



वानिशा / सहपोआ / आयटीएमएस / पीए / 9924 / 2019
सह पोलीस आयुक्त, वाहतूक
यांचे कार्यालय,
वाहतूक पोलीस मुख्यालय,
८७, सर पोचखानवाला मार्ग,
वरळी, मुंबई ४०० ०३०
दुरध्वनी क्र. ०२२-२४९५४४४३
दिनांक :- ०८/०३/२०१९

प्रति,

सह पोलीस आयुक्त (प्रशासन),
बृहन्मुंबई.

विषय :- Integrated Traffic Management System (ITMS) चे EOI
प्रसिध्द होण्याविषयी.

Integrated Traffic Management System (ITMS) चे EOI सोबत जोडले आहे. कृपया
Maha Tender Portal वर सदर EOI प्रसिध्द होण्यास विनंती आहे.

Amtesh
(अमितेश कुमार)
सह पोलीस आयुक्त, वाहतूक,
मुंबई.

EXPRESSION OF INTEREST (EOI)
For
Selection of Master System Integrator for Implementation
and Maintenance of Intelligent Traffic Management
System in Mumbai for a period of 5 years



Traffic Control Branch, Greater Mumbai Police

EOI REFERENCE NUMBER
TCB/JCP/ITMS/PA/7725/2019

8th March 2019

Disclaimer

The information contained in this Expression of Interest document (the “EOI”) or subsequently provided to Applicant(s), whether verbally or in documentary or any other form, by or on behalf of Traffic Control Branch, Greater Mumbai Police, herein referred to as TCB, or any of its employees or advisors, is provided to Applicant(s) on the terms and conditions set out in this EOI.

This EOI is not an agreement and is neither an offer nor invitation by TCB to the prospective Applicants or any other person. The purpose of this EOI is to provide interested vendors with information that may be useful to them in the formulation of their application.

TCB also accepts no liability of any nature whether resulting from negligence or otherwise howsoever caused arising from reliance of any Applicant upon the statements contained in this EOI.

The issue of this EOI does not imply that TCB is bound to select and shortlist Applicants for next stage or to enter into any technology tie-up agreements with shortlisted Applicants for the Project.

The Prospective Implementation Partner shall bear all costs associated with the preparation, technical discussion/ presentation and submission of EOI, TCB shall in no case be responsible or liable for these costs regardless of the conduct or outcome of the EOI process.



**TRAFFIC CONTROL BRANCH
GREATER MUMBAI POLICE
Worli, Mumbai, India**

**INVITES EXPRESSION OF INTEREST FOR THE SELECTION OF MASTER SYSTEM
INTEGRATOR FOR SUPPLY, INSTALLATION, COMMISSIONING, OPERATIONS AND
MAINTENANCE OF INTELLIGENT TRAFFIC MANAGEMENT SYSTEM (ITMS) FOR
MUMBAI CITY FOR A PERIOD OF 5 YEARS**

Contact Person:

Police Inspector Planning,
Traffic Control Branch, Mumbai Police
87, Sir Pochkanwala Road, Worli
Mumbai – 400030
Email: piplanning.traffic@mahapolice.gov.in
Contact: 022 24954443

Schedule of Events:

| Sr. No. | Particulars | Details |
|---------|-------------------------------|---|
| 1 | Name of the Authority | Traffic Control Branch, Greater Mumbai Police |
| 2 | Name of the Work | Implementation of Intelligent Traffic Management System in Mumbai City |
| 3 | Date of Issuance of EOI | 08 th March 2019 |
| 4 | Issuing Authority | Joint Commissioner of Police, Traffic, Mumbai |
| 5 | Contact Person | Police Inspector, Planning Traffic Police Headquarters, Mumbai 87, Sir Pochkanwala Road, Worli Mumbai – 400030 Email: piplanning.traffic@mahapolice.gov.in Contact: 022 24954443 |
| 6 | Tender Website | https://www.mahatenders.gov.in |
| 7 | Last Date for Pre-Bid Queries | 15 th March 2019, 3:00 pm to be sent to piplanning.traffic@mahapolice.gov.in in editable excel format as well as pdf format |
| 8 | Date , Time Venue for Pre-Bid | 18 th March 2019, 11:00 am Traffic Police Headquarters, Mumbai 87, Sir Pochkanwala Road, Worli Mumbai - 400030 |
| 9 | Last Date for Submission | 30 th March 2019 3:00 pm |
| 10 | Opening Date | 1 st April 2019 11:00 am |
| 11 | Presentation | To be decided later |

Note: Interested Vendors may download Expression of Interest documents from our website "<https://mapo.maharashtra.etenders.in>" **on or before last date of submission: 30th March 2019 3:00 pm**

**EXPRESSION OF INTEREST FOR THE SELECTION OF MASTER SYSTEM INTEGRATOR
FOR SUPPLY, INSTALLATION, COMMISSIONING, OPERATIONS AND
MAINTENANCE OF INTELLIGENT TRAFFIC MANAGEMENT SYSTEM (ITMS) FOR
MUMBAI CITY FOR A PERIOD OF 5 YEARS**

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Section – A: Expression of Interest

A. Background

Mumbai is a city of approximately 13 million people living in 438 sq. kms area. It is a Mega City with High Levels of accumulation and concentration of economic activities, and has complex spatial structures that are supported by Transport Systems. The current status of Mumbai's Traffic and Transport cannot satisfy the numerous requirements of urban mobility and greatly impacts urban productivity to move people between multiple origins and destinations. Extreme growth in population and vehicles, lack of proper signage and markings, on-going construction works, parking related issues, need for policy level changes coupled with infrastructure issues and operational difficulties have impacted traffic congestion directly and indirectly.

Mumbai, a city which is continuously growing, has witnessed enormous growth in traffic volumes which have, resulted in several traffic problems in and around the city, such as traffic jams, increase in number of road accidents etc. A need was felt to develop an Intelligent Traffic Management System (ITMS), which would aim at improving the efficiency and effectiveness of the traffic on Mumbai roads. Implementation of ITMS is an initiative taken by Mumbai Traffic Control Branch to provide a secure and pleasant road experience to citizens of Mumbai.

To realize the benefits of ITMS, it is pertinent to adopt an approach that includes technology based regulation, intervention, information and enforcement system to improve the mobility, discipline and safety on Mumbai roads. Therefore, ITMS is envisaged with multiple applications, including Adaptive Traffic Signaling, Red Light Violation Detection (RLVD) systems, Variable message sign boards, Traffic Surveillance Cameras amongst others which will ensure that the intended outcomes have been accomplished.

B. Purpose of this EOI

The purpose of this tender is for the Mumbai Traffic Control Branch to understand views of qualified firm for the Supply, Installation, configuration, Integration, Commissioning, Operations and Maintenance of Adaptive Traffic Management System solutions. Mumbai Traffic Control Branch is looking to engage a Master Service Integrator -

- Who brings strong technology experience in smart city implementation, integration and operations through integrated and multi-agency coordination platform
- Who understands traffic engineering and signal timing optimization for smoother flow of traffic
- Who can develop Standard Operating Procedures for the various components of the project and link with uses cases prepared by them
- Who is capable of providing high quality installations of the project equipment
- Who is capable of maintaining and operating the complex smart city systems to provide maximum decision making support and performance of the systems
- Who has experience implementing city-wide ICT and surveillance system coupled with using the said systems efficiently through data analytics

- Who will strongly build capacity of various stakeholders for efficient operations and management of the proposed solutions

This document is designed to provide interested firms with sufficient basic information to submit proposals suggesting their capability, experience, approach and equipment information, but is not intended to limit a proposal's content or exclude any relevant or essential data apart from what is mentioned in the document. Bidders are at liberty and are encouraged to expand upon the specifications to evidence superior understanding and service capability.

C. About ITMS

One of the primary objectives is to enhance the safety and security, improve efficiency of city administration and promote a better quality of life for residents. In order to achieve these objectives, TCB desires to foster the development of a robust ICT infrastructure that supports digital applications and ensure seamless steady state operations, traffic management, emergency response mechanisms and real time tracking of services and vital city metrics throughout the city. TCB is considering the appointment of a MSI to set up Integrated Traffic Management System for Mumbai.

The key objectives and outcomes expected to be achieved by the proposed interventions are:

- Reduce traffic congestion and provide safe and smooth travel experience to commuters
- Enhance Situational Awareness of existing traffic conditions on real time basis
- Enhance traffic discipline through effective enforcements
- Increase road safety by preventing accidents and allow citizens to make informed travel choices
- Create linkages to support Information Sharing through traffic controllers, Information Portal, Variable Message Signs, Web Services, IOTs and APIs
- Develop ability to assimilate and Analyze Real Time Traffic Information and historic trends to enable automated adaptive traffic control and improved visualization of ambient situation in the city and facilitate data driven decision making for better management of utilities and quantification of services
- Ensure long term Capacity Building through training and support for city administrative staff

D. Scope of Work

Key foundation components for Intelligent Traffic Management System considered for this project are:

- a) Intelligent Traffic Signal Controllers
- b) Adaptive Traffic Control System (ATCS)
- c) Vehicle Detectors
- d) Vehicle Counting and Classifiers
- e) Automatic Number Plate Recognition (ANPR) System
- f) Red Light Violation Detection (RLVD) System
- g) Speed Violation Detection (SVD) System
- h) Enforcement System (Stop Line, No Parking Zone and Wrong Direction)
- i) Traffic Monitoring Cameras

- j) Video Management system
- k) Public Address System
- l) Dynamic Messaging Signs
- m) Operation and Maintenance Phase

The selected MSI shall ensure the successful implementation of the proposed solutions as well as provide capacity building support to city authorities as per the scope of services described below. Any functionality not expressly stated in this document but required to meet the needs of the Mumbai Traffic Control Branch to ensure successful operations of the system shall essentially be under the scope of MSI and for that no extra charges shall be admissible. MSI shall implement and deliver the systems and components which are described in this document.

MSI's scope of work shall include but will not be limited to the following broad areas. Details of each of these broad areas have also been outlined in Annexures:

- a) Assessment, Scoping and Survey Study:** Conduct a detailed assessment, survey, gap analysis, and scoping study to develop a comprehensive project plan, including:
 - Assess existing systems and infrastructure.
 - Conduct site survey for finalization of detailed technical architecture, gap analysis, final Bill of Quantities and project implementation plan
 - Conduct site surveys to identify the need for site preparation activities
 - Obtain site clearance obligations & other relevant permissions with the support of Mumbai Traffic Control Branch

- b) Design, Supply, Installation, Testing and Commissioning of the following primary components for Intelligent Traffic Management System**
 - Adaptive Traffic Control System (ATCS)
 - Smart Traffic Sensors for Traffic management and Analysis
 - Automatic Number Plate Recognition (ANPR) System
 - Red Light Violation Detection (RLVD) System
 - Speed Violation Detection (SVD) System
 - Traffic Violation Cameras
 - Public Address System
 - Video Management system
 - Command Control Center

To better understand the capabilities of your firm you are expected the following questions in detail. Please refer to Section F for Questions that need to be answered clearly as part of the proposal. Any omission of question shall be considered for disqualification.

E. Notice Inviting Expression of Interest

Sub: EXPRESSION OF INTEREST FOR THE SELECTION OF MASTER SYSTEM INTEGRATOR FOR SUPPLY, INSTALLATION, COMMISSIONING, OPERATIONS AND MAINTENANCE OF INTELLIGENT TRAFFIC MANAGEMENT SYSTEM (ITMS) FOR MUMBAI CITY FOR A PERIOD OF 5 YEARS

TCB invites Expression of Interest only for the aforesaid Scope of Work. The responses from applying vendors must be submitted online on or before last date & time of submission as specified in 'Schedule of Events' on Page No. 4 of this EOI document.

The Traffic Control Board, Greater Mumbai Police, invites the EOI from the vendors Master System Integrators for ITMS.

1. TCB intends to enter into a contract with a qualified firm for the Supply, Installation, Integration, Commissioning, Operations and Maintenance of ITMS for Mumbai city.
2. One hard copy of the EOI response document duly completed in all respects shall be submitted separately as "**Original Copy**" as described further other than the mandatory Online submission, and the same should reach TCB on or before 30th March 2019 before 03:00 pm, at the following address:

**Police Inspector, Planning,
Traffic Control Branch, Mumbai Police
87, Sir Pochkanwala Road, Worli
Mumbai - 400030**

3. The Vendor shall clearly state in the forwarding letter to be enclosed with the EOI documents, the deviations from General Terms and Conditions, if any with cross references. If no such letter is received, it shall be presumed that the firm submitting EOI agrees entirely with the General Terms and Conditions.
6. Any conditional EOI response shall not be accepted and shall be rejected outright, unless, the nature of condition(s) put forth by the Vendor is acceptable to TCB.
7. The Vendors shall have to attach the documents in duplicate with the EOI as mentioned in the checklist of the documents to be submitted with the EOI.
8. The prospective vendor shall not be under legal action for any corrupt or fraudulent practices (blacklisted) by any Ministry/ Department of GoI/ State/ UT Government/ Government Organizations / Corporations / Undertakings etc.
9. Incomplete EOI shall be liable for rejection.
10. Acceptance of the EOI shall rest with the competent authority who reserves the right to reject any or all EOIs without assigning any reason thereof.
11. Any modifications or additions in terms and conditions of this EOI is not acceptable.

12. TCB reserves the right to reject all or any of the EOIs who in the judgment of the TCB does not appear to be in its best interest and the Vendors shall have no cause of action or claim against the TCB or its officers, employees, successors for assignees for rejection of its EOI. The Joint Commission of Police, Traffic Control Branch – Greater Mumbai City, does not bind himself to accept any EOI.
13. EOI documents are not transferable.
14. The Vendors shall carefully read the eligibility criteria, furnish the details and satisfy the same; otherwise the EOI shall be rejected without assigning any reason thereof.
15. The prospective Vendors are required to check the TCB website for Addendum, if any, before the due date of submission of the EOI response. Any Vendor submitting the EOI without attaching the addendum if any, will be disqualified.
16. EOI should be bound properly & with page no. & references on the front index for evaluation purpose and this index page shall be duly signed by Vendor. Unbound Loose pages / documents in EOI response shall not be entertained or evaluated. If the response to this EOI Document is submitted without proper binding, TCB may outright reject the response at the time of opening.
17. Interested eligible Vendor may obtain further information and clarification on any matter relating to the EOI documents by reaching out to the below authorized official from at the office of the TCB, Greater Mumbai:

Police Inspector Planning, Traffic Control Branch, Mumbai Police
18. Notice published in newspaper/ TCB website shall form part of the Empanelment Agreement.

F. Response to the Expression of Interest

TCB will analyze the responses received towards this EOI to shortlist prospective Implementation partners. During this period of shortlisting, detailed discussions will be held with prospective vendors, to bring more clarity.

G. Pre-Qualification Criteria

Only Vendors meeting the Pre-Qualification Criteria (PQ) as described in [Section - C](#) may respond to this Expression of Interest and will be considered for further evaluation.

H. Checklist of Documents

The information required to be submitted along with this EOI by the interested Implementation Partners are given in [Section - D](#).

Section – B: Vendor Information

| Sr. No | General Requirement | Details Required |
|--------|--|--|
| 1 | Name of Company/ Vendor | |
| 2 | Nationality of Company | |
| 3 | Contact Details | |
| | Office Address | |
| | Telephone No. | |
| | (O) | |
| | (M) | |
| | Telex No. | |
| | Fax No. | |
| | Email address | |
| 4 | Company Registration Number and Year of Registration | |
| 5 | Website URL | |
| 6 | Status of Company (Public Ltd., Pvt. Ltd., Partnership etc.) | |
| 7 | Company's GST Registration No. | |
| 8 | Company's Permanent Account Number (PAN) | |
| 9 | Name, Designation and Address of the Contact Person to whom all references shall be made regarding this EOI: | |
| 10 | Telephone Number of the Contact Person: | |
| 11 | Mobile Number of the Contact Person: | |
| 12 | Fax Number of the Contact Person: | |
| 13 | E-mail address of the Contact Person: | |
| 14 | The Applicant is - | |
| | a. An Individual | |
| | b. A Proprietary Firm | |
| | c. A Partnership Firm | |
| | d. A Limited Company or Corporation | |
| | e. A Private Limited Company | |
| 15 | Company Profile | Attach Company Profile with necessary supporting documents |

Authorized Signatory

Name :

Company's seal :

Date :

Section – C: Pre-Qualification Criteria

| | Criteria | Supporting Document Requirement |
|------|---|---|
| PQ 1 | The Bidder (all the members of consortium in case of consortium bid) must be registered companies and should be operational at least for last 5 years as on publication of bid Note: Global firms, not registered in India, would be required to register and open their office in India within 90 days of the issue of the Letter of Intent. | a) For companies with Indian origin - -Certificate of Incorporation / Registration under companies Act, 1956 -PAN card -VAT registration b) For global players, equivalent certificate in the country of incorporation. |
| PQ 2 | The Bidder (Prime Bidder in case of consortium) should have average annual turnover of minimum Rs. 400 crores in last three financial years (ending 31 March 2018) | Copy of audited financial statements |
| PQ 3 | The Bidder (Prime Bidder in case of consortium) should have Positive net worth of at least 75 crores in the last financial year (ending 31 March 2018) | Statutory Auditor certificate with clearly stated positive net worth |
| PQ 4 | The Lead bidder or any consortium member should have executed at least 1 Traffic Management System at 50 Junction the following - 1. Traffic Management System 2. At least 1 Traffic Law enforcement including speed or Red light violation Detection, CCTV surveillance system, Incident detection system and ANPR systems, etc 3. Traffic information dissemination including variable message signs etc, 4. Setting up of traffic command control centers in India or abroad | Copies of work order or Experience letter stating the quantity of intersection with contact details (Name, Email & Phone) of the customer. |
| PQ 5 | The Bidder (all the firms in case of consortium) should not have been blacklisted by Central Government (in India / Globally) / Any State Government in India as on the date of bid submission. | Self-declaration by the Bidder (all the members of the Consortium individually, in case the Bidder is a consortium) duly signed by the authorized signatory. |
| PQ 6 | The Bidder (Lead Bidder in case of consortium) or any one of the consortium members should have traffic engineering experience of at least 5 projects in India or Abroad | Copies of work order or Experience letter stating the quantity with contact details (Name, Email & Phone) of the customer. |

| | | |
|-------|---|---|
| PQ 7 | The Sole Bidder or the Lead bidder (in case of a Consortium) should possess any one of the below Certifications valid on the bid submission date: · ISO 9001 · ISO 20000:2011 · ISO 27001:2013 · SEI CMM level 3 or above | Copies of the valid certificates from authorized agencies |
| PQ 8 | Bidder (any of the consortium members) should have a local office in Mumbai. If bidder doesn't have local office in Mumbai, it should open a local office within 30 days from issuance of Lol or signing of the contract. | Proof of the Local Office in Mumbai or Undertaking from authorized signatory to open the local office within 30 days from issuance of Lol or signing of contract. |
| PQ 9 | Traffic Signal Controller OEM should have supplied its intelligent/adaptive controllers at least 10000 intersections across the globe in last 5 years. | Copies of work order or Experience letter stating the quantity with contact details (Name, Email & Phone) of the customer. |
| PQ 10 | Lead Bidder or Consortium Member should have done at least 1 project with 250+ signals that are semi or fully actuated with centralized system in India or abroad | Copies of work order or Experience letter stating the quantity with contact details (Name, Email & Phone) of the customer. |
| PQ 11 | The vehicle detector OEM should have at least supplied more than 10000 vehicle detectors in traffic applications in India or abroad | Copies of work order or Experience letter stating the quantity with contact details (Name, Email & Phone) of the customer. |
| PQ 12 | Enforcement System- OEM should have supplied at least 100 systems with RLVD/INSTANT SPEED/AVERAGE SPEED/Traffic Limited Zones in multiple projects for each enforcement listed below in India or abroad RLVD/SPEED/AVERAGE SPEED/TLZ | Copies of work order or Experience letter stating the quantity with contact details (Name, Email & Phone) of the customer. |
| PQ 13 | ANPR System OEM should have at least supplied ANPR solutions for more than 1000 lanes in India or abroad | Copies of work order or Experience letter stating the quantity with contact details (Name, Email & Phone) of the customer. |
| PQ 14 | ANPR System OEM should have at least supplied ANPR solutions for 2 projects of 100 cameras each in India or abroad | Copies of work order or Experience letter stating the quantity with contact details (Name, Email & Phone) of the customer. |

- The number of consortium members shall not exceed three (3), including the Prime Bidder.
- Any organization debarred / black-listed by Central Government / Government of Maharashtra, at the time of submission of the RFP, shall not be allowed to participate in this EOI. Bidder (all members in case of consortium) needs to submit a self-certification in this regard.

-
- Experience of the parent firm (in case bidder firm is a 100% subsidiary of the parent firm) or experience of the 100% subsidiary firm (if parent firm is applying for the bid) shall be considered.
 - An OEM / Product Company can be part of multiple consortiums, if bidding only as the Solution provider for the respective Product / Solution. A Prime Bidder in one bid can't be part of any other consortium. Any OEM can be part of multiple bids as OEM / sub-contractors.
 - Sub-contracting / out sourcing would be allowed only for work like -
 - Passive Networking & Civil Work during implementation,
 - Viewing Manpower at Command / Viewing Centers & Mobile Vans during post implementation
 - FMS staff for non-IT support during post-implementation
 - Services of a professional architect for design of Command/viewing centers
 - The bidder is expected to provide details of the sub-contractors for the work which is allowed as mentioned in the clause. An approval from GoM would be needed for subcontracting of the allowed work to any sub-contractor.
 - In case of consortium, all the members of consortium shall be jointly and severally liable and responsible
 - Only the bidders who choose to participate in this EOI process shall be allowed to submit their proposal at the time of RFP in the next stage.

Section – D: Checklist for Documents to be submitted

| | Criteria | Supporting Document Requirement |
|------|---|--|
| PQ 1 | <p>The Bidder (all the members of consortium in case of consortium bid) must be registered companies and should be operational at least for last 5 years as on publication of bid</p> <p>Note: Global firms, not registered in India, would be required to register and open their office in India within 90 days of the issue of the Letter of Intent.</p> | <p>a) For companies with Indian origin - -Certificate of Incorporation / Registration under companies Act, 1956 -PAN card -VAT registration b) For global players, equivalent certificate in the country of incorporation.</p> |
| PQ 2 | The Bidder (Prime Bidder in case of consortium) should have average annual turnover of minimum Rs. 400 crores in last three financial years (ending 31 March 2018) | Copy of audited financial statements |
| PQ 3 | The Bidder (Prime Bidder in case of consortium) should have Positive net worth of at least 75 crores in the last financial year (ending 31 March 2018) | Statutory Auditor certificate with clearly stated positive net worth |
| PQ 4 | <p>The Lead bidder or any consortium member should have executed at least 1 Traffic Management System at 50 Junction the following -</p> <ol style="list-style-type: none"> 1. Traffic Management System 2. At least 1 Traffic Law enforcement including speed or Red light violation Detection, CCTV surveillance system, Incident detection system and ANPR systems, etc 3. Traffic information dissemination including variable message signs etc, 4. Setting up of traffic command control centers in India or abroad | Copies of work order or Experience letter stating the quantity of intersection with contact details (Name, Email & Phone) of the customer. |
| PQ 5 | The Bidder (all the firms in case of consortium) should not have been blacklisted by Central Government (in India / Globally) / Any State Government in India as on the date of bid submission. | Self-declaration by the Bidder (all the members of the Consortium individually, in case the Bidder is a consortium) duly signed by the authorized signatory. |
| PQ 6 | The Bidder (Lead Bidder in case of consortium) or any one of the consortium members should have traffic engineering experience of at least 5 projects in India or Abroad | Copies of work order or Experience letter stating the quantity with contact details (Name, Email & Phone) of the customer. |

| | | |
|-------|---|---|
| PQ 7 | The Sole Bidder or the Lead bidder (in case of a Consortium) should possess any one of the below Certifications valid on the bid submission date: · ISO 9001 · ISO 20000:2011 · ISO 27001:2013 · SEI CMM level 3 or above | Copies of the valid certificates from authorized agencies |
| PQ 8 | Bidder (any of the consortium members) should have a local office in Mumbai. If bidder doesn't have local office in Mumbai, it should open a local office within 30 days from issuance of Lol or signing of the contract. | Proof of the Local Office in Mumbai or Undertaking from authorized signatory to open the local office within 30 days from issuance of Lol or signing of contract. |
| PQ 9 | Traffic Signal Controller OEM should have supplied its intelligent/adaptive controllers at least 10000 intersections across the globe in last 5 years. | Copies of work order or Experience letter stating the quantity with contact details (Name, Email & Phone) of the customer. |
| PQ 10 | Lead Bidder or Consortium Member should have done at least 1 project with 250+ signals that are semi or fully actuated with centralized system in India or aboard | Copies of work order or Experience letter stating the quantity with contact details (Name, Email & Phone) of the customer. |
| PQ 11 | The vehicle detector OEM should have at least supplied more than 10000 vehicle detectors in traffic applications in India or aboard | Copies of work order or Experience letter stating the quantity with contact details (Name, Email & Phone) of the customer. |
| PQ 12 | Enforcement System- OEM should have supplied at least 100 systems with RLVD/INSTANT SPEED/AVERAGE SPEED/Traffic Limited Zones in multiple projects for each enforcement listed below in India or aboard RLVD/SPEED/AVERAGE SPEED/TLZ | Copies of work order or Experience letter stating the quantity with contact details (Name, Email & Phone) of the customer. |
| PQ 13 | ANPR System OEM should have at least supplied ANPR solutions for more than 1000 lanes in India or aboard | Copies of work order or Experience letter stating the quantity with contact details (Name, Email & Phone) of the customer. |
| PQ 14 | ANPR System OEM should have at least supplied ANPR solutions for 2 projects of 100 cameras each in India or aboard | Copies of work order or Experience letter stating the quantity with contact details (Name, Email & Phone) of the customer. |

Section – E: Annexures Format

List of all Major Customers with Value of Installations done -

| Sr. No. | Name & Full Address of Customer | Equipment & Implementation | 2015-16 Rs. In lakhs | 2016-17 Rs. In lakhs | 2017 - 2018 Rs. In lakhs |
|---------|---------------------------------|----------------------------|-------------------------|-------------------------|-----------------------------|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Note:

1. Copies of POs / Customer Certificates to be submitted for each of the above credentials
2. Additional Sheets can be enclosed as per requirement

Format for Non-Blacklisting declaration

<<On Company Letter Head>>

UNDERTAKING

It is certified that **XX** has never been blacklisted by any Ministry / Department of GoI / State / UT Government / Government Organizations or Public Sector Banks or Local Bodies / Municipalities / Corporations / Govt. Undertaking and no criminal case is pending against the said firm/agency as on <<**submission date**>>

Place:

Date:

Signature of the Tenderer _____

Name of the Signatory _____

Name of the Firm/agency _____

Seal of the Firm/Agency _____

Section – F: Questions to be answered

| | |
|-----------|---|
| 1 | Please provide the minimum specifications for the below listed equipment's with reasons for each parameter suggested Traffic Controllers Signal LED Lights Vehicle Detectors Video Camera Enforcement Systems Signal Poles and Cantilevers |
| 2 | What is your view on storing complete video of all intersection for at least 7 days? The intention is to capture the video and store some of the video to watch at later date for study and improvement of junction. |
| 3 | What are the key standards for traffic signal modernization that should be followed |
| 4 | Where have you implemented adaptive signaling and what is the improvement achieved? Please provide with complete details of number of junctions/intersections, infrastructure deployed in the project by self or integration done with other service providers. Please provide details of best practices followed, learnings etc. |
| 5 | Where have you implemented enforcement system like RLVD, Wrong Direction, Stop Line, No-Parking Violation, Free Left Turn Violation, Speed enforcement? Please provide details with number of junctions/intersections/location for each and its outcome |
| 6 | Where have you implemented automatic vehicle classification and counting; Please provide the implementation details, purpose and accuracy achieved |
| 7 | How do you propose to optimize the signal timing and improve the traffic situation in Mumbai? Please provide an indicative % time improvement for travel time. Please provide details about the technology/solution that you propose for Mumbai and why? |
| 8 | How do you propose to cover 617 intersections? Please provide detailed plan and procedure for the same |
| 9 | What do you propose for the DC and DR setup, should it be In-House, Co-Located or on Cloud? Please provide justifications for the same. |
| 10 | How do you plan to continuously improve on the signal timing over a period of 5 years |
| 11 | Please tell us about your firms experience in traffic signal management, traffic experts in your firm who will be part of the project implementation if selected. |
| 12 | Please provide you estimate of bandwidth that would be required as per the BOW mentioned in Section G |
| 13 | Based on the indicative timelines provided please provide that payment terms that you would like to propose for the RFP. |

Section – G: Indicative Bill of Material

| Item Description | Approx. Units |
|---|---------------|
| ITMS System for Straight Road i.e. Pedestrian Phase (Hardware + Accessories like cable clamps, connectors etc.) | 56 |
| ITMS System for Straight Road (Hardware + Accessories like cable clamps, connectors etc.) (3 Arm) | 252 |
| ITMS System for Straight Road (Hardware + Accessories like cable clamps, connectors etc.) (4 Arm) | 266 |
| ITMS System for Straight Road (Hardware + Accessories like cable clamps, connectors etc.) (5 Arm) | 29 |
| ITMS System for Straight Road (Hardware + Accessories like cable clamps, connectors etc.) (6 Arm) | 9 |
| ITMS System for Straight Road (Hardware + Accessories like cable clamps, connectors etc.) (7 Arm) | 5 |
| Vehicle Detector for each arm | 2166 |
| Smart Traffic Sensors for Entry/Exit and important corridor | 25 |
| Poles (Straight Type) | 3866 |
| Poles (Cantilever Type) | 839 |
| Green Arrow LED | 7210 |
| Green Arrow LED (U-Turn) | 100 |
| Red Blow LED | 5285 |
| Amber Blow LED | 5305 |
| Amber Arrow LED | 600 |
| Pedestrian RED | 1965 |
| Pedestrian Green | 1965 |
| Timers | 2166 |
| PA system including hardware, software mounting infrastructure, accessories etc. at mid block | 1000 |
| RLVD | 300 |
| ANPR | 925 |
| Wrong Way | 300 |
| Spot Speed | 300 |
| Average Speed | 300 |
| Corner Parking | 300 |
| Mid Block Traffic Monitoring Camera | 1000 |
| Traffic Information DMS (3x2 mtrs) | 50 |
| Central Signal Management Software | 1 |
| Signal Controller License | 617 |
| Central PA system Software | 1 |
| Central RLVD Software System | 1 |

| | |
|---|-------------|
| Central Speed Violation Detection Software System | 1 |
| Central Video Management System | 2000 |
| Central Ticketing System | 1 |
| Central Enterprise Monitoring System | 1 |
| Web Portal | 1 |
| Mobile Application | 1 |
| 4x4 Video Wall with 55" LED Screens | 16 |
| Network Color Laser Printer with related supplies for 5 years | 2 |
| Video Wall Switcher with Required connectors and other accessories for Video Wall | 1 |
| Work Station for Operators (10) | 10 |
| Civil Work for Command Center (Including Stage, Table, Chair, AC, Power Backup etc. only electricity line and phone line will be provided by department) | 1 |
| Civil Work for Installation of Poles with Precast and required material | 3866 |
| Civil Work for Installation of Cantilever with Precast and required material | 839 |
| Civil Work for Installation of Junction/Controller Box with required Material | 617 |
| Excavation | 1 |
| HDP | 1 |
| Chamber | 1234 |
| Implementation Manpower (18 months) | 18 |
| Operations Manpower (60 months) | 60 |
| Bandwidth Cost (5 Years) | 5 |
| Hosting Charges (60 months) | 60 |
| RI Charges | 1 |

Section – H: Indicative Project Timelines

| Activity | Timeline |
|--|----------------|
| Vendor Onboarding | T1 |
| Finalization of BOQ | T1 + 2 Weeks |
| Phase 1 Implementation for 2 corridors | T1 + 4 months |
| Phase 2 Implementation (Cover all ATC Signals) | T1 + 10 months |
| Phase 3 Implementation (Cover all Non-ATC Signals) | T1 + 18 months |
| Go live (with all components) | T1 + 20 months |
| Operations and Maintenance | 5 Years |