiated by it at any time prior to the acceptance of the successful proposals; or after the successful proposal is accepted in accordance with below:

1) If a proposer is convicted of any offence under the prevailing law, DIRECTORATE may:

a. Cancel the relevant Tender Process if the proposal of the convicted proposer has been declared as successful but no procurement contract has been entered into;

b. Rescind the relevant contract or forfeit the payment of all or a part of the contract value if the procurement contract has been entered into between DIRECTORATE and the convicted proposer.

2) If it determines that the bidder recommended for award or on whom the contract / award has already been placed has engaged in corrupt or fraudulent practices in competing for the contract/award in question.

The decision of DIRECTORATE to cancel the procurement and reasons for such decision shall be immediately communicated to all proposers that participated in the tender process.

27 Interference with Tender Process

For a proposer who withdraws from the tender process after opening of financial proposal / withdraws from the tender process after being declared the successful proposer / fails to enter into contract after being declared the successful proposer / fails to provide performance security or any other document or security required in terms of the bidding documents after being declared the successful proposer, without

valid grounds, shall, in addition to the recourse available in the bidding document or the contract, EMD submitted will be forfeited.

28 Debarment from Bidding

I. If DIRECTORATE finds that a proposer has breached the code of integrity prescribed in the RFP, it may debar the proposer for a period of three years.

II. Where the entire proposal security or the entire performance security or any substitute thereof, as the case may be, of a proposer has been forfeiture by DIRECTORATE in respect of any tender process or procurement contract, the proposer may be debarred from participating in any tender process undertaken by DIRECTORATE for a period of three years.

III. DIRECTORATE, as the case may be, shall not debar a proposer under this section unless such proposer has been given a reasonable opportunity of being heard.

29 Monitoring of Contract

If delay in delivery of service is observed, a performance notice would be given to the selected proposer to speed up the delivery. Any change in the constitution of the agency etc. shall be notified forth with by the contractor in writing to DIRECTORATE **within thirty days** of such change. Such change shall not relieve the agency, from any liability under the contract.

The selected proposer shall not assign or sub-let his contract or any substantial part thereof to any other agency.

30 Corrupt/Fraudulent Practices

I. DIRECTORATE requires that the bidders under this tender shall observe the highest standards of ethics during the execution of such contracts. In pursuance of this policy, DIRECTORATE defines the terms set forth as follows:

   a. “Corrupt Practice” means the offering, giving, receiving or soliciting of anything of value to influence the action of the public official in the award of the contract, in contract execution;

   b. “Fraudulent practice” means a misrepresentation of facts in order to influence award of contract or an execution of a contract to the detriment of DIRECTORATE, and includes collusive practice among bidders (prior to or after proposal submission) to deprive DIRECTORATE of the benefits of the free and open competition.

II. In the event of corrupt practice and fraudulence, in addition to penal action as per the terms and conditions of the contract, legal action may also be initiated against the concerned. Apart from termination of contract, DIRECTORATE may also forfeit the PBG submitted by the bidder.

III. DIRECTORATE will suspend the award of contract if prima-facie it is established that the bidder had engaged in corrupt or fraudulent practices in competing for the contract in question.

IV. DIRECTORATE will declare a bidder ineligible after giving opportunity of being heard, either indefinitely or for a stated period of time, to be awarded a contract, if at any time it is found that the bidder has engaged in corrupt and fraudulent practices in competing for, or in executing, this contract.

31 Sub-Contracting

The proposer shall not assign or sub-let his contract or any substantial part thereof to any other agency.

32 General Terms and Conditions of Proposal & Contract

Proposers should read these conditions carefully and comply strictly while sending their proposal.

Note: The proposer shall be deemed to have carefully examined the conditions of the services to be rendered. If the proposer has any doubts as to the meaning of any portion of these conditions, he shall, before submitting the proposal and signing the contract refer the same to DIRECTORATE and get clarifications.

32.1 Signing of Contract

The successful bidder(s) shall execute an agreement within 15 days from the date of issuance of Letter of Intent (LoI) (or work order if LoI is not issued) ***with Directorate of Geology and Mining***. In addition to terms and conditions being mentioned hereunder, all terms and conditions of the tender and corrigendum issued shall also be applicable for the contract.

32.2 Execution of agreement

During the term of contract, the SI will work closely with Directorate and will perform the activities as per the scope of work. In case of poor performance, non-responsiveness or unjustified & repeated delays in delivery, Directorateshall terminate the agreement. In this case, the performance security shall be forfeited.

32.3 Failure to agree with the "Terms and Conditions" of the Tender

Failure of the successful bidder to agree with the Terms & Conditions of the contract shall constitute sufficient grounds for the annulment of the proposal or the award. In such circumstances,Directoratewould reject the proposal and forfeit the EMD as specified in the document.

32.4 Contract Documents

Subject to the order of precedence set forth in the agreement, all documents forming the Contract (and all parts thereof) are intended to be correlative, complementary, and mutually explanatory.

33 Governing Law

The Contract shall be governed by and interpreted in accordance with the laws of the State of Madhya Pradesh prevalent during & at the time of signing of contract. The courts in Bhopal shall have the jurisdiction.

34 Recoveries from Agency

I. Recovery of penalties shall be made ordinarily from bills.

II. Directorate of Geology and Mining shall withhold amount to the extent of shortcomings of the delivery of services unless these are completed as per the SLA. In case of failure to withhold the amount, it shall be recovered from dues of the agency and performance security deposit available with Directorate. The balance, if any, shall be demanded from the SIand when recovery is not possible, Directorateshall take recourse to law in force.

35 Taxes and Duties

I. GST, if applicable, shall not be included in the proposal price and shall be paid by Directorateseparately on prevailing rates. All other taxes, duties, license fee and levies shall be including in the proposal price.

II. TDS, if applicable for any tax, shall be done as per law in force at the time of execution of the contract.

III. If any tax exemptions, reductions, allowances or privileges may be available to the successful/ selected proposer / agency, the agency shall use its best efforts to benefit from any such tax savings to the maximum allowable extent, without any negative impact on Directorateand the contract.

IV. Any future changes in tax provision either by Central or State government shall be applicable.

36 Copyright

The copyright in all materials containing data and information furnished to the Purchaser by the SIherein, as part of responsibility within scope of this contract, shall remain vested in Directorate.

37 Confidential Information

The RFP contains information proprietary to DIRECTORATE. DIRECTORATE requires the recipients of this RFP to maintain its contents in the same confidence as their own confidential

information and refrain from reproducing it in whole or in part without the written permission of DIRECTORATE.

DIRECTORATE will not return the proposal/responses to the RFP received. The information provided by the bidder(s) will be held in confidence and will be used for the purpose of evaluation of proposal.

38 Force Majeure

I. Notwithstanding the provisions of conditions of contract, the successful bidder shall not be liable for forfeiture of its performance security or termination for default, if and to the extent that its' delay in performance or other failure to perform its obligations under the contract is the result of an event of Force Majeure.

II. For purpose of this clause, Force Majeure means an event beyond the control of the successful bidder and not involving the successful bidder's fault or negligence and not foreseeable. Such events may include, but are not limited to acts of DIRECTORATE either in its sovereign or contractual capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.

III. If a Force Majeure situation arises, the successful bidder shall promptly notify DIRECTORATE in writing of such conditions and the cause thereof. Unless otherwise directed by DIRECTORATE in writing, the successful bidder shall continue to perform its 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.

39 Termination

39.1 Termination for Default

I. DIRECTORATE may, without prejudice to any other remedy for breach of contract, by written 60 days' notice of default sent to the SI, terminate the contract in whole or part if the SIfails to deliver any or all of the systems within the period(s) specified in the contract, or within any extension thereof granted by the Purchaser pursuant to conditions of contract clause or if the successful bidder fails to perform any other obligation(s) under the Contract.

II. In the event that DIRECTORATE terminates the Contract in whole or in part, pursuant to the conditions of contract clause, it may procure, upon such terms and in such manner, as it deems appropriate, systems or services similar to those undelivered and the SI shall be liable to pay DIRECTORATE for any excess costs for such similar systems or services. However, SIshall continue the performance of the Contract to the extent not terminated.

39.2 Termination for Insolvency

DIRECTORATE may at any time terminate the Contract by giving a written notice of at least 60 days to the selected proposer, if the selected proposer becomes bankrupt or otherwise insolvent. In such event, termination will be without compensation to the selected proposer, provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to DIRECTORATE.

39.3 Termination for Convenience

DIRECTORATE, by 60days' written notice sent to the SI, may terminate the contract, in whole or in part at any time for its convenience. The notice of termination shall specify that termination is for DIRECTORATE's convenience, the extent to which performance of the SI under the contract is terminated and the date upon which such termination becomes effective. However, any undisputed payment to the invoices of the task accomplished by SI would be paid by DIRECTORATE.

40 Settlement of Disputes

If any dispute of any kind whatsoever arise between DIRECTORATE and the successful bidder in connection with or arising out of the contract, including without prejudice to the generality of the foregoing, any question regarding its existence, validity or termination, the parties shall seek to resolve any such dispute or difference by mutual consultation. If the parties fail to resolve such a dispute or difference by mutual consultation an appeal may be filed to the Principal Secretary / Secretary, Government of Madhya Pradesh, Directorate of Science &Technology. If still unresolved then the dispute would be resolved as per MP Madhyastham Adhikaran Act, 1985.The place of arbitration shall be Bhopal and all legal disputes are subject to the jurisdiction of courts at Bhopal.

41 Other Conditions

I. The SIshall bear the expenses regarding delivery of services.
II. The SIshall not, under any circumstances, revise the rates already approved for services. Any request for an increase in the rates will not be entertained under any circumstances during the contract period.
III. The SIshall execute the whole work in strict accordance with guidelines of DIRECTORATE.
IV. DIRECTORATE shall reserve the right to make any alterations in or additions to the original scope of work on mutually agreed terms. Any additional work which the bidder may be directed to do in the manner specified above as part of the work shall be carried out by the bidder on the same conditions in all respects on which he agreed to do the main work and at the same rates as specified by DIRECTORATE.
V. Any publicity by the bidder in which the name of DIRECTORATE is to be used shall be done only with the explicit written permission of DIRECTORATE.

VI. In the event of any material breach of the terms of the Agreement, the Party in breach shall cure the breach within 30 days of notice. In the event the breach is not cured within stipulated time the affected party may terminate the Agreement by giving notice in writing to the other Party and client shall pay all dues payable for the services rendered till the effective date of termination

41.1 Limitation of Liability

Except in cases of gross negligence or willful misconduct: -

I. Neither party shall be liable to the other party for any indirect or consequential loss or damage, loss of use, loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the SI to pay liquidated damages to DIRECTORATE; and
II. The aggregate liability of the selected agency to DIRECTORATE, whether under the Contract, or otherwise, shall not exceed the amount specified in the Contract.
III. The maximum aggregate liability of the SIshall not exceed the total project cost.

41.2 Liquidated Damages

Time is the essence of the Agreement and the delivery schedule are binding on the SI. In the event of delay or any gross negligence in implementation of the project, for causes solely attributable to the SI, in meeting the deliverables. DIRECTORATE shall be entitled at its option to recover from the SI as agreed liquidated damages, a sum of 0.5% of the value of the deliverable which suffered delay or gross negligence for each completed week or part thereof subject to a limit of 10% of the total contract value.

This right to claim any liquidated damages shall be without prejudice to other rights and remedies available to DIRECTORATE under the contract and law.

However, no penalty will be imposed for the durations leading to delays in implementation due to reasons solely attributable to the Directorate.

42 Exit Management on Contract Completion/Termination:

I. Upon completion of the contract period or upon termination of the agreement for any reasons, the agency shall comply with the following:
   a. Notify to DIRECTORATE forthwith the particulars of all Project Assets;
   b. Deliver forthwith actual or constructive possession of the project, writings and documents as may be required by DIRECTORATE, for fully and effectively divesting the agency of all of the rights, title and interest of the agency in the Project and conveying the Project.

II. Subject to clause (1) of exit management, upon completion of the contract period or upon termination of the agreement, the agency shall comply and conform to the following requirements in respect of the project:

a. All project assets including the hardware, software, documentation and any other infrastructure shall have been renewed and cured of all defects and deficiencies as necessary so that the project is compliant with the specifications and standards set forth in the RFP, agreement and any other amendments made during the contract period;

b. The agency delivers relevant records and reports pertaining to the project and its operation, and maintenance including all operation and maintenance records and manuals pertaining thereto and complete as on the contract completion date;

c. The agency executes such documents and other writings as DIRECTORATE may reasonably require to convey, divest and assign all the rights, title and interest of the agency in the project free from all encumbrances absolutely and free of any charge or tax to DIRECTORATE, or its nominee;

d. The agency complies with all other requirements as may be prescribed under applicable laws to complete the assignment of all the rights, title and interest of the agency in the project free from all encumbrances absolutely and free of any charge or tax to DIRECTORATE or its nominee.

III. Not earlier than 3 months before the expiry of the contract period but not later than 30 (thirty) days before such expiry, or in the event of earlier termination of the contract, immediately upon but not later than 15 days from the date of issue of Termination Notice, the authorized person as nominated by DIRECTORATE shall verify, in the presence of a representative of the agency, compliance by the agency with the requirements set forth in relation to the project for determining the compliance therewith. If party finds any shortcomings in the requirements, it shall notify the other of the same and the agency shall rectify the same at its cost.

IV. Upon the agency conforming to all requirements and handing over actual or constructive possession of the project to DIRECTORATE or a person nominated by DIRECTORATE in this regard, DIRECTORATE shall issue a certificate substantially in the form set forth, which will have the effect of constituting evidence of handover of all rights, title and lien in the project by the agency. DIRECTORATE shall not unreasonably withhold issue of such certificate.

43 Annexures

ANNEXURE-1: PRE-PROPOSALS QUERIES FORMAT

{To be filled by the bidder}

Name of the Agency:

Name of Person(s) Representing the Company/ Agency:

Name of Person	Designation	Email-ID(s)	Contact Number	Address for Correspondence

Query / Clarification Sought:

Sr. No.	RFP Page No.	RFPClause No.	Clause Details	Query/ Suggestion/ Clarification

Note: - *Queries must be submitted in the prescribed format only (.XLS/ .XLSX). Queries not submitted in the prescribed format will not be considered/ responded at all by DIRECTORATE.*

Pre-Proposal queries shall be sent at the e-mail address mentioned in the RFP, and 72 hours before Pre-bid meeting. Queries submitted post that may not be entertained.

ANNEXURE-2: Covering Letter

{To be submitted on the letter head of the bidder}

To,
Director,
Geology and Mining,
Bhopal 462011

Dear Sir,

We, the undersigned, offer **Selection of System Integrator for Implementation of AI based Smart Enforcement System to curb illegal transportation of mineral** accordance with your RFP dated …….. We are hereby submitting our proposal as per the requirements mentioned in the RFP.

We hereby declare that:

i. All the information and statements made in this proposal are true and we accept that any misinterpretation or misrepresentation contained in this proposal may lead to our disqualification by the Client.
ii. We meet the eligibility requirements as stated in this RFP and we confirm our understanding of our obligation to abide by the policy in regard to corrupt and fraudulent practices.
iii. Our proposal is binding upon us and subject to any modifications/ amendments DIRECTORATEmade before the date of submission.
iv. Our Agency does not face any sanction or any pending disciplinary action from any authority against our Agency.
v. We understand that the Client is not bound to accept any proposal that the Client receives.

Thanking you,

Authorized Signature {In full and initials with Seal}:
Name and Title of Signatory:
Name of Bidder (Agency/ Company's name):
In the capacity of:
Address:
Contact information (phone and e-mail):
Date& Time:_____

Place:_____

ANNEXURE-3: Checklist for Eligibility / Qualification Criteria Compliance

a. **For Pre-Qualification Criteria:**

SN	Basic Requirement	Specific Requirements	Documents Required	Ref. Page No. of Document submitted by Bidder
1	<<PQ Criteria 1>>	<<PQ Criteria 1>>	<<PQ Criteria 1>>	<< Mention Certificate/ Project name along with page no. in the bid >>
2	<<PQ Criteria 2>>	<<PQ Criteria 2>>	<<PQ Criteria 2>>	<< Mention Certificate/ Project name along with page no. in the bid >>

Note: Kindly use separate row for each PQ criteria.

ANNEXURE-4:Functional and Technical Requirement withCompliance Sheet for Minimum

Use Cases to curb illegal mineral transportation:

#	Minimum but not limited use cases in moving vehicle	Compliance (N/Y)
1.	Mineral Identification in moving vehicle without carrier cover (Refer Annexure : 15 for list of minerals)	
2.	Volume Mismatched (Volumetric Analysis vs. Transit Pass Data)	
3.	Invalid eTP	
4.	Invalid Vehicle Number (Registration Number on Plate)	
5.	e-TP Date and Time Mismatch	
6.	Transportation with Expired Transit Pass	
7.	Without any transit Pass	
8.	Having Transit Pass (Other State) but without ISTP	
9.	Transportation on Un-Registered Vehicle	
10.	Registered Vehicle Without having RFID-Tag	
11.	Un-Identified Vehicle carrying mineral	
12.	Vehicle No. Mismatched against e-TP /ANPR / RFID Tag	
13.	Vehicle having Non-Functional RFID Tag (Need to issue new Tag)	
14.	Vehicle having Transit Pass but Bypassed all Check gates	
15.	Multiple Round Trip with Single Transit Pass	
16.	Other Analysis (as per requirement)	

Mounting / Gantry Structure

#	Minimum Requirement Specification	Compliance (N/Y)
1.	It shall cover the entire span of the Road / Highway Lane segment in focus	
2.	The mounting structures Material, Design, Quality, Strength, Factor of safety shall be as per MoRTH Guidelines . The Structure shall handle the complete load. Bidder shall calculate the load of entire	

	structure , installed equipment, working people atop, weather conditions, cyclone history etc. to handle all incidental conditions.	
3.	The installation and civil work shall be as per MoRTH Guidelines and norms.	
4.	The structure shall be compatible with fixtures for installation of devices	
5.	Shall have HDPE conduiting for data cables and Electrical wires for all IT equipment to be mounted atop and rubberized-steel Flexi Pipe for peripheral cabling	
6.	Earthing and Lighting Protection shall be provided	
7.	Sign Boards shall be provided in English, Hindi with specific purpose like “This Road is under surveillance” .	

Outdoor Housing Cabinet

#	Minimum Requirement Specification	Compliance (N/Y)
1.	Shall have IP54 rating	
2.	The outdoor cabinet shall have enough space for housing the equipment . The cabinet shall have thermal and humidity control protection, cooling system, durable locks (double), double layered metal sheet for the housing, equipment trays, PDU, Cable managers and DIN rail mounts	
3.	The material of cabinet shall withstand extreme weather conditions and ensure durability	
4.	Shall have housing for electricity meters, changeover and MCBs with DIN rail mounts for MCBs and 6 sockets PDU strip	
5.	Shall have mechanism identify tampering attempts	
6.	Shall have cooling system to maintain favourable temperatures for all equipment hosted inside the cabinet	
7.	Shall be installed on elevated platforms with concealed ducts to withstand flooding during monsoons	

The integrated hybrid power management system

#	Minimum Requirement Specification	Compliance (N/Y)
1.	Shall have provision to install on mounting structure / gantry and shall withstand extreme windy conditions	

2.	Shall have MPPT based PCU with charging INPUTs from Grid and UN-filtered auxiliary power in addition to solar	
3.	SMF Battery Bank	
4.	Cabling within HDPE conduits (Solar Panels to PCU & PCU to Output)	
5.	All connectors/terminators and associated accessories shall be part of system	
6.	Shall have Wide voltage range compatibility (80-300v) of online UPS	
7.	Shall have Boost charging capability with Deep Discharge & OVER Charge protection	
8.	Shall have Auto-restart capability after abrupt shutdown	
9.	Shall have Switchover mechanism with MCB and minimum 4 Copper Electrode Earthing at Input/Output and Lightening Protection	
10.	Shall have SNMP : Power Management from SNMP Manager and Web Browser. This shall support to monitor the UPS & other System parameters through SNMP from remote installed locations to a central location with event logs.	

Fixed RFID reader

#	Parameters	Description	(N/Y)
1.	Accessories	Reader with Power adaptor with Indian standard power plug, and other installation accessories.	
2.	Antenna Mode	Monostatic or Bistatic	
3.	Environment	Non-AC, Dusty environments such as toll plazas, Open Highways and State roads etc.	
4.	Reader Housing	Aluminium	
5.		IP53 or better	
6.	Dimensions	Small Installation Footprint	
7.	Connectivity	10/100 BaseT Ethernet – RJ45	

#	Parameters	Description	(N/Y)
8.		DB9 or DB25	
9.	Operating Temp	0°to +55° C or better	
10.	firmware and Management protocol supported	Remote firmware management capability using web browser and web tools	
11.	Host Interface	Low Level Reader Protocol (LLRP) / Discovery Configuration and Initialization (DCI) / Reader Management (RM) / Application-Level Event (ALE) Standard. (The reader must retain transactional data even after power - off / restart of the device)	
12.	API Support	Yes	
13.	ISO standard	ISO 180006C (EPC Class 1 Gen 2) or better	
14.	Reading accuracy on Continuous power “ON”	The device should have designed to be powered on throughout its life. The device should not hang or restart automatically due to whatever reason.	
15.	Regulatory compliances	Safety: Safety UL / IEC/ EN or all certifications	
16.		Other: ROHS / WEEE or both	
17.	OS and Security Updates	Support for the **OS and Security Updates** should be available from the OEM throughout	

#	Parameters	Description	(N/Y)
		the contract Period - This is very important else that may lead to Security Vulnerability and may fail Security Audits.	

RFID Windshield Tag

#	Minimum Requirement Specification	**Compliance (Y/N)**
1.	Compliance with ARAI Standards	
2.	Waterproof coating	
3.	Tamperproof Tag	
4.	Read Range : 1-30 feet or higher	
5.	Air interface Protocol ISO/IEC, EPC Global	
6.	Frequency BandsUltra High Frequency (UHF)	

ANPR System

#	**Minimum Specifications**	**Compliance (Y/N)**
1	The system usage shall be privilege driven using password authentication.	
2	The system shall support real-time detection of vehicles at the deployed locations, recording each vehicle, reading its number plate, database look up from central server and triggering of alarms/alerts based on the vehicle status and category as specified by the database	
3	The deployed solution shall have ability to have IR illuminators to provide illumination for night-time scenario.	
4	The system shall have ability to provide the live feed of the camera at the integrated command control centre or as per user requirement.	
5	The ANPR system will have minimum accuracy of at least 90% for HSNP plates	
6	The system shall be robust to variation in License Plates in terms of font, size, contrast and colour and should work with good accuracy	
7	Ability to detect the colour of all vehicles in the camera view during daytime. The system can store the colour information of each vehicle along with the license plate information for each transaction in the database.	
8	Ability to input certain license plates according to the hot listed categories like	

#	Minimum Specifications	Compliance (Y/N)
	"Wanted", "Suspicious", "Stolen", etc. by authorized personnel.	
9	Ability to generate automatic alarms to alert the control room personnel for further action, in the event of detection of any vehicle falling in the hot listed categories.	
10	Ability to generate an automatic alarm to alert the control room on successful recognition of the number plate based on pre-defined rules.	
11	Ability to easy and quick retrieval of snapshots, video and other data for post incident analysis and investigations.	
12	Ability to generate MIS reports to concerned authorities and facilitate optimum utilization of resources. These reports shall include but not limited to: Report of vehicle flow at each of the installed locations for Last Day, Last Week and Last Month. Report of vehicles in the detected categories at each of the installed locations for Last Day, Last Week and Last Month. Report of Vehicle Status change in different Vehicle Categories. Ability to search the information based on parameters defined. Ability to auto generate reports and send to stakeholders. Ability to define system access based on rule.	
13	Local Server at Intersection: Outdoor Quad core processor based server should be able to cover at least 8 lanes. Temperature rating of the server should be at least 60 degrees.	
14	The system must be based on open platform and should run on LINUX/Windows Operating system.	
15	The system should have ANPR/ OCR to address the Alpha numerical character of irregular font sizes.	
16	The system should have plate matching functionality that works for all types of license plate should be independent of ANPR and thus provide very high detection rate.	
17	USB Port to support the latest external mass storage devices and Ethernet (10/100) Port for possible networking. However, all logs of data transfer through the ports shall be maintained by the system.	
18	Lightening arrester shall be installed for safety of system (As per BIS standard IS 2309 of 1989).	
19	The housing(s) should be capable of withstanding vandalism and harsh weather conditions and should meet IP66, IK10 standards (certified).	
20	Encrypted data, images and video pertaining to Violations at the Onsite processing station should be transmitted to the ICCC electronically.	
21	Advanced Encryption Standard (AES) shall be followed for data encryption on site and ICCC, and its access will be protected by a password.	
22	Ability to video recording in base station for 7 days. Automatically overwrite the data after 7 days.	
23	Direct extraction through any physical device like USB flash drive, Portable Hard disk etc. shall be possible but in encrypted state	

#	Minimum Specifications	Compliance (Y/N)
24	Wired/GPRS based wireless technology with 4G and upgradable or batter to be provided.	
25	The complete tracking of the vehicle is to be made possible on the GIS map to locate any suspicious / identified vehicle.	
26	The identified or suspicious vehicle may be flagged by any police personnel or sensed by ANPR or through other analytics like vehicle tracking based on colour & number of the vehicle.	

Fixed BoxCamera

No.	Parameter	Minimum Specifications	Compliance (Y/N)
1.	Video Compression	H.265 / H.264 or suitable compression	
2.	Pixel	4 MP or higher	
3.	Frame rate	Min. 25 fps or better	
4.	Image Sensor	1/2" / 1/1.8" Progressive Scan CCD / CMOS	
5.	Lens Type	Varifocal, IR Correction full HD lens	
6.	Lens	Auto IRIS P Iris Lens 12 – 40 mm,	
7.	Minimum Illumination	Colour: 0.1 lux, B/W: 0.01 lux (at 30 IRE) nor better	
8.	IR Cut Filter	Automatically Removable IR-cut filter, Head light Filter	
9.	Day/Night Mode	Colour, Mono, Auto	
10.	Auto adjustment and Remote Control of Image settings	Colour, brightness, sharpness, contrast, white balance, exposure control, backlight compensation, Gain Control, Auto back focus	
11.	Local storage	Micro SD/SDHC/SDXC memory card of 128GB (Class 10): In the event of failure of connectivity to the central server the camera shall record video locally on the SD card automatically. After the connectivity is restored these recordings shall be automatically merged with the server recording such that no manual intervention is required to transfer the SD card based recordings to server.	
12.	Protocol	HTTP, HTTPS, FTP, , TCP, UDP, , DHCP, ONVIF etc.	
13.	Security	Password Protection, IP Address filtering, User Access Log, HTTPS encryption, 802.1x Embedded Cybersecurity	
14.	Intelligent Video	Motion Detection & Tampering alert	

No.	Parameter	Minimum Specifications	Compliance (Y/N)
15.	Alarm I/O	Minimum 1 Input & Output contact for 3rd part interface	
16.	Operating conditions	0 °C – 60 °C, Humidity 90% or less (non- condensing)	
17.	Casing	NEMA 4X / IP-67 rated &	
18.	Certification	BIS	
19.	Power	PoE	
20.	IR	Built-in IR LED with minimum 50 meters IR range	
21.	Streaming	Inbuilt Multi Streaming with streaming options	

IR Illuminators

No.	Parameter	Minimum Specifications	Compliance (Y/N)
1	Power	Auto on off	
2	IR Control	Power level, Photocell sensitivity, Timer	
3	Type	850 nm semi-covert or better	
4	Distance & Angle of Beam with Lens Options.	Minimum : Suitable for ANPR Application	
5	Casing	Aluminium / Polycarbonate or both /or better	
6	LED Indicators	Required	
7	Environmental Protection	IP66, IK10 Rated	
8	Mount Options	Wall, Ceiling, Camera Housing Mount	
9	Operating Temperature	0 °C to 55 °C or batter	
10	Warranty	Min 3 Years OEM Warranty	
11	Standards/Certification	WEEE, RoHS	
12	Approved Makes	Same as Camera OEM	

Local Processing Unit

No.	Minimum Specifications	Compliance (Y/N)
1	The LPU shall be installed at the location level in IP 55 enclosure with Sunshield, vandal proof casing	
2	The system should run on outdoor, industrial grade multi core processor-based server .Some important specifications are as follows: Intel multi core latest generation processor i7 or higher	

No.	Minimum Specifications	Compliance (Y/N)
	16GB RAM minimum or higher 4TB surveillance grade hard disk (support up to 70° centigrade operating temperature) 128GB SSD or higher for operating system Fan less design The entire unit should be capable to perform under overall operating temperature of minimum 70 degree	

Weigh-in-Motion System

No.	Parameter	Minimum Specifications	Compliance (Y/N)
1	Sensor Type	The system should include in-ground sensors that can accurately measure the weight of vehicles in motion. The sensors should be durable, reliable, and capable of measuring axle and gross vehicle weights	
2	Accuracy	The system should be accurate in measuring the weight of vehicles in motion. The accuracy should be within +/- 5% or better of the actual weight of the vehicle	
3	Speed Range	The system should be capable of accurately measuring the weight of vehicles traveling at speeds between 5 and 80 km/h or higher	
4	Dynamic Range	The system should be capable of measuring a wide range of vehicle weights, including light passenger vehicles, heavy commercial trucks, tractor with trolley and buses	
5	Classification	The system should be capable of classifying vehicles based on their weight and axle configuration. The system should be able to differentiate between single-unit trolley and combination of trolley, trucks, buses, and passenger vehicles	
6	Data Collection and Transmission	The system should include a data acquisition unit that collects data from the in-ground sensors and transmits it to the decision support system in real-time. The data transmission should be reliable and secure. The system shall capture minimum below parameters:	

No.	Parameter	Minimum Specifications	Compliance (Y/N)
		• Date and Time, • Lane Id, Vehicle Count • Type of Vehicle • Number of Axles passing over the scale • per axle Weight • Gross Vehicle Weight • Vehicle Speed • Vehicle Length • Vehicle height	
7	Environmental Conditions	The system should be capable of operating in harsh environmental conditions, including extreme temperatures, humidity, and precipitation.	
8	System Integration	The system should be compatible with decision support system and should be able to integrate seamlessly	
9	Compliance	The system should be designed and installed in compliance with relevant national and international standards, including the International Organization for Standardization (ISO) standards for Weigh-In-Motion Systems.	

Handheld Device for field Staff

#	Parameter	Minimum Specifications	Compliance (Yes/No)
1	Operating System	Latest Windows or Linux or Android OS or OEM	
2	Processor	Min 800 MHz or better	
3	Memory (Flash ROM)	Minimum 1 GB or better	
4	RAM	Minimum 1 GB or better	
5	Extend Slot	Micro SD 32 GB or better	
6	Display	Minimum 3.5 inch TFT LCD (Trans reflective screen VGA/QVGA) or better	
7	Touch Screen	Yes	

#	Parameter	Minimum Specifications	Compliance (Yes/No)
8	Form Factor	Any	
9	GPS	GPS and A GPS	
10	Bluetooth	Yes	
11	Wi-Fi	Wi-Fi (802.11b/g/n)	
12	RFID Reader	Shall read RFID from Vehicles wind screen	
13	External Interface	USB HOST/RS232(Customized)	
14	Protection class	IP54	
15	Drop resistance level	1.5m	
16	Camera	3 MP Minimum	
17	Camera- Video	Support still image and video capture	
18	Front	QWERTY 42 Keys function key can be soft key	
19	Mini-USB Connector	USB2.0 connection	
20	SIM card slot	Yes	
21	TF card slot	Yes	
22	Power jack	Yes	
23	Audio Jack	Yes	
24	Battery Type	Rechargeable Li- ion battery 4000mAh or better	
25	Operating temperature	0-50 degree C or better	
26	Storage temperature	0-50 degree C or better	
27	Operating humidity	10% - 80%	
28	Storage humidity	10% - 90%	
29	Payment PIN PAD	The device should have PCI , EMV certified PIN PAD as per RBI guideline for accepting payment through Credit / Debit card	
30	Enclosure	Rugged	

Application Software with Artificial Intelligence:

#	Minimum Requirement Specification	Compliance (Y/N)
1.	The system shall work on all but not limited to defined use cases in all weather and light conditions	
2.	The system shall derive feeds / data from all devices connected on the Check Gate (RFID Reader and Cameras etc) on real time basis	
3.	Solution shall support distributed computing (Local Processing Unit and Data Center)	
4.	Solution shall read all types of Registration Number Plates at minimum speed of 80 km/hr with the accuracy 90% in day and 80% in night	

5.	Solution shall identify vehicle with accuracy 85% and do further vehicle classification with 80% for above cases	
6.	Solution shall identify vehicle with RFID (Mine Tag) with accuracy 85% accuracy and shall do e-TP verification of all RFID identified cases	
7.	Solution shall identify Mineral with accuracy above 90% during the day hours and above 75% during the night hours in uncovered vehicles	
8.	Solution accuracy shall be further improved upon such that accuracy level clearly appears on a upward trend	
9.	Solution shall maintain suitable logs for a period NOT less than 3months	
10.	Solution shall do volumetric analysis with 80% accuracy	

Video Management System

Sr. No.	Minimum Requirement Specification	Compliance (Y/N)
1.	VMS shall be used for centralized management of all field camera devices, video servers and client users.	
2.	VMS server shall be deployed in a clustered server environment or support an inbuilt mechanism for high availability and failover.	
3.	VMS shall support a flexible rule-based system driven by schedules and events.	
4.	VMS shall be supported for fully distributed solution for monitoring and control function, designed for limitless multi-site and multiple server installations requiring 24/7 surveillance with support for devices from different vendors. The VMS Software should have OS partner certification for tight integration with another operating system.	
5.	VMS shall support ONVIF.	
6.	The SI shall clearly list in their proposal the make and models that can be integrated with the VMS, additionally all the offered VMS and cameras must have Open Network Video Interface Forum (ONVIF) compliance. VMS shall be enabled for any standard storage technologies and video wall system integration.	
7.	VMS shall be enabled for integration with any external Video Analytics Systems both server & edge based.	
8.	VMS shall be capable of being deployed in a virtualized server environment without loss of any functionality.	

Sr. No.	Minimum Requirement Specification	Compliance (Y/N)
9.	All the cameras locations shall be overlaid in graphical map in the VMS Graphical User Interface (GUI). The cameras selection for viewing shall be possible via clicking on the camera location on the graphical map. The graphical map shall be of high resolution enabling operator to zoom-in for specific location while selecting a camera for viewing.	
10.	VMS shall have an administrator interface to set system parameters, manage codecs, manage permissions and manage storage.	
11.	VMS day to day control of cameras and monitoring on client workstations shall be controlled through the administrator interface.	
12.	Whilst live control and monitoring is the primary activity of the monitoring workstations, video replay shall also be accommodated on the GUI for general review and also for pre- and post-alarm recording display.	
13.	The solution design for the VMS shall provide flexible video signal compression, display, storage and retrieval.	
14.	All CCTV camera video signal inputs to the system shall be provided to various command control centre (s), viewing centre etc., and the transmission medium used shall best suit the relative camera deployments and access to the CCTV Network.	
15.	VMS client shall have the capability to work with touch-enabled multi-monitor workstations. It shall be capable of displaying videos in up to three (3) monitors simultaneously.	
16.	All streams to state and district CCC locations shall be available in real-time and at full resolution. Resolution and other related parameters shall be configurable by the administrator in order to provide for network constraints	
17.	The VMS shall support the following operations: Adding an IP device Updating an IP device Updating basic device parameters Adding/removing channels Adding/removing output signals Updating an IP channel Removing an IP device Enabling/disabling an IP channel Refreshing an IP device (in case of firmware upgrade) Multicast at multiple aggregation points	
18.	The VMS shall support retrieving data from edge storage. Thus when a lost or broken connection is restored, it shall be possible to retrieve the video from SD card and store it on central storage. System should support to view the recordings available over the cameras local storage devices (such as an SD card), and copy them to the server.	
19.	The VMS shall support bookmarking the videos. Thus, allowing the users to mark incidents on live and/or playback video streams.	

Sr. No.	Minimum Requirement Specification	Compliance (Y/N)
20.	The VMS shall allow the administrator to distribute camera load across multiple recorders and be able shift the cameras from one recorder to another by simple drag and drop facility.	
21.	VMS shall support automatic failover for recording.	
22.	VMS should also support dual recording or mirroring if required.	
23.	VMS shall support manual failover for maintenance purpose.	
24.	VMS shall support access and view of cameras and views on a smartphone or a tablet (a mobile device).	
25.	VMS shall support integration with the Edge-based or Server-based ANPR application.	
26.	VMS shall support integration with other online and offline video analytic applications.	
27.	VMS shall be able to accept alerts from video analytics built into the cameras, other third-party systems, sensors, etc.	
28.	VMS should support audio from edge devices/cameras.	

Video Wall(3 x 2):

No.	Parameter	Minimum Specifications	Compliance (Y/N)
1	Technology	LED / LCD / OLED or better	
2	Screen Size	55''	
3	Basel Size	Less than 0.9mm	
4	Resolution	Full high definition (1080p) 16:9 Widescreen	
5	Contrast ratio	1400:1 or better	
6	Brightness	500 nit or better	
7	Viewing angle	160 degree / 160 degree or better	
8	Response time	12 ms or less	
9	Screen to Screen gap	The inter screen gap should be <1mm	
10	Input	HDMI and other inputs as per Video Wall solution offered	
11	Control	IR/IP remote control	
12	Operations	24x7	
13	Wall Uptime	Min. 60,000 hours of rated life (Expected to be operational 24X7)	