Request for Proposal

for

"Selection of Implementation Agency for SITC, Operation, and Maintenance of Surveillance System and e-Challan system with advanced analytics in Ahmedabad City"
(SASA Phase – II)

RFP Notification No: SCADL_RFP_25-26_04

Issued By:
Smart City Ahmedabad Development Limited (SCADL)

November 2025

Table of Contents

Table of Contents 2
1. Disclaimer 7
2. Notice Inviting Proposal and Necessary Instruction 8
3. Abbreviations 11
4. Definitions 13
5. Introduction and background 15
5.1 About existing SASA-ICCC project 15
5.2 Objective of RFP 15
6. Eligibility criteria 17
6.1 Eligibility Pre-Qualification Criteria 18
6.2 Technical Evaluation Criteria 26
6.3 OEM Selection criteria 36
6.4 Preference to Class – I local supplier 42
7. Scope of work 44
7.1 Current Scenario 44
7.2 Surveillance System (RLVD/ANPR/Fixed/PTZ cameras) 45
7.3 Video Analytics Solution and E- Challan Application 49
7.3.1 Use Cases 50
7.3.2 Features / Functionalities 65
7.3.3 E-Challan System and Dashboard 65
7.3.4 Automatic Number Plate Recognition (ANPR) System 69
7.3.5 Other important details 70
7.4 Server, storage & Core network elements 71
7.5 Storage/Recording Requirement: 72
7.6 Network/Backbone Connectivity 73
7.6.1 Network Access: 76
7.7 Mounting structure 76
7.8 Earthing System 77
7.9 Provisioning of Electricity connection 77
7.10 Data Centre requirement 79
7.11 Insurance 80
7.12 General instructions/Key Consideration 81
8. Testing and Acceptance Criteria 84

8.1 Inspection 84
8.2 Final Acceptance Testing 84
9. Operations and Maintenance for the entire contract duration 86
9.1 Network Monitoring Services 88
9.2 Vendor Management Services 89
9.3 Network Management 89
9.4 Provision of Maintenance Vehicle 89
9.5 License Management 90
9.6 Hand-over of the system at the end of contractual period along with all documentation required to operate and maintain the system 90
9.7 System Documents, User Manuals and Training 90
10. Manpower Requirement 92
11. Project Timelines and Payment Terms 97
11.1 Implementation timeline for Central Hardware Infrastructure (Data Center) 97
11.2 Implementation timeline for NMS, VMS and Edge Location Infrastructure: 99
11.3 Implementation timeline for Video Analytics Use cases 108
11.4 Timelines & Payment Terms for Operation and Maintenance (O&M) phase 109
11.5 Miscellaneous 111
11.6 Commercial Bid Format 111
12. Service Level Agreement & Penalties 127
12.1 SLA for Manpower During the Joining Period, Implementation, and O&M Phase 127
12.2 Service Level Agreement for Operation & Maintenance Phase 128
12.3 .Software support – for which SI is responsible 133
13. Instructions to the Bidders 135
13.1 Availing RFP Documents 135
13.2 Completeness of the RFP Response 135
13.3 Tender Fee and Earnest Money Deposit (EMD) 135
13.4 Performance Bank Guarantee 136
13.5 Bid Validity Period 137
13.6 Proposal Preparation Cost 137
13.7 Submission of RFP Queries 137
13.8 Amendment of RFP Document 138
13.9 AMC/SCADL's rights to terminate the selection process 138
13.10 AMC/SCADL Right to Accept or Reject Any Bid or All Bids 138
13.11 Sealing, Marking and Submission of Bids 138

13.12 Late Bids....139
13.13 Language of Bids....140
13.14 Proposal Submission Format....140
13.15 Acceptance of Terms & Conditions....140
13.16 Documents to be submitted....140
13.17 Bid Evaluation Process....140
13.18 Selection Process for Bidders....141
13.19 Evaluation of Bids....141
13.20 Notifications of Award and Signing of Contract....145
13.21 Failure to agree with the Terms & Conditions of the RFP....145
13.22 Naming Convention for files....145
13.23 Right to vary the scope of the work at the time of award....146
13.24 Modification or Withdrawal of Bids....146
13.25 Quantity variation....146
13.26 Price Variation....147
13.27 Governing Law....147
13.28 Restriction on Transfer of Agreement....147
13.29 Limitation of liability....147
13.30 Sub contracting....147
13.31 Force Majeure....147
13.32 Resolution of Dispute....148
13.33 Discount....148
13.34 Site visit and verification of information....148
13.35 Ownership and Licenses....149
13.36 General Clause related to Any SIs/Sub-Selected vendor from a Country which shares a Land Border with India....149
13.37 Risk purchase clause....150
13.38 Termination....151
13.39 Consequences of termination....152
13.40 Exit Management....153
13.41 Indemnity....154
13.41 Severance....155
13.42 Confidentiality....155
14. Format for Pre-Qualification / Bidder's eligibility criteria....157
14.1 Checklist for Pre-Qualification documents....157

14.2 RFP Cover Letter 159
14.3 PQ 1: Bidder Information Format 161
14.4 PQ 2: Bidder's Annual turnover over last three financial years 163
14.5 PQ 3, TQ 1: Auditor's/CA Certificate for net worth for Bidder 165
14.6 PQ_4,5,6,7 and TQ_2,3,4,5 Details of similar work undertaken 166
14.7 PQ_8: Declaration by the bidder for not being Blacklisted / Debarred 169
14.8 PQ_8: Affidavit 171
14.9 PQ – 8 : Self-Declaration – Not insolvent 172
14.10 PQ – 8 : Self-Declaration – Not convicted in any criminal offense 173
14.11 Bank Guarantee format for EMD 174
14.12 Format for Performance Bank Guarantee 177
14.13 Commercial Bid Cover Letter 180
14.14 General Instructions on Preparation of the Technical Proposal 182
14.15 Checklist for Technical-Qualification Document 183
14.16 PQ – 10 : MAF 184
14.17 PQ 11: Land border sharing declaration 186
14.18 TQ 6: CVs of the Key Manpower proposed 189
14.19 Bidder's Total Responsibility Certificate 191
14.20 No Deviation Certificate 192
14.21 : Self Declaration by Bidder on Data Centre Equipment 194
14.22 Unpriced Bill of Material 195
14.23 Self Certification on PMA 196
15. Annexures 199
15.1 Annexure I – Technical Specifications 199
1. Galvanized cantilever pole 199
2. Gantry including mounting/installation 201
3. Pole for surveillance cameras 202
4. Armored Power Cable 203
5. Junction Box, with adjustable mounting frames 204
6. Surge Protection Power Strips 205
7. Voltage Stabilizers at Junctions 205
8. Camera Type : (Box Cameras for ANPR, RLVD - Minimum 3 video streams shall be available for all the cameras) 206
9. Camera Type: Fix Box Camera for Bridge Surveillance -- Minimum 3 video streams shall be available for all the cameras 209

10. Camera Type: Front Facing Camera for Video Analytics – Minimum 3 video streams shall be available for all the cameras. 210
11. Camera Type : PTZ 212
12. External IR Illuminator 214
13. Outdoor 8 Port Managed L2 Switch with Fiber Port 215
14. 42U Server Rack for DC 216
15. 42U Network Racks for DC 218
16. Storage (For Applications) 220
17. Storage (for Video's) 222
18. Blade Chassis and Server 225
19. DC Core Router 227
20. DC Core L3 switch at ICCC 228
21. 48 port Layer 2 Switch (Access/Aggregation/TOR/Server Farm Switch) 229
22. 48 Port Managed L2 switch for OOB connectivity 231
23. Unified Threat Management (UTM) 231
24. CAT 6 cable 233
25. PVC conduit 233
26. Armoured 6 core optical fiber cable 233
27. Online UPS for ICCC 234
28. Precision Air-Condition(PAC) for ICCC (Data Centre Server farm area) 235
29. Network Management System (NMS) 235
30. Video Management Software (VMS) 240

15.2 Annexure II -List of Locations 246

1. Disclaimer

The information contained in this Request For Proposal ("RFP") whether subsequently provided to the service providers, ("service provider/System Integrators") verbally or in documentary form by Smart City Ahmedabad Development Limited (henceforth referred to as "SCADL" in this document) or any of its employees or advisors, is provided to service provider on the terms and conditions set out in this RFP document and any other terms and conditions subject to which such information is provided. This RFP document is not an agreement and is not an offer or invitation to any party. The purpose of this RFP is to provide the service providers or any other person with information to assist the formulation of their operational plan. This RFP includes statements, which reflect various assumptions and assessments arrived at by SCADL in relation to this scope. This RFP document does not purport to contain all the information each service provider may require. This RFP document may not be appropriate for all persons, and it is not possible for the Chief Executive Officer, SCADL and their employees or advisors to consider the objectives, technical expertise and particular needs of each service provider. The assumptions, assessments, statements and information contained in the RFP documents, may not be complete, accurate, adequate or correct. Each service provider must therefore conduct its own analysis of the information contained in this RFP and to seek its own professional advice from appropriate sources. Information provided in this RFP document to the service provider is on a wide range of matters, some of which may depend upon interpretation of law. The information given is not intended to be an exhaustive account of statutory requirements and should not be regarded as a complete or authoritative statement of law. SCADL accepts no responsibility for the accuracy or otherwise for any interpretation of opinion on law expressed herein. SCADL and their employees and advisors make no representation or warranty and shall incur no liability to any person, including the service provider under law, statute, rules or regulations or tort, the principles of restitution or unjust enrichment or otherwise for any loss, cost, expense or damage which may arise from or be incurred or suffered on account of anything contained in this RFP or otherwise, including the accuracy, reliability or completeness of the RFP, and any assessment, assumption, statement or information contained therein or deemed to form part of this RFP or arising in any way in this Selection Process. SCADL also accepts no liability of any nature whether resulting from negligence or otherwise howsoever caused arising from reliance of any Bidder upon the statements contained in this RFP. SCADL may in its absolute discretion, but without being under any obligation to do so, can amend or supplement the information in this RFP. The issue of this RFP document does not imply that SCADL is bound to select a service provider or to appoint the Selected operator (as defined hereinafter), for implementation and SCADL reserves the right to reject all or any of the service provider or proposals without assigning any reason whatsoever. The service provider shall bear all its costs associated with or relating to the preparation and submission of its RFP proposal including but not limited to preparation, copying, postage, delivery fees, expenses associated with any demonstrations or presentations which may be required by SCADL or any other costs incurred in connection with or relating to its Bid. All such costs and expenses will remain with the service provider and SCADL shall not be liable in any manner whatsoever for the same or for any other costs or other expenses incurred by a service provider in preparation for submission of the RFP proposal, regardless of the conduct or outcome of the selection process.

2. Notice Inviting Proposal and Necessary Instruction

SMART CITY AHMEDABAD DEVELOPMENT LTD Selection of Implementation Agency for SITC, Operation, and Maintenance of Surveillance System in Ahmedabad City	
Request for Proposal (RFP) For Selection of Implementation Agency for SITC, Operation, and Maintenance of Surveillance System and e-Challan system with advanced analytics in Ahmedabad City	
Pre-Bid Meeting:	04/12/2025 up to 1200 Hrs.
Last Date of Online Bid Submission:	17/12/2025 up to 1600 Hrs
Last Date of Receipt of Physical Bid as mentioned in RFP Clause – 13.11 (only):	17/12/2025 up to 1700 Hrs
Detail & Tender available On	www.tender.nprocure.com, www.ahmedabadcity.gov.in & www.smartcityahmedabad.com
Smart city Ahmedabad Development Ltd. (SCADL) Office Address	Command and Control Centre, Opp. Divan Ballubhai School, Nr. Sanskar Kendra, Paldi, Ahmedabad - 380007
Email	smartcity@ahmedabadcity.gov.in, scadl.amc@gmail.com
For any AMC complain/suggestion call 155303	

Proposals in prescribed proforma are invited by SCADL from eligible parties for this RFP.

1.	Scope of Work	Selection of Implementation Agency for SITC, Operation, and Maintenance of Surveillance System and e-Challan system with advanced analytics in Ahmedabad City
2.	Tender submission Cost	Rs. 18,000 /- (Rs. Eighteen Thousand Only) In the form of Demand Draft / Banker's Cheque in favor of "Smart City Ahmedabad Development Limited" drawn on any scheduled / nationalized bank and payable at Ahmedabad.

3.	EMD (bid Security / Security deposit)	Rs. 4,00,00,000 /- (Rs. Four Crores Only) Demand Draft in favor of "Smart City Ahmedabad Development Limited" drawn on any scheduled bank and payable at Ahmedabad OR EMD in the form of bank guarantee with validity of 180 days from the last date of bid submission in favor of "Smart City Ahmedabad Development Limited" from • All Nationalized banks including the Public sector banks - IDBI Ltd. • Private sector banks - AXIS Bank, ICICI Bank and HDFC Bank
4.	Office issuing RFP	Chief Executive Officer (CEO), Smart City Ahmedabad Development Limited, Command and Control Centre, Opp. Divan Ballubhai School, Nr. Sanskar kendra, Paldi, Ahmedabad-380007
5.	Contract Period	100% Go-live + 5 years of O&M
6.	Bid validity days	180 days from the last date of submission of bids
7.	Issue of Tender	The tender can be downloaded from below websites. https://ahmedabadcity.gov.in https://www.nprocure.com/
8.	Queries by email	Bidders shall have to post queries by email to smartcity@ahmedabadcity.gov.in, scadl.amc@gmail.com on or before 05/12/2025 up to time 03:00 pm
9.	Pre-Bid	Pre-bid will be held on 04/12/2025 at 12:00 pm at Smart City Ahmedabad Development Limited, Command and Control Centre, Opp. Divan Ballubhai School, Nr. Sanskar kendra, Paldi, Ahmedabad-380007
10.	Proposal due date (last date & time of Tender submission)	Tender should be submitted before 17/12/2025 up to 1600 Hrs. Bidder shall upload their bids on https://www.nprocure.com/
11.	Submission (in Hard Copy)	Physical documents in sealed envelope with relevant details as mentioned in Clause – 13.11 (only) may be submitted to reach at following address before 17/12/2025 up to 1700 Hrs. Smart City Ahmedabad Development Limited, Command and Control Centre, Opp. Divan Ballubhai School, Nr. Sanskar kendra, Paldi, Ahmedabad-380007
12.	Date & Time of opening of Tender	Pre-Qualification documents will be opened on 17/12/2025 at 18:00 Hrs in the presence of bidders' representatives. Qualified bidders would be subsequently informed later about the date, time and venue for price bid opening.

13.	Contact persons (For any Clarifications)	Chief Executive Officer (CEO), Smart City Ahmedabad Development Limited, Command and Control Centre, Opp. Divan Ballubhai School, Nr. Sanskar kendra, Paldi, Ahmedabad-380007

3. Abbreviations

Abbreviation	Description
ANPR	Automatic Number Plate Recognition
UAT	User Acceptance Testing
BoQ	Bill of Quantity
CCTV	Closed Circuit TV
ICCC	Integrated Command and Control center
CR	Change Request
EMD	Earnest Money Deposit
FAT	Final Acceptance Testing
FRS	Functional Requirement Specification
GoI	Government of India
GoG	Government of Gujarat
ICT	Information Communication and Technology
IP	Internet Protocol
LoI	Letter of Intent
O&M	Operations and Maintenance
PBG	Performance Bank Guarantee
PoE	Power Over Ethernet
PTZ	Pan, Tilt & Zoom
RLVD	Red Light Violation Detection
RoW	Right of Way
SOP	Standard Operating Procedure
SoW	Scope of Work
SRS	Software Requirement Specification
VMS	Video Management System
NMS	Network Management System
SCADL	Smart City Ahmedabad Development Limited

Abbreviation	**Description**
SITC	Supply, Installation, Testing and Commissioning
TSP	Telecom service provider

4. Definitions

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

i. User Acceptance Test (UAT)" means the User Acceptance Testing of the ordered product and services on completion of installation and commissioning as per the requirement.
ii. Acceptance Test Document" means a document, which defines procedures for testing the installed and commissioned product and services against requirements laid down in the Agreement.
iii. Agreement" means the Service Level Agreement to be signed between the successful bidder and the SCADL including all attachments, appendices, all documents incorporated by reference thereto together with any subsequent modifications /changes /corrigendum's, the RFP, the bid offer, the acceptance and all related correspondences, clarifications, presentations.
iv. Authorized Representative/Agency" shall mean any person/agency authorized by either of the parties.
v. "TENDERER" here shall mean "Smart City Ahmedabad Development Limited".
vi. "Bidder" means any agency who fulfils the requirement laid in the RFP documents and is possess the required expertise and experience as per the RFP document. The word Bidder when used in the pre-award period shall be synonymous with Bidder, and when used after award of the Contract shall mean the successful Bidder with whom TENDERER signs the Service Level Agreement for executing the project.
vii. "Contract" is used synonymously with Agreement.
viii. "Field Acceptance Test (FAT)" means the acceptance testing of the commissioned project components at specified locations / Data Centre.
ix. "Go-Live" for field network means the date on which the FAT of respective milestone / phase as per the Implementation Milestone table has been successfully completed and accepted by the TENDERER. "Go-Live" for data Center means the date on which the FAT of data center equipment as per the Implementation Milestone table has been successfully completed and accepted by the TENDERER.
x. "100% Go Live" means the date on which the FAT of all the project component's including all milestones as per the Work order has been successfully completed and accepted by the TENDERER.
xi. "Implementation Period" shall mean the period from the date of issuance of the Work Order and up to the issuance of Final Go-live Certificate.
xii. "LoI" means Letter of Intent, which constitutes the intention of the TENDERER to place the Work Order with the successful bidder.
xiii. "Work order" shall mean a formal order issued by TENDERER to the successful bidder covering delivery timelines, SLA and other terms and conditions.
xiv. "OEM" Shall stand for Original Equipment manufacturer.
xv. "Period of Agreement" means implementation period and O&M period considered cumulatively with all the required Hardware, software and Technical & Functional specifications as per the Scope of work for the Project.
xvi. "Third Party Agency" means any agency, if/as appointed by TENDERER for monitoring the Project during commissioning and operation
xvii. "Request for Proposal" means the detailed notification seeking a set of solution(s), services(s), materials and/or any combination of them.

xviii. “Latency” refers to the average time required for round-trip packet transfers between Edge surveillance locations to ICCC,Paldi Data center on the Network Backbone of Telecom service provider.

xix. Planned Downtime” means the unavailability of the application services due to maintenance activities such as configuration changes, upgradation or changes to any supporting infrastructure wherein prior intimation (at least two working days in advance) of such planned outage shall be given and approval sought from the Tenderer.

xx. Service Down Time" (SDT) means the time period when specified services/network segments with specified technical and operational requirements as mentioned in this document are not available to TENDERER. The services shall be operational on all days of a year and 24- hours/ day with in the uptime specified in the Service Level Agreement (SLA).

xxi. “Unplanned downtime” means an instance other than the planned down time in which ordered services are not available to TENDERER.

xxii. "Uptime" means the time-period when specified services with specified technical and service standards are available to TENDERER and its user organizations.

xxiii. "% Uptime" means ratio of 'up time' (in minutes) in a quarter to Total time in the quarter (in minutes) minus schedule downtime (in minutes) multiplied by 100.

5. Introduction and background

Ahmedabad is one among forefront in implementation of smart initiatives for urban development projects. Under Smart City Mission Ahmedabad has implemented several new projects namely, Integrated Transport Management System (ITMS), City Surveillance project, e-Challan, Smart Anganwadi, Smart Public Toilet, Digital Payment and establishment of Integrated City Command and Control Centre with several e-Governance projects.

As per the GoI guidelines, Ahmedabad Municipal Corporation (AMC) has formed a Special Purpose Vehicle (SPV) as Smart City Ahmedabad Development Limited (SCADL) for the implementation of projects under the smart city mission. SCADL executes the task of project design, tender preparation, bid process management, selection and on-boarding of implementation agency. SCADL work closely with user departments from AMC and other government departments in implementation and operationalization of various smart city projects.

Ahmedabad was selected among the first 20 Smart Cities in India under the Smart Cities Mission of the Ministry of Housing and Urban Affairs considering the proposals submitted by the Ahmedabad Municipal corporation. A Special Purpose Vehicle (SPV) was formed in 2016 under the mission guidelines and was named as Smart City Ahmedabad Development Limited (SCADL). It carries the end-to-end responsibility for vendor selection, implementation, and operationalization of various Smart City Projects.

The objective was to promote sustainable and inclusive cities that provide core infrastructure and give a decent quality of life to its citizens, a clean and sustainable environment and application of Solutions. Most of the ICT initiatives proposed and being implemented by Ahmedabad city have been identified with a predominant objective to improve public safety and surveillance, traffic management, public services quality, emergency response and real time tracking of municipal services.

5.1 About existing SASA-ICCC project

SASA-ICCC project has various smart solutions like Integrated Command and Control Center, Smart surveillance system, Smart traffic management system, Public Wi-Fi hotspots, LED/Digital Display panel/boards, and various type of sensors, smart lighting etc. riding on the Pan city ICT infrastructure and city wide point to point connectivity network.

SCADL, AMC and Ahmedabad Police Department, Ahmedabad are the major stakeholders of the entire project. Wherein Police department are utilizing video feeds for city surveillance and intelligent traffic management of the entire city and SCADL is utilizing video feeds and other sensor deployed under the project for efficient and effective management of the municipal services and city operations.

5.2 Objective of RFP

Smart City Ahmedabad Development Limited (SCADL) is inviting proposals from interested bidders for the Supply, Installation, Testing, and Commissioning (SITC), as well as the Operation and Maintenance (O&M) of surveillance system connectivity in Ahmedabad City. In Ahmedabad City, there are currently 130 traffic junctions equipped with comprehensive surveillance and traffic management systems. This surveillance system incorporated a range of advanced technologies, including surveillance cameras, Automatic Number Plate Recognition (ANPR) Cameras, and Red-

Light Violation Detection (RLVD) cameras. The core objective of this project is the expansion of the CCTV camera network, encompassing general surveillance, Automatic Number Plate Recognition (ANPR), and Red Light Violation Detection (RLVD) cameras and e-Challan system with advanced analytics in Ahmedabad City.

This RFP involves the installation of CCTV cameras, Automatic Number Plate Recognition (ANPR) cameras, and Red-Light Violation Detection (RLVD) cameras to improve overall surveillance capabilities, SITC of Data center, P2MP/L2VPN bandwidth requirement from Telecom Service provider and e-Challan system with advanced analytics at newly established junctions and the entry and exit points of the ring road and new bridges in Ahmedabad City.

6. Eligibility criteria

The Bidder must possess the requisite experience, strength and capabilities in providing services necessary to meet the requirements as described in the RFP document. Keeping in view of the work involved, following criteria are prescribed as the Bidder's Eligibility criteria for the Bidder interested in undertaking the project. The Bidder must also possess technical know-how and financial ability that would be required to successfully provide System Integration, Operation and Maintenance services sought by AMC/SCADL for the entire contract duration. The bids must be complete in all respect and should cover entire scope of work as stipulated in the bid document. This invitation to bid is open to all Bidders who qualify the eligibility criteria as given below in section 6.1.

Note:

For evaluation purpose, following definitions are considered

- For PQ – 4 : Any project that falls under below category will be considered for evaluation.
- The completed / implemented project is defined as those projects that have been installed, commissioned and gone live in last 7 years from the date of publishing of this RFP. If WO date is older than seven (7) years from RFP released date(excluding RFP released date), then 100% Go-live certificate (issued at the end of implementation / capex phase) must not be older than 6 years from RFP released date. If WO date, 100% Go-live date & Work completion date (work completion certificate is the one issued at the end of contract period) falls within seven (7) years from RFP released date(excluding RFP released date), it will be considered.
- For ongoing project, WO date must be earlier than three (3) years from RFP released date (excluding RFP released date) and 100% Go-live certificate (issued at the end of implementation / capex phase) must be older than 1 year from RFP released date..
- While showcasing the past experience, the experience of OEM will not be considered as Bidder's experience in Pre-qualification and Technical evaluation unless the Bidder themselves is an OEM.
- For PQ – 5, 6 & 7 : Any project that falls under below category will be considered for evaluation.
- The completed / implemented project is defined as those projects that have been installed, commissioned and gone live in last 7 years from the date of publishing of this RFP. If WO date is older than seven (7) years from RFP released date (excluding RFP released date), then supporting document from end client / client certification will be required to prove that the respective demanded experience of PQ – 5, 6 & 7 was achieved within seven (7) years from RFP released date (excluding RFP released date)time. If WO date & Work completion date (work completion certificate is the one issued at the end of contract period) falls within seven (7) years from RFP released date (excluding RFP released date), it will be considered.
- For ongoing project, WO date must be earlier than two (2) years from RFP released date (excluding RFP released date) and supporting document from end client / client certification will be required to prove that the respective demanded experience of PQ – 5, 6 & 7 was achieved before RFP released date.
- While showcasing the past experience, the experience of OEM will not be considered as Bidder's experience in Pre-qualification and Technical evaluation unless the Bidder themselves is an OEM.

6.1 Eligibility Pre-Qualification Criteria

Following will be the minimum qualification criteria. Each eligible service provider should possess all the following qualification criteria. Responses not meeting the minimum qualification criteria will be rejected.

#	Description	Pre-Qualification Criteria	Proof Document Required
1	Legal Entity	i. The sole bidder or The lead bidder & consortium partner (in case of consortium) should be an Indian firm. ii. The sole bidder or the lead bidder & consortium partner (in case of consortium) should be registered under the Companies Act 1956/2013 in India or a Limited Liability Partnership Firm under Limited Liability Partnership Firm Act 2008 at the time of the bidding iii. The sole bidder or The lead bidder & consortium partner (in case of consortium) should have a registered number of, GST, Income Tax / Pan number *iv*. The sole bidder or The lead bidder & consortium partner (in case of consortium) should be in operation in India for a period of minimum 5 years as on RFP release date	• Certificate of Incorporation / Registration Certificate • Copy of PAN card • Copy of GST registration
2	Financial Capability	The sole bidder or The Lead bidder (in case of consortium) should have minimum average annual turnover of >=**INR 250 crores from ICT / IT&ITES/ Surveillance** based business in last three financial years (i.e. FY 2021-22, FY 2022-23 and FY 2023-24) Bidder may submit the non-audited provisional CA certificate for FY 2024-25 (in that case FY 2024-25, FY 2023-24 & FY 2022-23 will be	Copy of the audited profit and loss financial statements • Certificate from the statutory auditor / CA clearly specifying the average annual turnover for the specified years from ICT / IT&ITES/ Surveillance / video analytics business. (Refer format given in section:14.4-Auditor's/CA Certificate for net worth for Bidder.)

#	Description	Pre-Qualification Criteria	Proof Document Required
		considered for evaluation for all conditions under this RFP) The consortium partner (in case of consortium) should have minimum average annual turnover of >=INR 15 crores from ICT / IT&ITES/ video analytics based business in last three financial years (i.e. FY 2021-22, FY 2022-23 and FY 2023-24 or FY 2024-25)	• The Original / Notarized copy of the certificate should be submitted.
3	Financial Capability II	The sole bidder or The Lead Bidder & consortium partner (in case of consortium) must have positive net worth and should be profit-making in last three (3) financial years (i.e. FY 2021-22, FY 2022-23 and FY 2023-24) or FY 2024-25	Certificate from the Statutory Auditor on net worth and profit making (i.e. FY 2021-22, FY 2022-23 and FY 2023-24) The Original / Notarized copy of the certificate should be submitted
4	Bidder's Experience_1	The sole bidder or The Lead Bidder (in case of consortium) should have demonstrable experience of SITC and O&M of at least one surveillance project in past **7 years** from the date of issuance of this RFP for any Indian Govt. clients (ULB/State Govt. / Central Govt. / PSU/Government SPV**)** with total project value (including O&M phase) of >= **75 Crore** **Note - 1:** The total project value should be comprising of the surveillance component (Fixed outdoor / PTZ cameras/ANPR /RLVD / outdoor surveillance cameras, cameras installed for Safe City/ Smart City/ ITMS Project/ Highway Enforcement /Surveillance Project for airports /ports), surveillance passive items	**In case of Completed project** • Copy of completion / 100% Go Live certificate issued by client • Copy of Work order clearly highlighting scope of work, Bill of Material and value of contract / order pertaining to the components mentioned in the criteria. • Project Citation on Bidder's letterhead as **per format attached in Section 14.6-** Details of similar work undertaken • Consortium agreement specifying roles and responsibilities, in case of project submitted was executed by a consortium and Lead Bidder of this RFP was part of that consortium. Lead bidder of this RFP must have executed the required scope of surveillance & DC in that consortium.

#	Description	Pre-Qualification Criteria	Proof Document Required
		(gantry / cantilever / poles / junction box / rack) and associated data center (DC) component (Network / Servers / Storage / UPS) only. (to prove worth of project, both surveillance component BoQ line items & data center component BoQ line items are mandatory). If the WO comprises of multiple activities, then bidder will have to provide necessary supporting documents to prove the required experience. **Note – 2:** Any WO issued by successful bidder of any project to 3rd party organization as a subcontracting will not be allowed to qualify for this PQ even if the end client of that project was Government entity.	**In case of ongoing projects** • 100% Go Live certificate issued by client • Copy of Work order clearly highlighting scope of work, Bill of Material and value of contract + **Certificate from the client mentioning the amount and type of work completed +Performance certificate of the bidder from the client** • Project Citation on Bidder's letterhead as per format attached in Section 14.6- Details of similar work undertaken • Consortium agreement specifying roles and responsibilities, in case of project submitted was executed by a consortium and Lead Bidder of this RFP was part of that consortium. Lead bidder of this RFP must have executed the required scope of surveillance & DC in that consortium
5	Bidder's Experience_2	The sole bidder or The Lead Bidder (in case of consortium) should have demonstrable experience of SITC of at least one surveillance project covering at least 1000 cameras (Fixed outdoor / PTZ cameras/ANPR /RLVD / outdoor surveillance cameras/ Cameras installed for Safe City/ Smart City/ ITMS Project/ Highway Enforcement or Surveillance Project for airports / ports) in past 7 years from the date of issuance of this RFP for any Govt. clients (ULB/State Govt. / Central Govt. / PSU/Government SPV/ private organization).	**In case of Completed & ongoing project** • Copy of supporting document from end client / client certification • Copy of Work order clearly highlighting scope of work, Bill of Material and value of contract / order pertaining to the components mentioned in the criteria. • Project Citation on Bidder's letterhead as **per format attached in Section 14.6-** Details of similar work undertaken

#	Description	Pre-Qualification Criteria	Proof Document Required
		Note: If the WO comprises of multiple activities, then bidder will have to provide necessary supporting documents to prove the required experience	• Consortium agreement specifying roles and responsibilities, in case of project submitted was executed by a consortium and Lead Bidder of this RFP was part of that consortium. Lead bidder of this RFP must have executed the required scope of surveillance cameras in that consortium.
6	Bidder's Experience_3	The Sole Bidder or any member of the consortium (in the case of a consortium) should have demonstrable experience in the SITC of at least one video analytics project, using either their own COTS e-Challan application or NIC – e-challan application along with any other OEM COTS e-Challan application. The scope of the video analytics software must mandatorily include speed violation, RLVD and ANPR use cases, along with at least 50% of the below-mentioned use cases. The project should have been implemented within the last 7 years from the date of issuance of this RFP for any government clients (ULB/State Government/Central Government/PSU in India) List of use cases : 1. Detection of garbage on road, 2. Detection of damaged infrastructure, 3. Detection of Potholes on Road, 4. Detection of Cattle on road, 5. Detection of uncovered debris in truck & extended metallic	**In case of Completed & ongoing project** • Copy of supporting document from end client / client certification • Copy of Work order clearly highlighting scope of work, Bill of Material and value of contract / order pertaining to the components mentioned in the criteria. • Project Citation on Bidder's letterhead as **per format attached in Section 14.6-** Details of similar work undertaken • Consortium agreement specifying roles and responsibilities, in case of project submitted was executed by a consortium and Lead Bidder of this RFP was part of that consortium. Lead bidder of this RFP must have executed the required scope of surveillance cameras in that consortium

#	Description	Pre-Qualification Criteria	Proof Document Required
		elements outside of heavy vehicles, 6. Spitting Detection, 7. Detection of faded stop lines & zebra crossings, 8. Detection of Water logging, 9. Use of Mobile Phone while driving, 10. Not wearing seat belt detection, 11. Detection of two-wheelers riding without Helmet, 12. Detection of vehicles driving on wrong side, 13. Detection of more than two passengers on two-wheeler, 14. Facial Recognition, 15. Detection of Parking Violation Detection 16. Video Summarization **Note -:** 1. RLVD, ANPR: Minimum 10,000 events for each 2. Other Use Case: Min. 500 events should have been detected for each use case to prove any 8 use cases. 3. The successful bidder will have to supply same video analytics application / product for which the WOs were submitted to qualify for this PQ. 4. If the WO comprises of multiple activities, then bidder will have to provide necessary supporting documents to prove the required experience.	

#	Description	Pre-Qualification Criteria	Proof Document Required
7	Mandatory Undertaking	(The sole bidder or The lead bidder & consortium partner (in case of consortium)) and OEM : 1. Should not have been blacklisted or debarred by any Central Government / Any State Government / Smart City SPV / PSU/ Supreme Court of India/Any Government Agency in India as on the date of bid submission. 2. Not be insolvent, in receivership, bankrupt or being wound up, not have its affairs administered by a court or a judicial officer, not have its business activities suspended and must not be the subject of legal proceedings for any of the foregoing reasons. 3. Not have their directors and officers convicted of any criminal offence related to their professional conduct or the making of false statements or misrepresentations as to their qualifications to enter into a procurement contract within a period of three years preceding the commencement of the procurement process, or not have been otherwise disqualified.	Self-declaration by the (sole bidder or lead Bidder & consortium partner) and OEM duly signed and stamped by the authorized signatory in format described in RFP section 14.7, 14.9 and 14.10 **Note:** Original or Notarized copy of self-declaration should be submitted.
8	Bidder's office	The Sole bidder or the Lead bidder (in case of consortium) should have a Permanent Office in Gujarat or should setup office in Gujarat in 45 days from the award of Work Order	Copies of any two of the followings: Property Tax/ Electricity/ Telephone Bill/ VAT/ CST Registration / Lease agreement. Or Undertaking to open Office in Gujarat
9	OEM Partnership	The Lead Bidder should submit valid letter from each of the OEM – confirming the following: OEM shall ensure that all equipment / components / sub- components being supplied by them shall be supported for entire contract period. If the same is de-supported by the OEM for any reason whatsoever, the bidder shall replace it	Authorization Letter/MAF from OEM whose product is being quoted by the bidder on company's letter head signed by authorized signatory in format described in RFP section 14.16-MAF. (This clause is applicable only for all types of cameras, network switches, routers, firewall, servers, storage, data

#	Description	Pre-Qualification Criteria	Proof Document Required
		with an equivalent or better substitute that is acceptable to Tenderer without any additional cost to the Tenderer and without impacting the performance of the solution in any manner whatsoever.	center switches, all types of software applications, Racks, UPS, Battery bank).
10	Land Border	The lead bidder, consortium partner and OEMs are required to submit the undertaking as per the Department of Expenditure, Government of India guidelines on procurement dated 23.07.2020 to confirm that, all the quoted product Make under this bid are not from a country which shares a land border with India or, of if from such a country, quoted product/OEM have been registered with competent authority.	The Performa for undertaking is enclosed with **bid Format in Section 14.17 for Bidder & OEM**. The lead bidder & & consortium partner is required to submit the undertaking on Non-Judicial stamp of Rs 300/- for all quoted product and for OEM on their company letter head
11	Network Service Provider	**For P2MP/L2VPN Services:** The Network service provider should have a valid Unified License (All Services) or National Long Distance (NLD) License from Govt. of India. **Note:** This mentioned criteria has to be met by the Network Service Provider	Copy of valid Licenses to be submitted (Document must be mentioned clearly with the name of the services provider, License category (UL/UASL/NLD), date of issue and validity from Govt. of India. **Note:** All licenses should be valid as on the date of submission of the bid. However, licenses should be valid until the contract period of the project. If during the contract period if the license is about to expire then the bidder will have to renew the license before it expires. If the service provider's license will not be renewed than SI is responsible to provide the uninterrupted connectivity from the other operator who meets the above criteria with no additional cost to the tenderer

Note 1:

1. Consortium is allowed in this bid.
2. The Bidder must attach valid documents in support to their Pre-Qualification as mentioned above. Without proper supporting documents, the bid proposals are liable to be rejected.
3. The Manufacturer's Authorization Form (MAF) is required for Active hardware or software component being supplied as part of this project.

4. For all cited projects under Bidder's experience criteria; the Bidders shall have to submit work order with complete BoQ, contract agreement, go-live / completion certificate, proof for O&M as documentary evidence against each of the project.
5. SCADL reserves the right to check/validate the authenticity of the information provided in the Pre-qualification and Technical evaluation criteria.
6. The bidder needs to provide contact detail (email & phone number) of senior official from end client to verify WO / citation details.
7. SCADL may invite each Bidder to make a presentation on their proposal. Further, authorities may request written clarifications from the Bidders to clarify ambiguities and uncertainties arising out of the evaluation of the Bid documents.
8. In case of conditional bid or major deviations from the RFP requirements, SCADL may at its discretion reject the respective bid and will not be considered for further evaluation process.
9. The Bidder is requested to submit a notarized copy of all the documentary evidence.
10. The project citation provided by the bidder to qualify in PQ-4 can also be used to qualify for PQ-5.

Note 2: Consortium Clause

1. The Bidder is allowed to make a consortium with only one other bidder.
2. One Consortium partner can tie up with only one lead bidder for this RFP.
3. Parent or child organization including a group company of any lead bidder & consortium partner cannot participate as a bidding entity (lead or consortium member) in any other consortium in this RFP.
4. In case of consortium, the Lead Bidder must be specified by the bidder.
5. In case of a consortium, applicant consortia shall have a valid Memorandum of Understanding (MoU) / Consortium Agreement among all the members signed by the CEO / Country Head / Authorized Signatories of the companies dated prior to the submission of the bid. The MoU / Consortium Agreement shall clearly state the composition of the consortium who shall be the Lead bidder, the complete description of the partner and Roles & Responsibilities of the partner. The consortium bid submitted without valid MoU / Consortium Agreement shall be treated as non-responsive. The contract shall be signed with the Lead Bidder with mentioning name of the consortium partner and the Lead Bidder shall be single Point of Contact for this Project. PBG shall be submitted by the Lead Bidder. The payments for the said project shall be released only in the name of Lead Bidder.
6. The lead Bidder shall be solely responsible for any failure liable to the Government for the execution of the entire project / SoW in accordance with the terms & conditions of the bid document and a statement of this effect shall be included in the MoU / Consortium Agreement.

6.2 Technical Evaluation Criteria

For technical evaluation, all the pre-qualified Bidder/s would be required to fulfil criteria(s) set forth in this section: Technical Qualification Criteria are as follows:

<table>
<tr><th>Sr. No.</th><th>Evaluation Criteria</th><th>Sub-Criteria</th><th>Max. Marks</th><th>Marking Guidelines</th><th>Documentary Evidence</th></tr>
<tr><td>1</td><td>Financial capability</td><td>The sole bidder or The Lead bidder (in case of consortium) having average annual turnover from ICT / IT&ITES/ Surveillance based business in last three financial years (i.e. FY 2021-22, FY 2022-23 and FY 2023-24 or FY 2024-25)</td><td>10</td><td><table><tr><th>Average annual Turnover</th><th>Marks</th></tr><tr><td>>=250 crores & <= 300 crores</td><td>8 Marks</td></tr><tr><td>>300 & <=400 crores</td><td>9 Marks</td></tr><tr><td>>400 Crores</td><td>10 Marks</td></tr></table></td><td>Copy of audited Balance Sheet, audited Profit & Loss statements for each of the last 3 financial year
Certificate from the statutory auditor / CA clearly specifying the average annual turnover for the specified years from ICT / IT&ITES/ Surveillance business only.</td></tr>
<tr><td>2</td><td>Experience of Bidder_1</td><td>The sole bidder or The Lead Bidder (in case of consortium) should have demonstrable experience of SITC and O&M of at least one surveillance project in past 7 years from the date of issuance of this RFP for any Indian Govt. clients (ULB/State Govt. / Central Govt. / PSU/Government SPV) with total project value</td><td>15</td><td><table><tr><th>No. of Qualified Project</th><th>Marks</th></tr><tr><td>=1 Project</td><td>11 Marks</td></tr><tr><td>2 Project</td><td>13 Marks</td></tr><tr><td>>=3 Project</td><td>15 Marks</td></tr></table></td><td>In case of Completed project
Copy of completion / 100% Go Live certificate issued by client
Copy of Work order clearly highlighting scope of work, Bill of Material and value of contract / order pertaining to the components mentioned in the criteria.
Project Citation on Bidder’s letterhead as per format attached in Section 14.6-</td></tr>
</table>

Sr. No.	Evaluation Criteria	Sub-Criteria	Max. Marks	Marking Guidelines	Documentary Evidence
		should be >= **75 Crore** **Note 1:** The total project value should be comprising of the surveillance component (Fixed outdoor / PTZ cameras/ANPR /RLVD / outdoor surveillance cameras, cameras installed for Safe City/ Smart City/ ITMS Project/ Highway Enforcement or Surveillance Project for airports / ports), surveillance passive items (gantry / cantilever / poles / junction box / rack) and associated data center (DC) component (Network / Servers / Storage / UPS) only. (to prove worth of project, both surveillance component BoQ line items & data center component BoQ line items are mandatory).			Details of similar work undertaken • Consortium agreement specifying roles and responsibilities, in case of project submitted was executed by a consortium and Lead Bidder of this RFP was part of that consortium. Lead bidder of this RFP must have executed the required scope of surveillance & DC in that consortium. **In case of ongoing projects** • 100% Go Live certificate issued by client • Copy of Work order clearly highlighting scope of work, Bill of Material and value of contract + **Certificate from the client mentioning the amount and type of work completed +Performance certificate of the bidder from the client** • Project Citation on Bidder's letterhead as per format attached in Section 14.6- Details of similar work undertaken • Consortium agreement specifying roles and

Sr. No.	Evaluation Criteria	Sub-Criteria	Max. Marks	Marking Guidelines	Documentary Evidence
		If the WO comprises of multiple activities, then bidder will have to provide necessary supporting documents to prove the required experience. **Note – 2:** Any WO issued by successful bidder of any project to 3rd party organization as a subcontracting will not be allowed to qualify for this TQ even if the end client of that project was Government entity. The project citation submitted by the bidder against PQ criteria to qualify for PQ can also be submitted in TQ along with additional projects to get marks.			responsibilities, in case of project submitted was executed by a consortium and Lead Bidder of this RFP was part of that consortium. Lead bidder of this RFP must have executed the required scope of surveillance & DC in that consortium.

<table>
<tr><th>Sr. No.</th><th>Evaluation Criteria</th><th>Sub-Criteria</th><th>Max. Marks</th><th>Marking Guidelines</th><th>Documentary Evidence</th></tr>
<tr>
<td>3</td>
<td>Experience of Bidder_2</td>
<td>The sole bidder or The Lead Bidder (in case of consortium) should have demonstrable experience of SITC of at least one surveillance project covering at least 1000 cameras (Fixed outdoor / PTZ cameras/speed violation/ANPR /RLVD / outdoor surveillance cameras) in past 7 years from the date of issuance of this RFP for any Govt. clients (ULB/State Govt. / Central Govt. / PSU/Government SPV/ private organization).

Note:
If the WO comprises of multiple activities, then bidder will have to provide necessary supporting documents to prove the required experience.

The project citation submitted by the bidder against PQ criteria to qualify for PQ can also be submitted in TQ along with additional projects to</td>
<td>15</td>
<td>
<table>
<tr><th>Number of Qualified Project (at least 1000 cameras in each project)</th><th>Marks</th></tr>
<tr><td>=1 Project</td><td>11 Marks</td></tr>
<tr><td>2 Project</td><td>13 Marks</td></tr>
<tr><td>>=3 Project</td><td>15 Marks</td></tr>
</table>
</td>
<td>In case of Completed & ongoing project
• Copy of supporting document from end client / client certification
• Copy of Work order clearly highlighting scope of work, Bill of Material and value of contract / order pertaining to the components mentioned in the criteria.
• Project Citation on Bidder's letterhead as per format attached in Section 14.6- Details of similar work undertaken
• Consortium agreement specifying roles and responsibilities, in case of project submitted was executed by a consortium and Lead Bidder of this RFP was part of that consortium. Lead bidder of this RFP must have executed the required scope of surveillance cameras in that consortium</td>
</tr>
</table>

<table>
<tr><th>Sr. No.</th><th>Evaluation Criteria</th><th>Sub-Criteria</th><th>Max. Marks</th><th>Marking Guidelines</th><th>Documentary Evidence</th></tr>
<tr><td></td><td></td><td>get marks.</td><td></td><td></td><td></td></tr>
<tr><td>4</td><td>Experience of Bidder_3</td><td>The Sole Bidder or any member of the consortium (In case of Consortium) should have demonstrable experience of SITC of at least one video analytics project with either their own COTS e-Challan application or NIC – e-challan application along with other OEM COTS e-Challan application. The scope of video analytics software should mandatory have RLVD & ANPR use case (Mandatory) along with min. 50% of below mentioned used cases The project should be implemented in last 7 years from the date of issuance of this RFP for any Govt. clients (ULB/State Govt. /</td><td>15</td><td><table><tr><th>Number of Qualified Projects as per mentioned in Note-1 and Note-2 which is considered as One Project</th><th>Marks</th></tr><tr><td>= 1 Project</td><td>11 Marks</td></tr><tr><td>2 Projects</td><td>13 Marks</td></tr><tr><td>>=3 Projects</td><td>15 Marks</td></tr></table></td><td>In case of Completed & ongoing project
Copy of supporting document from end client / client certification
Copy of Work order clearly highlighting scope of work, Bill of Material and value of contract / order pertaining to the components mentioned in the criteria.
Project Citation on Bidder’s letterhead as per format attached in Section 14.6- Details of similar work undertaken
Consortium agreement specifying roles and responsibilities, in case of project submitted was executed by a consortium and Lead Bidder of this RFP was part of that consortium. Lead bidder of this RFP must have executed the required scope of surveillance cameras in that</td></tr>
</table>

Sr. No.	Evaluation Criteria	Sub-Criteria	Max. Marks	Marking Guidelines	Documentary Evidence
		Central Govt. / PSU in India). List of use cases : 1. Detection of garbage on road, 2. Detection of damaged infrastructure, 3. Detection of Potholes on Road, 4. Detection of Cattle on road, 5. Detection of uncovered debris in truck & extended metallic elements outside of heavy vehicles, 6. Spitting Detection, 7. Detection of faded stop lines & zebra crossings, 8. Detection of Water logging, 9. Use of Mobile Phone while driving,			consortium.

Sr. No.	Evaluation Criteria	Sub-Criteria	Max. Marks	Marking Guidelines	Documentary Evidence
		10. Not wearing seat belt detection, 11. Detection of two-wheelers riding without Helmet, 12. Detection of vehicles driving on wrong side, 13. Detection of more than two passengers on two-wheeler, 14. Facial Recognition, 15. Detection of Parking Violation Detection 16. Video Summarisation **Note -:** 1. RLVD, ANPR: Minimum 10,000 events for each 2. Other Use Case: Min. 500 events should have been detected for each use case to prove any 8 use cases.			

Sr. No.	Evaluation Criteria	Sub-Criteria	Max. Marks	Marking Guidelines	Documentary Evidence
		3. The successful bidder will have to supply same video analytics application / product for which the WOs were submitted to qualify for this PQ. 5. If the WO comprises of multiple activities, then bidder will have to provide necessary supporting documents to prove the required experience. 6. The project citation submitted by the bidder against PQ criteria to qualify for PQ can also be submitted in TQ			

Sr. No.	Evaluation Criteria	Sub-Criteria	Max. Marks	Marking Guidelines	Documentary Evidence
		along with additional projects to get marks.			
5	**Demonstration of the solution (POC) and Presentation**	Demonstration of the Video Analytics and Surveillance Solution (All the proposed analytics must be shown to the authority). SI's strategy for implantation plan of entire project.	45	• System Integrator's understanding of project requirements (functional and technical) and completeness of proposed solution – **8 Marks** • Presentation of the Approach and Methodology for implementation and maintenance Support– **8 Marks** • Redundancy - The bidder has to show how and why the solution is redundant. The bidder has to ensure and show there is no single point of failure in the proposed Network architecture and Field connectivity network– **7 Marks** • Strategy to maintain all the SLAs during Post Implementation Period – **7 Marks** Total Presentation Marks: **30 Marks** All the technical and functional specifications of the video analytics	–

<table>
<tr><th>Sr. No.</th><th>Evaluation Criteria</th><th>Sub-Criteria</th><th>Max. Marks</th><th>Marking Guidelines</th><th>Documentary Evidence</th></tr>
<tr><td></td><td></td><td></td><td></td><td>solution are to be demonstrated along with outcome to SCADL/AMC officials.

<table><tr><th>Evaluation Parameters</th><th>Marks</th></tr><tr><td>Detection of Municipal violation use cases (garbage, Spitting, Cattle, potholes, uncovered debris in truck, water logging,)</td><td>6 Marks</td></tr><tr><td>Traffic Enforcement Use cases (No Helmet, No wearing Seat belt, Mobile Phone while driving, Wrong side Driving, Triple riding)</td><td>5 Marks</td></tr><tr><td>Facial recognition solution, Video Summarization solution</td><td>4 Marks</td></tr></table>
Total POC Mark: 15 Marks</td><td></td></tr>
</table>

Note:

1. Experience of Sole Bidder or Lead Bidder (in case of consortium) Outside India shall not be considered for the purpose of evaluation under both pre-qualification and technical qualification criteria.
2. The Bid evaluation committee may invite each pre-qualified Bidder to make a presentation & demonstration (POC) to PURCHASER at a date, time and venue decided by PURCHASER. The purpose of such presentations & POC would be to allow the Bidders to present their proposed solutions to the Committee and orchestrate the key points in Proposals.
3. All the supporting documents should be in English language only however, if in case client document is in other language, Bidder must submit a notarized copy of translated document in English language.
4. Minimum qualification mark for technical qualification criteria is **70**. Bidder not achieving **70** marks shall be disqualified.
5. During the evaluation of the Bid, SCADL reserves the right to enquire / seek additional documents / justification to further understand the Bidder's submission against various qualification criteria. Such communication shall be at the discretion of SCADL. No claim from any of the Bidder in this regard shall be entertained for any of the reason(s) pertaining to the bid evaluation.

6.3 OEM Selection criteria

OEM Eligibility criteria for various key components are given in the table below. OEM would need to submit the self-certification. If required Department may ask for additional supporting documents for the compliance to these criteria.

Sr. No.	Component	Criteria for OEM	Documentary Evidence
1	Surveillance Cameras (RLVD,ANPR,PTZ, Fix Box Cameras)	i. Should have a registered office in India for past more than 3 years as on RFP release date. ii. The MAC address of the IP devices must be registered in the name of OEM. iii. Minimum Supply and installation base of 70,000 IP based cameras in India or globally as on bid submission date. iv. The OEM should have its own RMA setup to fulfil its warranty, service, AMC commitments (or via authorized service partner / distributor) in India as on the bid submission date. v. The OEM should have valid ISO 9001, ISO 27001 certifications.	i. Certificate of Incorporation (CIN) ii. Certificate from regulatory body iii. Undertaking on OEM's letterhead iv. Undertaking on OEM's letterhead v. Necessary certification from competent authority vi. Undertaking on OEM's letterhead vii. Undertaking on OEM's letter head viii. STQC Certificate for the quoted product

Sr. No.	Component	Criteria for OEM	Documentary Evidence
		vi. The OEM should not have been debarred / blacklisted as per the order by Honorable Court of India. (High Court / Supreme Court / Govt. of India/Smart City SPV or any other govt. department across India). Also, there must not be any criminal case logged by any Government authority in any court in last 7 years as on the bid submission date. vii. OEM should comply with land border guidelines, (Undertaking to be submitted). viii. OEM should have valid STQC certificate for the Cameras to be quoted. If valid STQC certificate for any particular camera is not available at the time of bidding, bidder and OEM can quote that camera with STQC application proof submitted in bid and will have to ensure that valid STQC certificate is obtained before start of supply of camera.	
2	Server, Storage, Security Appliances, Network Component **excluding field outdoor Switches**	Proposed OEM should feature in Leader's quadrant / challenger's quadrant in either of following. The latest published Gartner Magic Quadrant report. Gartner Magic Quadrant for Wired & Wireless LAN Access Infrastructure. Gartner Magic Quadrant for DC and cloud networking for DC switches Gartner Magic Quadrant for Primary Storage Gartner Magic Quadrant for Network Firewalls/UTM **OR** IDC Worldwide Top 5 companies as per their revenue market share	i. Undertaking & copies of supporting documents from the Bidder confirming the compliance along with the OEM authorization ii. OEM's statutory auditor certificate (For Make in India product / domestic value declaration) certifying percentage of local content in terms of composition of the products

Sr. No.	Component	Criteria for OEM	Documentary Evidence
		Note : For server OEMs (only) being qualified in this PQ either through Gartner or IDC criteria as above, it is mandatory to comply to 40% domestic value requirement as per criteria of "Percentage domestic value addition in terms of Bill of Material (BOM) required for the Servers to qualify as domestically manufactured" as mentioned in Policy released by Ministry of Electronics and Information Technology (MeitY), Government of India dated 14th September 2017 having no. F.No.33(1)/2017-IPHW and any further amendments. Bids of SIs not complying to this will be rejected.	
3	Network Component of **field outdoor Switches**	Proposed OEM should feature in Leader's quadrant / challenger's quadrant in either of following. The latest published Gartner Magic Quadrant report. Gartner Magic Quadrant for Wired & Wireless LAN Access Infrastructure. **OR** IDC Worldwide Top 5 companies as per their revenue market share **OR** OEM of quoted switches under "Make In India" as per GR's referred in RFP along with its corrigendum's having at least following minimum credentials beside meeting functional and	Undertaking & copies of supporting documents from the Bidder confirming the compliance along with the OEM authorization **OEM of quoted switches under "Make In India"** i. Undertaking & copies of such projects experience and installation base from bidder confirming the compliance along with the OEM authorization + Performance certificate of the OEM product on the client letter head ii. Certificate of Incorporation / Registration Certificate, Copy of PAN, Copy of GST Registration iii. OEM's statutory auditor certificate

Sr. No.	Component	Criteria for OEM	Documentary Evidence
		technical requirement specifically mentioned for the product in the RFP. i. The respective OEMs of the mentioned components asked in the RFP should have minimum installation base of 3 different smart cities/ safe cities/ police/law enforcement agency/Bharat net project. ii. OEM should be operational in India for minimum 7 years from date of RFP release date. **Note :** For field outdoor switch OEM being qualified in this PQ either through Gartner or IDC or Make in India criteria as above, it is mandatory to comply to 60% local content as per policy released by Ministry of Communications, Department of Telecommunications (DoT), Government of India dated 29th August 2018 having no. 18-10/2017-IP and any further amendments.	(For Make in India product / domestic value declaration) certifying percentage of local content in terms of composition of the products
4	Online UPS	i. Minimum installation base of minimum 10KVA capacity or higher capacity of 1,000 Online UPS in India or globally as on bid publication date. ii. The OEM should have its own RMA setup (or via authorized service partner / distributor) in India as on bid submission date. iii. The OEM should have valid ISO 9001 certifications	i. Undertaking on Bidder and OEM's letterhead ii. Undertaking on Bidder and OEM's letterhead iii. Necessary certification from competent authority
5	Video Management Software and NMS	i. Successful deployment of the VMS software for minimum three (3) projects in last 7 years including city or state or central security and surveillance projects/ Smart city/ Safe city / ITMS / Highway Surveillance projects in	i. Purchase Order (PO date should be within 7 years from bid submission date) / client certificate mentioning successful deployment of the product ii. Purchase Order (PO date should be within

Sr. No.	Component	Criteria for OEM	Documentary Evidence
		India or globally as on bid submission date. Out of 3, at least 1 project should have integrated >1000 cameras into VMS. ii. Successful deployment of the NMS software for minimum three (3) projects in last 7 years including city or state or central security and surveillance projects/ Smart city/ Safe city / ITMS / Highway Surveillance projects in India or globally as on bid submission date. Out of 3, at least 1 project should have integrated >2000 electronics elements into NMS. iii. The VMS OEM should have valid ISO 9001 / ISO 27001. iv. The NMS OEM should have ITIL compliant certification / CMMI Level 3 certification.	7 years from bid submission date) client certificate mentioning successful deployment of the product iii. Necessary certification from competent authority iv. Necessary certification from competent authority Note: Certificate from DPIIT-recognized startup OEM
6	Video Analytics solution	i. Successful deployment of the Video Analytics solution for minimum three (3) projects in last 7 years including city or state or central security and surveillance Smart city/ Safe city / ITMS / Highway Surveillance projects in India or globally as on bid submission date. Out of 3, at least 1 project should have integrated >1000 cameras into video analytics solution for any traffic / civic use cases. ii. The OEM should have valid ISO 9001 / ISO 27001 / CMMI Level 3 or higher certifications.	i. Purchase Order (PO date should be within 7 years from bid submission date) / client certificate mentioning successful deployment of the product ii. Necessary certification from competent authority Note: Certificate from DPIIT-recognized startup OEM
7	Facial Recognition Analytics	i. Minimum installation base of 100 FR cameras licenses in India or globally in last 7 years from bid submission date	i. Purchase Order (PO date should be within 7 years from bid submission date) client certificate mentioning successful

Sr. No.	Component	Criteria for OEM	Documentary Evidence
		OR The Face Recognition Algorithm must have participated in the NIST Face Recognition Vendor Test (FRVT) and having FNIR (False Negative Identification Rates) of less than 0.0017 under the 1:N where N = 12M, **Investigation (R=1,T=0) by developer **as on the tender publishing date. (Copy of report to be submitted along by the OEM)"	deployment of the product or Necessary certification from competent authority
8.	Video Summarization	i. Minimum installation base of 100 cameras for video summarization licenses in India or globally in last 7 years from bid submission date	i. Purchase Order (PO date should be within 7 years from bid submission date) client certificate mentioning successful deployment of the product

Note:

i. In case at any point of time after issue of WO to successful bidder, the details provided is found to misrepresent any facts or documents or any piece of information provided, then OEM/s shall be disqualified and blacklisted. In such situation, the successful bidder will have to provide the new solution of new OEM as per the requirement of the RFP at no extra price within one month subject to levy of a penalty of 5% of the total amount (column E = quantity * unit price as per Financial bid) of respective SITC / supply line item (as per applicable) of financial bid.

6.4 Preference to Class – I local supplier

i. As per the policy No. P-45021/2/2017-PP (BE-II) dated 4th June 2020 and any further amendments released by Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, Government of India, preference will be given to such System Integrator (SI) who will prove them as Class – I local supplier as per clause – 3(A) (Purchase Preference), point (C). SI will have to prove themselves as Class – I local supplier at project level i.e. C0= Total Project Cost (INR) (CAPEX+ OPEX- 5 year) as per financial bid (all those respective line items where domestic value of goods are complied to (for non Indian OEMs), where domestic products are quoted and domestic service is offered will be considered to calculate the % of local content).

Clause – 3(A) (Purchase Preference), point (C) of above-mentioned policy

(c) In the procurements of goods or works, which are covered by para 3(b) above and which are not divisible in nature, and in procurement of services where the bid is evaluated on price alone, the 'Class-l local supplier' shall get purchase preference over 'Class-II local supplier' as well as 'Non-local supplier', as per following procedure:

i. Among all qualified bids, the lowest bid will be termed as L1. If L1 is 'Class-I local supplier', the contract will be awarded to L1.
ii. If L1 is not 'Class-l local supplier', the lowest bidder among the 'Class-I local supplier', will be invited to match the L1 price subject to Class-l local supplier's quoted price falling within the margin of purchase preference, and the contract shall be awarded to such 'Class-l local supplier' subject to matching the L1 price.
iii. In case such lowest eligible 'Class-I local supplier' fails to match the L1 price, the 'Class-l local supplier' with the next higher bid within the margin of purchase preference shall be invited to match the L1 price and so on and contract shall be awarded accordingly. In case none of the 'Class-l local supplier' within the margin of purchase preference matches the L1 price, the contract may be awarded to the L1 bidder.

Also, below definitions will be applied as per above mentioned policy.

'Margin of purchase preference' means the maximum extent to which the price quoted by a "Class-l local supplier" may be above the L1 for the purpose of purchase preference.

Margin of Purchase Preference: The margin of purchase preference shall be 20%.

Applicability of above mentioned policy for this QCBS RFP :

This being a QCBS RFP, bid evaluation process will declare bidder with highest combine score (technical as well as financial score) as H1 bidder. The bidder with next highest combine score will be declared as H2 and so on.

Now, to apply above policy in this case, the 'Class-l local supplier' shall get purchase preference over 'Class-II local supplier' as well as 'Non-local supplier', as per following procedure:

i. Among all qualified bids, if H1 is 'Class-I local supplier', the contract will be awarded to H1.

ii. If H1 is not 'Class-l local supplier', the bidder among the 'Class-I local supplier' with highest combine score (technical as well as financial score), will be invited to match the H1 combine score subject to Class-l local supplier's combine score falling within the margin of purchase preference, and the contract shall be awarded to such 'Class-l local supplier' subject to matching the H1 combine score.

iii. In case such eligible 'Class-I local supplier' fails to match the H1 combine score, the 'Class-l local supplier' with the next higher combine score within the margin of purchase preference shall be invited to match the H1 combine score and so on and contract shall be awarded accordingly. In case none of the 'Class-l local supplier' within the margin of purchase preference matches the H1 combine score, the contract may be awarded to the H1 bidder.

Also, below definitions will be applied as per above mentioned policy.

'Margin of purchase preference' means the maximum extent to which the combine score of a "Class-l local supplier" may be below the H1 combine score for the purpose of purchase preference.

Margin of Purchase Preference: The margin of purchase preference shall be 20%.

Note : to match H1 combine score, the H2 / H3 / H4 & so on (as applicable) bidders will have to reduce their financial bid at project level to increase their combine score to match H1 combine score (this is because finalized technical score would not get changed). In this case, the % by which the financial bid at project level is reduced to match H1 combine score, same % reduction will be applied to all the line items of financial bid.

7. Scope of work

Selected bidder will be responsible for supply, installation, testing, commissioning and O&M of CCTV Cameras, point to multipoint leased lines/L2VPN, Network devices, Server, Storage, IT Infrastructure, Data center, COTS e-Challan software / AI application, Non-IT Infrastructure (Network Cabling, Pole, Gantry etc.) to make it fully functional & integrated with ICCC. Selected bidder will also be responsible to run e-Challan application on the surveillance network and integrate with ONOC system. Therefore, this SoW contains a package of work for field surveillance network + Data Center + e-Challan system and thus bidders are free to alter the indicative network design given in this RFP as per the technology components they are bidding with the condition that the proposed network design must comply to all technical and functional requirements of this RFP. The details related to network design given in this RFP is indicative.

Bidder is required to execute below mentioned scope of work under this RFP. This is a very high level Scope of Work, which is mentioned to provide an overview of the requirement to the Bidder. Following are the list of tasks to be carried out by the Bidder, which includes but not limited to:

i. Surveillance cameras (RLVD,ANPR,PTZ,Fixed) along with its associated accessories at newly established junctions , the entry & exit points of the ring road and New Bridge locations in Ahmedabad City.
ii. Networking devices (Core Router, L3/L2 Switches, Firewall), Server, Storage in the Data Center.
iii. Setting up of Data Centre for the entire project.
iv. SI is responsible to provision for necessary bandwidth/Network Connectivity from Telecom service Provider between Edge Devices, Command Control Center during the contract period.
v. COTS e-Challan software / AI application with advanced analytics along with its related database(s) and OS.
vi. Operation and maintenance of all procured elements under this RFP for the entire duration of the contract.
vii. Bidder will have to deploy manpower during implementation phase and Operation/Maintenance phase.
viii. No “End of Life”/ end of support / refurbished / repaired items shall be supplied & installed either temporary or permanent basis in implementation phase.

7.1 Current Scenario

Smart City Ahmedabad Development Limited (SCADL) has implemented various projects to ensure safety, security and better commute to the citizens of Ahmedabad. All these projects are already implemented and is currently in operation & maintenance phase.

For the surveillance network, SCADL has installed a significant number of surveillance cameras across Ahmedabad city. These cameras are placed at Junction locations, critical areas, public spaces, road networks and key infrastructure. There is one integrated Command & Control Center and DC where servers, storage, and workstations are installed to store and monitor/viewing of cameras and all these cameras have been effectively integrated with the Command-and-Control Center (ICCC).

7.2 Surveillance System (RLVD/ANPR/Fixed/PTZ cameras)

A. Bidder is required to carry out below major SITC activities for elements which includes but not limited to:

i. RLVD Cameras with IR (1 per arm)
ii. ANPR Cameras with IR (1 ANPR camera per traffic lane (minimum resolution – 2 MP) or 1 ANPR camera per 2 traffic lanes (minimum resolution – 4 MP)
iii. PTZ cameras (1 per Junction location, 1 per Ring Road location)
iv. Front Facing cameras for Junction location (1 no. camera per arm (minimum resolution of 16 MP) or maximum 2 nos. cameras per arm (minimum resolution of 8 MP))
v. Fix Box Camera for Bridge Location (2 no. per Pole)
vi. Junction box
vii. Network Switch
viii. Power and LAN cabling
ix. Cantilever / Gantry / pole (As per ground requirement)

1. Entire SoW of surveillance network is divided into 5 phases as mentioned in implementation timeline clause. Each phase consists of 20% of locations. In this RFP, there are 3 types of locations – approx. 75 traffic junctions, 88 entry-exit points as given by Police team and 15 bridges. 1 no. traffic junction, 1 entry-exit point and 1 bridge each will be considered as 1 location. Priority of 20% locations for any phase will be jointly decided by all concerned stakeholders including AMC, SCADL, Police and results of field survey done by SI. During execution time of any phase change of any location will be allowed after approval of authority if any circumstances arises that will have probability of delaying milestone completion.
2. Cameras being the core of the entire Surveillance system, it is important that their selection is carefully done to ensure suitability & accuracy of the information captured on the field and is rugged, durable & compact. As mentioned above, bidders & their OEMs are free to design the surveillance network as per the technology components they are bidding within guidelines provided in this RFP. For ex.: bidder will have to mandatorily consider 1 RLVD camera per arm (also referred to as one road with multiple traffic lanes). But as far as ANPR cameras are concerned, bidder can go with any one model out of two allowed in this RFP. Model – 1 : Bidder can consider 1 ANPR camera per traffic lane (minimum resolution – 2 MP). Model – 2 : Bidder can consider 1 ANPR camera per 2 traffic lanes (minimum resolution – 4 MP). 1 ANPR camera per 3 or more traffic lanes is not allowed. Accordingly, bidder will have to consider number of ANPR cameras & field outdoor switches required to complete the entire SoW of this RFP.
3. Bidder will require front facing camera for video analytics use cases like “driving 4-wheeler without seat belt”, “using mobile phone while driving” etc. Bidder will have to plan either 1 no. camera per arm (minimum resolution of 16 MP) or maximum 2 nos. cameras per arm (minimum resolution of 8 MP). Bidder will have to install these cameras on same gantry or cantilever on which RLVD & ANPR cameras are planned.
4. The cameras should be capable of capturing high-quality images and videos of vehicles and their license plates, ensuring accurate identification.

5. These cameras need to work on 24x7x365 basis during all weather conditions and transmit video feeds to the Command Control Centre and should be capable to capture the video feeds at a lower FPS during the lean period.
6. SCADL/Police Department may take the regular review of the requirements for video resolution, FPS and may change these numbers to suit certain specific requirements (for example, there could be a situation when certain cameras are required to be viewed at higher FPS for specific period).
7. The PTZ cameras will have the functionality to zoom in and pan out on a specific predefined field in its viewing area, detect and track motion etc.
8. The proposed Video Management System shall provide a complete end-to-end solution to view live / recorded video of any IP camera on the Network.
9. SI shall be responsible to integrate the CCTV system with the NMS software for SLA monitoring.
10. SI shall be responsible for Supply, Installation, Testing and Commissioning of the Software for Video Management System (VMS) and EMS/NMS including all features as mentioned in this RFP. The bidder will have to demonstrate the full load capacity of required quantity of all pingable devices mentioned in RFP for the NMS and the full load capacity of required quantity of all cameras for the VMS to the satisfaction of SCADL.
11. It will be responsibility of the bidder to ensure that the feeds of the camera are visible into the VMS & elements are discovered in NMS solution. It will be responsibility of the bidder to ensure all the network devices should be available and able to generate various reports from NMS solution.
12. The cameras proposed under the project should ensure the use of bit rates and compression techniques such that the bandwidth utilization for the video stream transmission is optimized.
13. Positioning of Cameras should be such that it covers the entire road/lane available at the respective locations. Once the successful bidder receives the junction locations from the Tenderer, they shall conduct a survey to assess and determine the number of ANPR cameras needed for each road arm.
14. The SI will responsible for the maintenance and Regular patch upgrade of the camera systems.
15. Cameras should be installed on proper pole/cantilever/Gantry at the locations finalized by the TENDERER. However, there are locations in the city where poles/gantry are already installed/available. It is envisaged that selected bidder should cover the exact availability and requirement of setting up of new poles/gantry in their detailed feasibility status report.
16. All cameras supplied by the bidder must be fully compliant with the latest ONVIF standards, including support for ONVIF Profile S, G, M, and T. The cameras shall be capable of seamless integration with any ONVIF-compliant VMS, regardless of the VMS OEM. The bidder should submit the OEM Authorization for the same along with the technical bid.
17. For more details on technical specifications of Cameras, bidder should refer to technical Requirements in this RFP.
18. There is a video wall available at the ICCC Paldi location and is currently managed by the existing SI of the SASA O&M project. The bidder will be responsible to provide the cameras feed in to 'their supplied VMS application to display camera feeds on the video wall. Integration with ICCC is Bidders responsibility.

19. The bidder will have to provide RTSP stream of the cameras to the police department (Ahmedabad Old and New CP office) whenever is required
20. Bidder must share necessary API / SDKs with other agency of SCADL/Police department for the purpose of integration with existing / future system(s) of SCADL. Requirement may come even during the operation and maintenance phase of the project. Bidder must not raise any concern thereof and should not seek any amount for the same.
21. For SCADL, it is envisaged to get following integrations done using API's of the respective systems- Ahmedabad Viswas, Ahmedabad Nirbhaya and CSITMS, Netram Gujarat - for getting access to the cameras deployed. SI is expected to integrate the proposed systems with the existing systems implemented in Ahmedabad Nirbhaya, Netram, CSITMS Project and VISWAS Project.
22. During implementation phase, successful bidder will be responsible to operate & maintain all the assets installed at any locations (traffic junctions / entry-exit points / bridges) before Go-live is issued for any particular milestone / phase. This is O&M before Go-live of particular milestone / phase and therefore it will include repairing, re-installing with fresh supply (if required) and O&M of active & passive network elements in the events of damage, theft, vandalism, cyclone, fire etc. in successful bidder's responsibility., If observed that any camera / field equipment requires change in the field of view / orientation, it shall be done by SI without any extra cost.
23. In case of request for change in location of field equipment post installation, the same shall be borne by Purchaser at the discovered rate as per commercials/financial bid.

B. Field execution & compliance requirement for CCTV network

1. Bidder will have to construct RCC foundation of minimum 0.7 mtr height for installation of junction box to protect the equipment from water logging.
2. After installation of all active & passive equipment in junction box, the door of the junction box must be able to close properly. This will be strictly applicable during O&M phase also.
3. Junction box will be installed at one corner of the junction on footpath. Bidder will have to lay power cables & copper cables from junction box till gantry / cantilever / pole and nearby power distribution point of Torrent Power. Bidder will have to lay these cables in underground manner only. No aerial cabling will be allowed.
4. For underground installation of the cables, bidder will have to use various methodologies like T&D / HDD / manual boring as per the availability of RoW permission from the authority as well as instruction of the field officer of the authority. For RoW permission, SI will have to make application to AMC on behalf of SCADL (application will be made in the name of SCADL), SI will have to collect demand note, SI will have to pay the demand note amount from their own account first and will have to get it reimbursed from SCADL. Reimbursement will be made as an expense reimbursement without GST. All procedural work of making an application, preparing any documents like field drawings etc., collecting DN, making payment at AMC office and collecting permission letter etc. will be SI's responsibility. Reinstatement / restoration work will be SI's responsibility. For ex.: if any footpath is opened by removing paver blocks or any asphalt / concrete road is broken for T&D or making pits for HDD/boring, in such case SI will have to restore the surface in original condition at their own cost and SI will have to follow AMC's concerned field

officer's instruction in this regards up to officer's satisfaction. The process mentioned in this clause applies only to SI's work of laying data cables and power cables. This process will not apply to Telecom Operators for laying OFC cables for providing P2MP / L2VPN connectivity for this project. For Telecom Operators, they will have to follow routine process wherein they will make an RoW application to AMC on their own name and they will also have to pay all DNs from their own account and no reimbursement in this regards will be made to Telecom Operator.

5. In case of any RoW permission related issue / field feasibility related issue, temporary aerial cabling will be allowed by SCADL after receipt of detailed justification / survey report from bidder. Once the ROW permission is received, the bidder is required to convert the aerial cable to underground within 21 days.
6. Bidder will have to ensure with utmost important that no injuries happen to citizens and no damage happens to any government / private assets during implementation work in field. Bidder will have to indemnify SCADL, AMC, Police, their representatives and employees from any claims arising due to any such accident / damage / injury cases. Bidder will have to ensure that all the debris, material, tools, machinery etc. are cleared from field / site immediately after completion of work to avoid any accident in field / injury to citizens / damage to any other asset of citizens.
7. The requirement for patch cords between FMS and switch connectivity falls under the scope of the Systems Integrator. Ensure the patch cords meet industry standards and are of sufficient length.
8. Bidder will have to ensure that all cables must enter into junction box through bottom cable entry points of the junction box to ensure that the door can be properly closed.
9. All the cables inside junction box should be labelled properly & tied properly with cable tie.
10. All the cables on gantry / cantilever / pole should be laid inside pvc / flexible pipes (as per field requirement) & pipes should be tied properly with cable tie.
11. All types of Cabling(electrical/optical) laying must be carried out as per relevant BIS/IS standards.
12. All proper precautions must be taken in advance to avoid rodent cut or any field relevant challenges of weather/atmosphere/field.
13. The System Integrator (SI) will require Right of Way (ROW) and permissions from following departments/ agencies for smooth implementation of the said project for Smart City Ahmedabad: AMC, Highway Authorities, Other Government agencies as required for system implementation. The SI will require following permissions for implementation of the project requirements:

Permissions	Details
Gantry/Cantilever/Pole erection	Prior permission and clearances from concerned officials and departments before erecting Poles
Main junction box installation	Prior permission and clearances from concerned officials and departments before installing Main junction boxes
Laying of Data cable and electrical cable	Prior permission and clearances from concerned officials and departments to lay cable from Torrent power junction box to Field SCADL junction box
Electrical Connection with electricity meter installation at junction	Permission and clearances from concerned officials and service provider for electrical connection

7.3 Video Analytics Solution and E- Challan Application

SITC and O&M of COTS e-Challan software / application with advanced analytics along with its related database(s) is in the bidder's scope.

The successful bidder will be required to collaborate with **maximum** two Original Equipment Manufacturers (OEMs) to implement the use cases outlined in Table I in the subsequent section.

The video analytics platform should comply to below requirements.

1. The platform should support various applications & all the use cases and therefore it must allow addition of new applications and algorithms for VA without requiring changes to the platform.
2. The hardware provisioned to run the video analytics use cases should be centralized for all the use cases.
3. The platform should include drill-down functionality to navigate from summarized views to specific location / event views with trend analysis.
4. The system should show on a live stream of a camera all the objects detected in FoV of a camera for all the applicable use cases using boxes.
5. The system should proactively check if FPS of camera & resolution is as per requirement and if they change anytime during the operation.
6. The platform should support partial search functionality of alert labels for ex. Part of a number plate.
7. The platform should provide result in 3 seconds for any query.
8. The platform shall provide analytics to correlate various data points for comprehensive actionable insights.
9. Platform should be able to configure and re-configure any analytics dynamically without the need to stop and start any application / analytics.
10. Every part of the metadata of alerts shall be clickable and searchable, enabling comprehensive drill-down functionality for in-depth analysis.
11. The Platform should be capable of grouping multiple occurrences of unique vehicles and persons. This includes the use of facial recognition and number plate recognition. The system should be able to aggregate all the alerts of a uniquely identifiable object irrespective of its registration status i.e. unregistered, registered or registered across different databases at different points of time and if these objects are seen together across multiple cameras, it should be proactively highlighted. The system should also be able to consume relationship information between uniquely identifiable objects either manually or through integration with third party databases.
12. The Platform must support queries in natural language to enable users to search for objects using simple, conversational queries. (Example: The system should understand and accurately process queries such as "find me all the black sedan that have crossed the entry camera in the past 2 days").
13. The NLP search should be operator friendly and shall support multi-condition queries in a single input, allowing users to filter alerts by combining parameters like plate type, number pattern, speed, vehicle make, color, and body type.

7.3.1 Use Cases

The scope of work under this RFP covers below mentioned **19 Use cases and additional feature** along with functional requirements to be implemented in e-Challan application / solution. The use cases mentioned below are to be run at cameras positioned at New Junction/Ring Road/Bridge locations and new cameras installed under SASA project (by another SI). Successful bidder of this RFP will have to do all required technical coordination with SI of SASA Project.

Bidder should note that the list of cameras for various use cases shall vary during the course of the project. The frequency of such variance shall be on a periodic / ad-hoc basis. In line with this, Bidder must procure floating license for the video analytics solution i.e. bidder will have to uninstall licenses from some cameras and install same licenses in other cameras as per instruction of SCADL / AMC.

If the bidder's E-challan application/solution necessitates higher FPS and bit rate for effective video analytics, then the bidder is free feel to choose higher version of cameras beyond those outlined in the indicative technical specification requirements.

Table I:

Sr. no	Function	Events	Use case to be Applied at
1	Civic Administration	Detection of garbage on road.	RLVD Cameras
2	Civic Administration	Detection of damaged infrastructure	RLVD Cameras
3	Civic Administration	Detection of Potholes on Road	RLVD Cameras
4	Civic Administration	Detection of Cattle on road	RLVD Cameras
5	Civic Administration	Detection of uncovered debris in truck & extended metallic elements outside of heavy vehicles.	RLVD / ANPR Cameras
6	Civic Administration	Spitting Detection	RLVD/ANPR Cameras
7	Civic Administration	Detection of faded stop lines & zebra crossings	RLVD Cameras
8	Civic Administration	Detection of Water logging	RLVD Cameras
9	Traffic	Red Light Violation Detection / Stop Line Violation Detection	RLVD Cameras
10	Traffic	Use of Mobile Phone while driving	Front Facing camera
11	Traffic	Not wearing seat belt detection	Front Facing camera

Sr. no	Function	Events	Use case to be Applied at
12	Traffic	Detection of two-wheelers riding without Helmet	ANPR Camera (700 cameras of SASA + bidder's ANPR cameras as per their network design)
13	Traffic	Detection of vehicles driving on wrong side.	ANPR Camera (700 cameras of SASA + bidder's ANPR cameras as per their network design)
14	Traffic	Detection of more than two passengers on two-wheeler	ANPR Camera (700 cameras of SASA + bidder's ANPR cameras as per their network design)
15	Traffic	Detection of lane violation blocking free left traffic by entering wrong lane	ANPR Camera
16	Traffic	License cost for one license for Automatic Number Plate Recognition (ANPR)	ANPR Camera (1000 cameras of SASA + bidder's ANPR cameras as per their network design)
17	Facial Recognition	License cost for one license for Facial Recognition to be floating on cameras	100 no. of Cameras (PTZ/Surveillance Cameras)
18	Video Summarization	License cost for one license for Video Summarization to be floating. of cameras	100 no. of Cameras (RLVD/PTZ/Surveillance Cameras)
19	Parking Violation Detection/Stalled Vehicle Detection	Detection of Parking Violation Detection/Stalled Vehicle Detection	100 no. of Cameras (PTZ/Surveillance Cameras)

A. Detection of garbage on road

1. The system should be capable enough to detect from the cameras raw video feed the locations where garbage is dropped on the road / footpath / in grounds where littering is not allowed. The system should detect all the littered areas and should have capability to filter out littered area with size of >0.5 mtr (any dimension like length / width / diagonal distance between edges of littered area can be considered for sizing).
2. Every detection should automatically create an event, a report in the format to be provided with actual image of the littered area, camera name / ID through which the littered area / garbage is detected, timestamp of detection etc. and such report should be stored

automatically with due indexing. Wherein the feed should contain t-10 seconds to t+10 seconds timeframe video. Where, T = the time at which incident has happened.

3. The system should detect this violation with minimum 70% accuracy in implementation phase & till end of 1st year of O&M. Accuracy is to be increased by 10% every year after 1st year of O&M. Maximum accuracy of 90% is to be achieved (above 90% accuracy is desirable but will not be liable for penalty if not achieved.).

B. Detection of damaged infrastructure

1. The system should be capable enough to detect from the cameras raw video feed the locations where civil / other infrastructure is damaged. For ex.: broken speed breaker, damaged traffic lights / poles, broken road edges, broken dividers and broken footpath.
2. It will be the responsibility of the bidder to collect relevant datasets and train the analytics model.
3. Every detection should automatically create an event, a report in the format to be provided with actual image of the damaged infrastructure, camera name / ID through which the damaged infrastructure is detected, timestamp of detection etc. and such report should be stored automatically with due indexing wherein the feed should contain t-10 seconds to t+10 seconds timeframe video. Where, T = the time at which incident has happened.
4. The system should detect this violation with minimum 60% accuracy in implementation Phase & till end of 1st year of O&M. Accuracy is to be increased by 10% every year after 1st year of O&M. Maximum accuracy of 90% is to be achieved (above 90% accuracy is desirable but will not be liable for penalty if not achieved.)

C. Detection of potholes on the road

1. The system should be capable enough to detect from the cameras raw video feed if any potholes are there on the road. The system should detect all the potholes including situated close to each other and should have capability to filter out potholes with size of >10 inch (any dimension like length / width / diagonal distance between potholes edges can be considered for sizing).
2. Every detection should automatically create an event, a report in the format to be provided with actual image of the road / pothole, camera name / ID through which the pothole is detected, timestamp of detection etc. and such report should be stored automatically with due indexing wherein the feed should contain t-10 seconds to t+10 seconds timeframe video. Where, T = the time at which incident has happened.
3. The system should detect this violation with minimum 70% accuracy in implementation phase & till end of 1st year of O&M. Accuracy is to be increased by 10% every year after 1st year of O&M. Maximum accuracy of 90% is to be achieved (above 90% accuracy is desirable but will not be liable for penalty if not achieved.).

***D*. Detection of cattle on road**

1. The system should be capable enough to detect from the raw video feed if any cattle are roaming on the road.

2. Every detection should automatically create an event, a report in the format to be provided with actual image of the cattle, camera name / ID through which the cattle is detected, timestamp of detection etc. and such report should be stored automatically with due indexing. Wherein the feed should contain t-10 seconds to t+10 seconds timeframe video. Where, T = the time at which incident has happened.
3. The system should detect this violation with minimum 70% accuracy in implementation phase & till end of 1st year of O&M. Accuracy is to be increased by 10% every year after 1st year of O&M. Maximum accuracy of 90% is to be achieved (above 90% accuracy is desirable but will not be liable for penalty if not achieved.).

E. Detection of uncovered debris in truck

1. The system should be capable enough to detect from the raw video feed the heavy vehicles like trucks / trailers carrying debris without covering it with cloth / any suitable material..
2. Every detection should automatically create a challan, a report in the format to be provided with actual image of the uncovered debris in truck, camera name / ID through which the uncovered debris in truck is detected, timestamp of detection etc. and such report should be stored automatically with due indexing. Wherein the feed should contain t-10 seconds to t+10 seconds timeframe video. Where, T = the time at which incident has happened.
3. The system should detect this violation with minimum 60% accuracy in implementation phase & till end of 1st year of O&M. Accuracy is to be increased by 10% every year after 1st year of O&M. Maximum accuracy of 90% is to be achieved (above 90% accuracy is desirable but will not be liable for penalty if not achieved.).

F. Spitting detection

1. The system should be capable enough to detect from the raw video feed if the vehicle driver / co-passenger in all types of 2 wheeler, 3 wheeler, 4 wheeler vehicles is spitting on the road.
2. Every violation should automatically create a challan, a report in the format to be provided with actual image of the spitting detection, camera name / ID through which the spitting is detected, timestamp of detection etc. and such report should be stored automatically with due indexing. Wherein the feed should contain t-10 seconds to t+10 seconds timeframe video. Where, T = the time at which incident has happened.
3. The system should detect this violation with minimum 60% accuracy in implementation phase & till end of 1st year of O&M. Accuracy is to be increased by 10% every year after 1st year of O&M. Maximum accuracy of 90% is to be achieved (above 90% accuracy is desirable but will not be liable for penalty if not achieved.).

G. Detection of faded stop lines & zebra crossings

1. The system should be capable enough to detect from the raw video feed the locations where white color of stop lines & zebra crossings have faded & it is not clearly visible.
2. For already faded stop lines & zebra crossings, the new paint work will be first carried out by authority first & then selected bidder's scope of detection will start.
3. Every detection should automatically create an event, a report in the format to be provided with actual image of the crossroad, camera name / ID through which the event is detected, timestamp of detection etc. and such report should be stored automatically with due indexing.

Wherein the feed should contain t-10 to t+10timeframe video. Where, T = the time at which incident has happened.

4. The system should detect this violation with minimum 80% accuracy in implementation phase & till end of 1st year of O&M. Accuracy is to be increased by 10% every year after 1st year of O&M. Maximum accuracy of 90% is to be achieved (above 90% accuracy is desirable but will not be liable for penalty if not achieved.)

H. Detection of water logging

1. The system should be capable enough to detect from the raw video feed the locations where water logging has happened. The system should detect all the water logging areas and should have capability to filter out water logging area with size of >3 mtr (any dimension like length / width / diagonal distance between edges of water accumulation can be considered for sizing).
2. The system should be able to categorize events on the dashboard based on the density of waterlogging, such as high density and low density events. The bidder shall provide such filtering system in their dashboard w.r.t to camera ID, Junction Name, Arm wise, time stamp vise etc.
3. Every detection should automatically create an event, a report in the format to be provided with actual image of the water logging, camera name / ID through which the water logging is detected, timestamp of detection etc. and such report should be stored automatically with due indexing. Wherein the feed should contain t-10 second to t+10 second timeframe video. Where, T = the time at which incident has happened.
4. The system should detect this violation with minimum 70% accuracy for implementation milestone approval & till end of 1st year of O&M. Accuracy is to be increased by 10% every year after 1st year of O&M. Maximum accuracy of 90% is to be achieved (above 90% accuracy is desirable but will not be liable for penalty if not achieved.)

I. Red Light Violation Detection / Stop Line Violation Detection System

1. The RLVD system should use the Video/Image processing techniques to identify the red-light violations.
2. The RLVD system Including ANPR capabilities should be integrated with the various application and Databases like e-GujCop, RTO Database (Vahan, Sarathi), one nation one challan application and e-Challan application (to be developed under this project) etc. such that e-Challans can be generated by the system through an automated process.
3. The RLVD system and related videos as well as the surveillance video feed should go to the CCC, wherein the Red-Light violation and its Number plate detection shall take place in real time.
4. The system should be capable of identifying & capturing of vehicles traveling through a signalized intersection during the 'red' signal phase during 24x7 (both day and Night) and recording a series of violation images that track the whole violation event.
5. The system should be able to capture the image of the violating Vehicle along with the active Red Light (in red colour), as a proof of the violation.
6. The system should be able to perform OCR (optical character recognition) of number plates (Read and Detect) written in English and Gujarati language with character in standard or non-standard fonts, unusual characteristics like Different size characters, font, colors, special characters etc.

7. The system should be able to do simultaneous monitoring of multiple lanes and should be able to identify multiple Red Light Violations simultaneously within the same lane/ Road.
8. The RLVD system should have both the options, one for integration with the Red Light Signaling System controller and second it should be able to sense the Red-light signal using pixel based change detection and identify violators based on it.
9. 'Scene' images will be captured showing the red signal in the direction of vehicle's travel.
10. The System should be able to read and identify the Registration plate of the vehicle violating the Red Light through the ANPR system.
11. The system should be able to capture and provide Video Feed from the RLVD application (Server side) for a duration for which the RED Signal is active for that section of the Road.
12. The system should also be able to detect Stop Line Violation Detection (SLVD) in case the vehicle had not travelled through a signalized intersection, but had just crossed the stop line & stopped there during the 'red' signal phase.
13. The System should be able to identify and log Red Light Violations / Stop Line Violation with minimum accuracy of 90% in day and night time.
14. The system should be able to generate various MIS reports like vehicle(s) violating rules, Vehicle details, violation type along with date and time stamp and week / Month / Year wise reports.

J. Detection of use of mobile phone while driving

1. The system should be capable enough to detect from the raw video feed if the vehicle driver in all types of 2-wheeler, 3 wheeler, 4 wheeler & larger vehicles is using the mobile phone (for viewing the mobile screen as well as talking by holding mobile phone in hand) while driving. Additionally, the vehicle owners standing at junction while signal is red & if they are talking on phone, in such case challan should not be generated.
2. Every violation should automatically create a challan, a report in the format to be provided and created image / video snippets of duration to be specified and such report should be stored automatically with due indexing.
3. The system should detect this violation during 24x7 (both day and Night) with minimum 70% accuracy in implementation phase & till end of 1st year of O&M. Accuracy is to be increased by 10% every year after 1st year of O&M. Maximum accuracy of 90% is to be achieved (above 90% accuracy is desirable but will not be liable for penalty if not achieved.).

K. No seat belts / safety belts detection system

1. The system should be capable enough to detect from the raw video feed if the vehicle driver & co-passenger in front seat in all types of 4 wheeler or larger vehicles haven't wore seat belt / safety belt.
2. Every violation should automatically create a challan, a report including vehicle number plate of the violators, date& time, location in a format to be provided and created image / video snippets of duration to be specified and such report should be stored automatically with due indexing.
3. The system should detect this violation during 24x7 (both day and Night) with minimum 70% accuracy in implementation phase & till end of 1st year of O&M. Accuracy is to be increased by

10% every year after 1st year of O&M. Maximum accuracy of 90% is to be achieved (above 90% accuracy is desirable but will not be liable for penalty if not achieved.).

L. Not wearing helmet detection

1. The system should be capable enough to detect from the raw video feed if the vehicle driver & co-passenger in back seat in all types of 2 wheeler vehicles haven't wore helmet.
2. The system shall have the capability to be disabled the events if in case SCADL/Police authorities required where a co-passenger in the back seat is not wearing a helmet.
3. Every violation should automatically create a challan, a report in the format to be provided and created image / video snippets of duration to be specified and such report should be stored automatically with due indexing.
4. The system should detect this violation during 24x7 (both day and Night) with minimum 70% accuracy in implementation phase & till end of 1st year of O&M. Accuracy is to be increased by 10% every year after 1st year of O&M. Maximum accuracy of 90% is to be achieved (above 90% accuracy is desirable but will not be liable for penalty if not achieved.)

M. Wrong side driving detection

1. The system should be capable enough to detect from the raw video feed if the vehicle driver in all types of 2 wheeler, 3 wheeler, 4 wheeler & larger vehicles is driving the vehicle on wrong side of the road.
2. The purpose of this use case is to identity violators if they are driving on the wrong side of the road.
3. Every violation should automatically create a challan, a report including vehicle number plate of the violators, date& time, location in a format to be provided and created image / video snippets of duration to be specified and such report should be stored automatically with due indexing.
4. The system should detect this violation during 24x7 (both day and Night) with minimum 70% accuracy in implementation phase & till end of 1st year of O&M. Accuracy is to be increased by 10% every year after 1st year of O&M. Maximum accuracy of 90% is to be achieved (above 90% accuracy is desirable but will not be liable for penalty if not achieved.)

N. Detection of more than two passengers on two-wheeler

1. The system should be capable enough to detect from the raw video feed if more than 2 passengers are travelling on all types of 2-wheeler.
2. The system should be able to differentiate between adult passenger and a child / infant sitting on a lap of a person sitting on a back seat. A child / infant sitting on a lap of a person sitting on a back seat will not be considered as a violation.
3. Every violation should automatically create a challan, a report in the format to be provided and created image / video snippets of duration to be specified and such report should be stored automatically with due indexing. The system should detect this violation during 24x7 (both day and Night) with minimum 90% accuracy

O. Detection of lane violation blocking free left traffic by entering wrong lane

1. The system should be capable enough to detect from the raw video feed if any vehicle has entered into / stopped in a wrong lane prohibiting free left turn for other vehicles. The system should detect such violations for all types of 2 wheeler, 3 wheeler, 4 wheeler & larger vehicles. For all those junctions where free left is allowed, all the vehicles from left most lane will not be considered as violation, but only stationary vehicles will be considered as a violation.
2. Every violation should automatically create a challan, a report in the format to be provided and created image / video snippets of duration to be specified and such report should be stored automatically with due indexing.
3. The system should detect this violation during 24x7 (both day and Night) with minimum 60% accuracy for implementation milestone approval & till end of 1st year of O&M. Accuracy is to be increased by 10% every year after 1st year of O&M. Maximum accuracy of 90% is to be achieved (above 90% accuracy is desirable but will not be liable for penalty if not achieved.).
4. **The bidder shall note that the license quantity specified in the financial bid is intended for price discovery purposes only**. SCADL does not guarantee any specific quantity for this use case. If a traffic junction design permits the successful implementation of this use case, then SCADL will notify the bidder to conduct analytics for this use case. To get approval of this use case, the bidder must meet the accuracy criteria mentioned in point 3 of this use case . Upon approval, SCADL will pay the bidder based on the agreed unit price per license for the executed license quantity, as specified in the financial bid.

P. Video Summarization

1. SCADL is planning to procure about 100 floating licenses of Video summarization System with 5 concurrent client licenses, these licenses can be dynamically applied on live video feed of identified cameras and on recorded or exported video feed. The some of the mentioned feature will be utilize in live feed & some of the feature will be utilized in the recorded feed. The Video summarization analytics system shall be based on computer vision and AI (Artificial Intelligence) technology enabling rapid video review, search, quantitative video insights and smart alerting, thereby shortening time-to-target to detect and mitigate security threats and enhancing safety and operational optimization significantly. System shall enable generation of Summarization of video sourced from both recorded offline-video files and online VMS platforms with full case management, multi-camera search, appearance similarity.
2. System shall be able to generate live alerts thereby delivering proactive response to critical user-defines events ensuring enhanced safety and security.
3. System shall be able to perform the video analysis on the pre-recorded files. Additionally, it shall be integrated with the video management solution proposed by the bidder.
4. System shall automatically extract all the moving objects (People/Vehicle/Animal) from the original video and efficiently reconstructs and without altering the original image/video/data simultaneously displaying events that have occurred at different times.

5. System shall Instantly locate people, vehicles and items of interest by searching for similar looking objects.

6. System shall dynamically visualize Key performance (KPI) Indicator of Visitor/Pedestrian count derived from extracted video objects and their classification for comprehensive business intelligence.

7. System shall summarize the daily alerts and send the notifications.

8. **Indicative Object Search Criteria**

    a. Time Range – Shall be able to limit the search criteria to specific time ranges
    b. **Source** – Shall be able to limit the objects to specific CCTV Camera feed or offline pre-recorded video files
    c. Classes – Post-analysis, reviewed video shall be shown based on People, Two-Wheeled Vehicles, Other Vehicles and Animals with following categories:
        i. **People Class:** Man, Woman, Boy, Girl etc.
        ii. **2-Wheeled Vehicle Class**: Bicycle, Motorcycle etc.
        iii. **Other Vehicles Class:** Car, Pickup Van, Truck, Bus, three vehicle etc.
        iv. **Animals Class:** Animals
    d. People Attributes – The Person Attribute Detection should incorporate person attribute-based search capabilities on UVIP to assist forensic search and investigation teams. This functionality should enable identification and filtering of individuals based on visual characteristics, even in scenarios where facial data is not clearly available. The system must automatically extract and index the following person attributes—wherever the camera captures partial or full-body visuals within its field of view (FOV):

        i. Upper Clothing – Type (e.g., shirt, jacket, t-shirt) and colour
        ii. Lower Clothing – Type (e.g., jeans, trousers, skirt) and colour
        iii. Hair – Style and presence of headgear (e.g., cap, helmet, scarf, glasses)
        iv. Object in Hand – Detection of any handheld items (e.g., bag, mobile, weapon)
        v. Age Group – Estimated age category (e.g., child, teenager, adult, elderly)
        vi. Gender – Predicted gender of the person
        vii. Body Type – Physique-based categorization (e.g., slim, average, heavy)
        viii. Action – Basic behavioral cues (e.g., walking, running, sitting, carrying)
        ix. Scene Description – Contextual details about the scene (e.g., indoors, crowd, vehicle proximity)
        x. Bags: Backpacks, Handheld Bags
        xi. Hats: Hats, No Hats
        xii. Colour - Identify objects according to any combination of various colors like Brown, Red, Orange, Yellow, Green, Lime, Cyan, Purple, Pink, White, Grey, and Black
        xiii. Size - Select objects based on their actual (real-life) size specified in meters.

xiv. Speed - Select objects based on their actual speed specified in kmph
xv. Dwell - Select objects dwelling for longer than a certain time period in a scene
xvi. Area - Identify objects included or excluded within one or more user-defined areas.
xvii. Path - Identify objects traveling along one or more user-defined paths

These attributes must be part of the metadata generated by the algorithm and indexed to enable quick and efficient forensic search. The system should allow users to query and filter alerts based on any combination of the above attributes, thereby enhancing the investigation process even in the absence of identifiable facial information.

e. Vehicle Attribute : The Vehicle Attribute Detection system should incorporate vehicle attribute-based search capabilities in platform to assist enforcement and investigation teams. This functionality should enable identification, tracking, and filtering of vehicles based on visual characteristics, even when the license plate is not clearly visible. The system must automatically extract and index the following vehicle attributes wherever the vehicle is captured within the camera's field of view (FOV):

i. Vehicle Type – Classification such as car, HMV, bike, auto-rickshaw, etc.
ii. Vehicle Color – Primary exterior color of the vehicle.
iii. Make and Model – Brand (e.g., Toyota, Hyundai, Tata etc), where feasible.
iv. License Plate Visibility – Detection of plate presence, occlusion, and readability.
v. Commercial or Private – Classification based on vehicle markings, plate color, or additional cues.
vi. Scene Description – Contextual details about the scene.

These attributes must be indexed as metadata and made searchable through the system interface. Users should be able to query and filter alerts or video evidence based on any combination of the above attributes, thereby accelerating enforcement actions or investigative workflows even in the absence of clear license plate data."

9. The system shall provide a functionality to enter color and make of the vehicle, and the system will have to give alerts from live video feeds of all cameras where the vehicles matching with given parameters are found. For ex. : Red Maruti Swift. These are some types of the examples.

10. System shall generate near-real-time alerts based on any of the above-mentioned search and filter criteria. System should allow various filters to select all applicable cameras on which summarization to be run, colour, vehicle make & model, people attributes etc.

11. Video Summarization System/Software should have capability to perform all the functionality on recorded video feed (feed of Minimum 2 MP Camera) of existing SASA project including but not limited to Nirbhaya Project, Ahmedabad Viswas Project, Ahmedabad CSITMS projects, any other feeds from any other projects.
12. The SI along with the respective OEM has to take entire responsibility of the analytics outcomes as envisaged in this RFP without any issues (like bad image quality, bad video quality, camera focus, environmental disturbance etc.)
13. **Performance Parameters**

    a. System shall be able to detect the minimum face size of at least 30x30 pixels.
    b. System shall be able to detect the faces across the multiple CCTV video sources.
    c. System shall be able to detect selected objects from minimum 10 CCTVs at a time and summarization should be concluded within 2 min.
    d. These system shall automatically generate real-time alerts for new events that match the predefined criteria.
    e. System shall use extensive AI Technology and perform video processing on suitable GPUs. Bidder to submit undertaking from Video summarization OEM on recommendation of the most suitable graphic card. Based on the OEM recommendation Bidder have to provide the Graphic card/GPU capacity.
    f. System shall be integrated with the appropriate database software like Oracle or SQL or Any other for maintaining the various alerts and analysed video feeds.
    g. OEM of video Summarization system shall certify the number of cameras that can run at a given point of time on a proposed physical server/virtual machine by the bidder, on peak load and with maximum performance.
    h. System shall be able to provide video Summarization for 2 hrs video in less than 2 mins with selected objects highlighted.
    i. Bidder to calculate the compute and storage requirements as per solution proposed by bidder.

14. Bidder is expected to provide video summarization solution using AI & deep learning on a recorded video feed in such a way so that during implementation phase and the first year of O&M the accuracy of provided alerts will be of at least 80% accuracy (true alerts/total alerts). Accuracy is to be increased by 5% every year after 1st year of O&M. Maximum accuracy of 90% is to be achieved (above 90% accuracy is desirable but will not be liable for penalty if not achieved.).

Q. Facial Recognition System

1. SCADL is planning to procure about 100 floating licenses of FR system with 5 no. of concurrent client licences with DB size of 5,000 images, these licenses can be dynamically applied to identified cameras as and when required. Face Recognition System (FRS) shall be designed for identifying or verifying a person from various kinds of photo inputs from digital image file to video source. The system shall offer logical algorithms and user-friendly, simple graphical user interface making it easy to perform the facial matching.

2. The Face Recognition System shall be able to work with any video streaming sensor like IP Camera (Surveillance, PTZ,) - Live & Recorded and for Body Worn Cameras, Mobile handset cameras - Recorded Video feed. FR system shall be able to identify multiple subjects of interest in real-time, through leading face & person recognition technology based on AI & Deep Neural

networks and provide an alert when subject of interest in match is found. Primary FR will be configured on fix Surveillance & PTZ camera.

3. FR System/Software should have capability to perform all the functionality on recorded video feed (feed of Minimum 2 MP Camera) of existing SASA project including but not limited to Nirbhaya Project, Ahmedabad Viswas Project, Ahmedabad CSITMS projects, any other feeds from any other projects.

4. The SI along with the respective OEM has to take entire responsibility of the analytics outcomes as envisaged in this RFP without any issues (like bad image quality, bad video quality, camera focus, environmental disturbance etc.)

5. The image of the faces extracted by facial recognition application, along with the timestamp and location of the image capture will stored for a period of 3 months.

6. The system shall be able to broadly match a suspect/criminal photograph with database created using photograph images available with Police/other entity. Thus, it should avoid duplicate registration of the new face (if any).

7. Bidder is expected to provide face recognition solution using AI & deep learning on a recorded video feed in such a way so that during implementation phase and the first year of O&M the accuracy of provided alerts will be of at least 80% accuracy (true alerts/total alerts). Accuracy is to be increased by 5% every year after 1st year of O&M. Maximum accuracy of 90% is to be achieved (above 90% accuracy is desirable but will not be liable for penalty if not achieved.).

8. The system shall be able to:

    a) The Face Recognition System (FRS) shall seamlessly operate in real-time and offline mode, identifying and recognizing faces from live video streams of CCTV, digital image files, or archived footage. The system should be compatible with various input sources including IP cameras, body-worn cameras, mobile handset cameras, Tablet cameras, UAVs, and drones.
    b) The FRS system should support real-time updates to its database, enabling the immediate addition or modification of entries without requiring reconfiguration or application/system restarts. It should also allow for the integration of faces detected in live feeds from various sources, thereby constantly improving the accuracy and completeness of the database. The FRS system should support Advanced deduplication and quality control mechanisms to maintain a high-integrity database suitable for security and surveillance applications.
    c) The Facial Recognition System (FRS) should possess the capability to verify whether a newly enrolled face already exists within the database prior to proceeding with the registration of the new face into the system. In addition, the system must have the capability to swiftly locate any prior detection of a Person of Interest (POI) when enrolled into the watch list, achieving a retrospective search in under 2 seconds. It should incorporate advanced deduplication and quality control mechanisms to uphold a high-integrity database, ensuring suitability for security and surveillance purposes.

d) FRS should run in constrained and unconstrained environments both with optimized compute power and minimum hardware sizing provided below. FRS system shall be able to recognize a minimum 70 x 70 Pixel face size in video or live feed.
e) The FRS System shall demonstrate accuracy (> 90%) in detecting and recognizing faces across a wide spectrum of Indian facial characteristics, functioning seamlessly in various environmental conditions. It shall provide the capability to be fine-tuned or sustained using Indian-centric datasets, ensuring consistent and adaptable performance to meet local needs.
f) The system shall be able to detect more than 20 faces simultaneously in a crowd on moderate face rotation either horizontal or vertical. It should support a yaw angle of -30 to +30 degrees, a pitch angle of -30 to +30 degrees and a roll angle of -30 to +30 degrees relative to the camera.
g) The FRS shall provide support to recognize partial faces with varying angles from multiple videos simultaneously from Video clips and VMS Playback directly from FRS Client Interface. FRS shall be able to process uploaded pre-recorded video feeds depending on the proposed hosting hardware and the video quality. The FRS system shall provide detection output indicating the orientation of the detected face, distinguishing between front and side faces with score.
h) System shall be able to detect the faces across the multiple CCTV video sources for online (real-time) and offline modes regardless of following conditions:
   a. Changes in Facial expression
   b. Changes in facial hair or hairstyle
   c. Changes by moderate ageing (up to10 years)
   d. Partially hidden faces or occluded faces like wearing dark glasses mask etce. Changes in lighting conditions
i) Simple Search UI that facilitates quick and easy access to the collection of events recorded by the system without the constant monitoring by operators and must perform a full 1: N search of the probe image by both existing events as well as image uploads. It shall support following
   a. Search previous events by enrolled names
   b. Search previous events by date and time
   c. Search previous events by camera group
j) Search previous events by images from previous detections and show as pre stacked together basis on similarity. Search previous events by images uploaded by operator and show as pre stacked together basis on similarity.
k) FRS shall have capability of Search backwards for previous detections and/or recognitions (events) of the detected person without enrolment from live CCTV & other forensic videos / offline videos.
l) FRS system shall be able to search any image available in open domain without manually uploading or downloading the image. The search results should be categorized basis the confidence of the algorithm and pre stacked together basis on similarity,

m) FRS must allow tracking of faces on maps to be uploaded in the system for cameras connected to FRS and shall highlight the camera location on the map for each detection/alert.

n) The Face Recognition Algorithm should have participated and have been established in the Face Recognition Algorithm Evaluation conducted by NIST (National Institute of Standards and Technology, U.S. Department of Commerce) for both 1:N and 1:1 FRVT Tests. The NIST benchmark/ latest performance FRVT test results should not be more than 12 months old as on the date of bid submission. For the NIST 1:1 Benchmarking, On the VISABORDER dataset, calculated using FNMR @ FMR = 10-6, the scores should be .0099 or better.

o) The system shall have the best-suited technology employed for 1:1 (one to one) and 1: N (one to many) matching application for various purposes for non- voluntary face detection & recognition in the wild/crowd scenarios.

p) The Facial recognition system should seamlessly be integrated to the 3rd party applications such as Big Data frameworks, Open source platforms, social media platforms such as Twitter, Facebook, Instagram, YouTube, WhatsApp etc. to identify the people.

q) The system shall use the Artificial Intelligence based Deep learning mechanism for searching a suspect across multiple camera views.

r) The system shall be able to flag or bookmark an incident for future investigations.

s) The system shall have the provision to take multiple samples of same face belonging to same person and simultaneously detect a minimum of 20 faces in any given frame in real time.

t) The system shall be able work on face rotation horizontal (Min ±45 degree) and vertical (Min ±30 degree). The System shall be able to work in the following conditions:
    - Changes in facial expression
    - Changes in facial hair or hairstyle
    - Changes by moderate aging (up to 15 years)
    - Partially hidden faces or occluded faces like fearing dark glasses etc.
    - Changes in lighting conditions

u) The system shall be able for matching suspect faces from pre-recorded video feeds from CCTV deployed at various identified locations.

v) The system shall support diverse graphic & video formats as well as live cameras.

w) The system shall be able to utilize any of the file formats like JPEG, PNG, BMP, TIFF etc. format for enrolment.

x) The system shall be able to check if new enrolled face is already enrolled in the database before registering the new enrolled face in the system. Also, the system shall be able to find a previous detection of a POI upon enrolment to watch list (retrospective search).

y) The system shall have option to automatically enroll face images from CCTV cameras/video source and shall work adequately with reference image (for enrolment) of Face Size.

z) The system shall be able to work on full HD or better Camera video with maximum performance.

aa) The system shall be able to be implemented on centralized and dedicated compute & storage infrastructure Server

bb) The system must perform a full 1: N search of the probe image in Max 5 seconds against a database of up to 5,000 records.

cc) Capture face images from CCTV feed and generate alerts and pass the alerts to the on the application if a blacklist match is found.

dd) Search photographs from the database matching suspect features.

ee) Match suspected criminal face from pre-recorded video feeds obtained from CCTVs deployed in various critical identified locations, or with the video feeds received from private or other public organization's video feeds.

ff) Add photographs obtained from newspapers, raids, sent by people, sketches etc. to the criminal's repository tagged for sex, age, scars, tattoos, etc. for future searches.

gg) The system should be able to enhance the quality of the input images via multiple models such as –

- Brightness and Contrast adjustment
- Auto Tune Functionality for auto image enhancement
- Image smoothening especially for dull images
- Image / Motion Deblurring functionality
- Dehazing functionality to remove fog, smoke and smog
- Noise removal for removing grainy noise
- Sharpening filters for image enhancement
- Low Light Enhancements
- Remove backgrounds from images to clearly view areas of interest for further processing

hh) The system shall be able to work on windows or Linux operating system

ii) The system shall support database system like MS SQL or Oracle or any other data base system.

jj) System shall able to integrate with camera either by RTSP stream directly or shall able to integrate through VMS provided by SI, preference will be given to tight integration through VMS.

kk) OEM of facial recognition system shall certify the number of cameras that can run at a given point of time on a proposed physical server/virtual machine proposed by the bidder, on peak load and with maximum performance.

ll) The facial recognition system shall be enabled at cameras identified by the Police/SCADL. Police / Intelligence Agencies/SCADL shall dynamically identify these cameras, as and when required.

mm) The Facial recognition software must send an alert to VMS which shall highlight the camera location (uploaded in VMS) for each detection (Whenever required).

nn) The Face Recognition system must be General Data Protection Regulation (GDPR)/ Indian Data Protection ready to address and aid any privacy concerns that may arise from the use of such software by various agencies in future.

oo) The Face Recognition system shall support federated architecture with Server Client.

pp) Bidder to calculate the compute and storage requirements as per solution proposed by bidder.

R: Parking Violation Detection/Stalled Vehicle Detection

1. The system must be capable of detecting whether vehicles, including all types such as two-wheelers, three-wheelers, four-wheelers, and larger vehicles, are parked or stalled on the road using raw video feeds. The primary aim of this use case is to identify violators when their vehicles are improperly parked or stalled, ensuring efficient traffic management.

2. Every violation should automatically create a challan, a report including vehicle number plate of the violators, date& time, location in a format to be provided and created image / video snippets of duration to be specified and such report should be stored automatically with due indexing.

3. The system should detect this violation during 24x7 (both day and Night) with minimum 70% accuracy in implementation phase & till end of 1st year of O&M. Accuracy is to be increased by 10% every year after 1st year of O&M. Maximum accuracy of 90% is to be achieved (above 90% accuracy is desirable but will not be liable for penalty if not achieved.)

7.3.2 Features / Functionalities

***A.* Track Movement of Flagged Vehicles**

1. Track movement of a flagged vehicle (by entering vehicle number manually in a given field and tagged number as "Wanted", "Suspicious", "Stolen") across the city on map with relevant video feeds.
2. The system should be able to generate an alarms / alerts when found in live video feeds of any of the ANPR. The bidder must include a feature in their application that allows for the bulk upload of vehicles using an Excel spreadsheet and the system should take all numbers in processing simultaneously.
3. Functionality to tag any vehicle in any of the ("Wanted", "Suspicious", "Stolen") categories and send an alert to concerned department when the vehicle passes through any of the junctions.
4. For above mentioned functionality that is to be implemented based on given vehicle number, system will also have to provide past trails of vehicle movement for the given from & to time period.

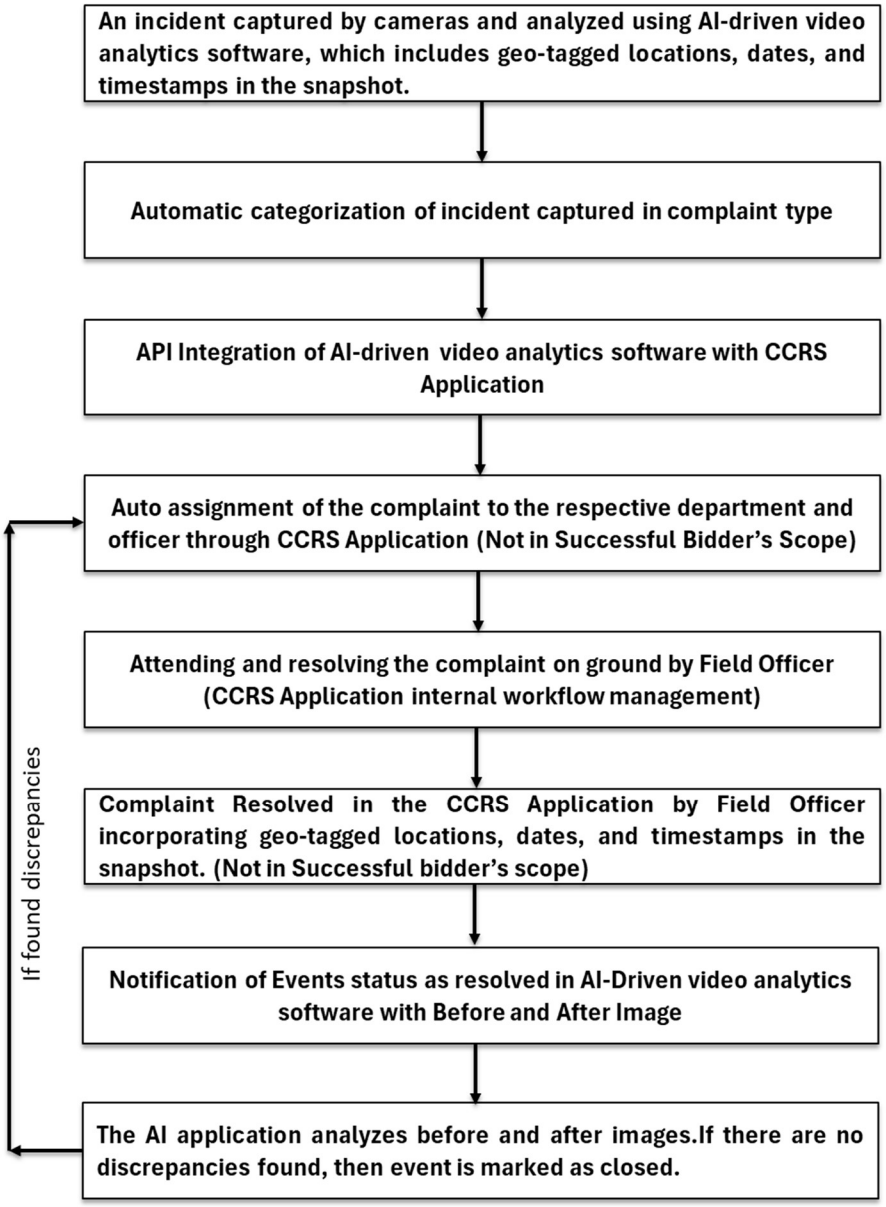
7.3.3 E-Challan System and Dashboard

1. The successful bidder is required to develop a "e- Challan system/solution" based on the laws/rules of Motor Vehicle Act of central/state government.
2. Successful bidder is responsible for end-to-end designing, planning, supply, implementation, testing, commissioning and maintenance of entire e-Challan system and dashboard.

3. It is envisaged that successful bidder will have to submit a detailed Functional Requirement document and software requirement specification covering each and every aspect of the system required to successfully run the system.
4. e-Challan system should be able to automatically generate e-challan's based on the laws/rules of Motor Vehicle Act of central/state government for the violations detected by the surveillance system. It should also have a provision/interface for manual e- challan generation for violations captured through video feeds and field level. If the government make changes in laws pertaining to traffic management during the O&M period of the contract, the bidder will have to carry out such changes without any additional cost.
5. It should be integrated with the all the required databases/systems for auto generation of e- Challan like RTO ,ONOC system, VMS system and other required resources.
6. e-Challan system should have a provision to whitelist vehicle numbers of emergency vehicles (for ex. ambulance) so that RLVD challans for such vehicles will not be generated even upon violation.
7. The successful bidder is required to submit the SoPs, documents, FAQ along with all the patches and upgrades of the system.
8. Application development must be documented in detail and the code/script should be properly annotated with comments etc.
9. The application should be able to view all the violations/detections (of All use cases mentioned in the RFP) on the map (map service to be supplied by the successful bidder) the view should allow the facility to change the time scale from 1 hr. to 1 year, with daily, weekly, monthly, quarterly, and yearly views available.
10. The system should also be able to view the e-Challans push to ONOC/generated per traffic signal with a facility to drill down. The view should allow the facility to change the time scale from 1 hr. to 1 year, with daily, weekly, monthly, quarterly, and yearly views available.
11. The successful bidder will be required to provide functionality within their application dashboard that allows for time-based analysis, junction-specific analysis, camera id vise analysis and arm-specific analysis for all use case mentioned in this RFP. Additionally, the application should facilitate comprehensive data filtering facility for all above-mentioned parameters and reporting capabilities and generate custom reports.
12. The system should also generate report w.r.t use case wise top 100 offender list, Junction location listing from highest to lowest number of events generated for use cases for specified time interval, etc. The view should allow the facility to change the time scale from 1 hr. to 1 year, with daily, weekly, monthly, quarterly, and yearly views available.
13. The system should also generate report of total no. of vehicles captured in each ANPR camera for specified time interval.
14. The system should have a functionality to fetch requested data from particular camera feed (For example : There should be a field to input numeric value of total number of passed vehicles for ex. 5000, now system should provide all the junctions / arm / lane i.e ANPR camera based on filter applied from where >5000 vehicles have passed in a specified time period filter.)
15. **Vehicle Classification:** The system should be capable enough to View ambient volume count of all types of vehicles with bifurcation of types of vehicle in at least defined categories of 2W, 3W, car, Bus, LCV, HCV, MPV, HGV, HPV, LGV and LMV across all junctions in the city with a facility to drill down volume count on each arm. The system should be able to provide detailed view reports on vehicle counts at any given junction, broken down by arm, camera id, junction name during specified time periods. The view

should allow the facility to change the time scale from 1 hr. to 1 year, with daily, weekly, monthly, quarterly and yearly views available.

16. The system should be able to generate MIS reports based on the type/ Date /time/Location of offences for multiple time duration like daily, weekly, monthly, quarterly etc., as may be required for the day-to-day activity.
17. The Successful bidder will also have to publish the API's for the integration of Violation information with RTO Database (Vahan, Sarathi) , e- Gujcop application , one nation one challan application.
18. SCADL requires the integration of all municipal events detected (such as garbage, water logging, potholes, faded zebra crossing, damage infrastructure and not limited to this) on the bidder's dashboard with the SCADL's Comprehensive Complaint Redressal System (CCRS) application. The selected bidder is responsible for developing and publishing an API that facilitates this integration. The expectation is that any events recorded on the dashboard will seamlessly integrate with the CCRS application. Once a field officer resolved an event within the CCRS application, the bidder's dashboard must automatically update the event's status to resolved and then AI application analyzes before and after images and if there are no discrepancies found in before and after image , then event is marked as closed.



19. The Application dashboard should be able to show all the violations/detections on the map (map service to be supplied by the successful bidder), the view should allow the facility to change the time scale from 1 hr. to 1 year, with daily, weekly, monthly, quarterly, and yearly views available.
20. The reports to display date and time stamp when event has been identified, Location where event occurs, Navigation links on dashboard against all events, event description, video clipping of identified event of 10 second (Violation of event) , image of the event detected, Camera Name/ID, Status, Seen time.
21. The 10 second video feed should have multiple tags in same video highlighting in box for every event in the dashboard.

22. Each department/ward/zone will have designated login credentials. Upon successful login, the dashboard interface will display events specific to the user's department. Events related to other departments will not be visible on the dashboard.
23. The Application dashboard created should have login credentials, these login credentials created are to be provided to various concerned AMC departments. The bidder should provide dashboard access to min. "n" no. of officials and maximum of 150 concurrent logins.
24. The bidder should provide a user-friendly interface for seamless event browsing within the designated department/ward/zone.
25. The reports to have features to filter the events based on wards, zones, event type, department, captured source of the event (Camera ID) and Status wise.
26. The dashboard will display the number of open events based on daily and monthly metrics, as well as their respective closed status. (w.r.t zone, ward, use case wise).
27. The Dashboard shall seamlessly capture all events observed through Cameras while ensuring optimal performance, even with the integration of the quantity of dashcams specified in the RFP i.e. the performance of the dashboard should not be degraded when all camera license use cases outlined in the RFP are executed.
28. The Successful bidder should also ensure that no duplicate events are to be identified by the Application and displayed on the dashboard.
29. The successful bidder will be required to publish APIs for integrating violation information with the RTO database (Vahan, Sarathi). This integration will allow for the retrieval of the violator's name, address, and mobile number by sending the license plate number to the Vahan application. The dashboard will showcase all generated events and provide an option to manually approve or reject the challans. Once an event is approved, the challan will be automatically sent to the violators.
30. The “web based e-Challan” payment module has to be developed by the successful bidder and integrate with a AMC Payment Gateway (to be provided by SCADL) for the online payment of the challans by the citizens through multiple mode i.e. Debit / Credit Card / Internet Banking / wallet etc.
31. The system should also have the provision for integration of the e-challan system with an SMS gateway (To be provided by SCADL) for Intimating the offenders/violators at the various steps such as at the time of generation of challan, Payment due, payment made etc.

7.3.4 Automatic Number Plate Recognition (ANPR) System

1. The proposed ANPR System shall enable monitoring of vehicle flow. The system shall support real-time detection of vehicles, reading of its number plate and conversion of the same into alphanumeric text.
2. The proposed system should be able to generate an auto alarms /alerts based on the vehicles status and category as specified by the database.
3. The proposed ANPR system has to be integrated with various Applications/ Databases of the e-GujCop application of the Police department, RTO Database (Vahan, Sarathi), one nation one challan application etc. for verification/checking and fetching/providing the required vehicle information.

4. The proposed system should be able to store the image of vehicle, number plate and also able to create a record of vehicle no., Date & time stamp, locations etc. in DBMS.
5. The proposed System should be able to detect and recognize the English alphanumeric License plate in standard fonts and formats of all the vehicles.
6. The proposed system should be capable to perform OCR (optical character recognition) of number plates (Detect and Read) written in English and Gujarati language with character in standard or non-standard fonts, unusual characteristics like different size characters, font, colors, special characters etc.
7. The Accuracy of ANPR system should be more than 90% in case of standard English Alphanumeric Font and High Security Registration plates and 75% for Hindi Devnagari and Gujarati scripts, the system should be able to capture the Registration Plate of a vehicle moving at a speed of up to 150 Km/hour with the same level of accuracy.
8. The system database should allow to make an advance search in the database with different set of criteria while conducting post incident analysis/investigations.
9. The proposed system should be able to generate various MIS reports like vehicle flow, detected vehicle category wise reports, etc.

7.3.5 Other important details

1. SI is responsible to size and propose the video analytics servers with GPU requirements, Application Servers, Database servers, Recording servers, Directory servers, Management servers for smooth functioning of the entire solution as per OEM guidelines and standard industry practice. SI has to supply, install, commission and manage/maintain the IT Infrastructure components such as Servers, Databases, Software as required at the Data Centre that has been proposed as part of the bid. Bidder to provide number of physical server related requirement for this project in their technical bid. Also, Bidder must procure the same quantity during the implementation phase of the project.
2. The System Integrator has to procure the materials and equipment as required and given as part of the System Integrator's response. However, it should be noted that the System Integrator has to procure all necessary equipment to run the solution as per the requirementof the RFP documents including the SLA. In case, it is identified that certain components are required but not quoted by the Bidder, the SI will procure and commission the same without any financial implications.
3. AMC / SCADL is not responsible for any assumptions or judgments made by the Bidder for arriving at any type of sizing or costing. AMC / SCADL at all times will benchmark the performance of the Bidder to the RFP Documents circulated to the Bidder and the expected service levels as mentioned in these documents. In the event of any deviations from the requirements of these documents, the Bidder must resolve the concern within two weeks of detection of the deviation, in order to achieve the desired service levels as well as meeting the requirements of these documents. Also, if Bidder misses to factor the cost of any item required to deliver the solution successfully or under size the solution, then the Bidder has to provide that without any additional cost to SCADL.
4. The System Integrator shall note that the specification provided is the minimum requirement and the System Integrator shall procure better equipment if it is required to meet the service levels mentioned in the RFP.
5. Proposed e-Challan application and solution will have to generate all types of e-Challan/Events (19 no.use cases and additional features) from the live video feed of these cameras as per SoW of this RFP.

6. Selected SI will have to provide all necessary licenses for the e-Challan application & related databases on the name of SCADL for total number of cameras as mentioned in SoW. All the licenses should be perpetual in nature.
7. Selected SI will have to submit entire source code of the application to SCADL without any additional cost at the end of contract period. The ownership of the application (including the source code) will be of SCADL. It is selected SI's responsibility to ensure that with the source code provided to SCADL, the entire e-challan analytics application runs successfully even post contract period without any further requirement of O&M contract with the bidder. SCADL will sign NDA with selected bidder at the end of contract period and then only selected bidder will have to provide entire source code to SCADL. Also, selected SI will be responsible to provide technical & functional training to SCADL representatives on this matter so that SCADL team can successfully run the application post contract period.

7.4 Server, storage & Core network elements

The Successful Bidder shall be responsible for Design, Supply, Install, Test, Commission, Operation and Maintenance of Servers, storage, Network devices in the data center under the scope of the RFP. Bidder is required to consider following points with respect to the Installation and integration of data center elements.

1. The bidder is responsible for SITC of Data Center Server including host OS (if required), Virtualization platform (bidder is free to plan either class – 1 or class – 2 hypervisor as per their architecture design and all required licenses etc.
2. The bidder is responsible for SITC of SAN & NAS Storages for camera video feed storage and various applications. Bidder is also allowed to consider unified storage but in this case, bidder will have to comply to minimum storage requirement as specified in this RFP for video feed and various applications.
3. The bidder is responsible for providing the solution within a virtualization environment.
4. The bidder is responsible to plan for scalable Storage & Server solution considering for the addition of more cameras in future. Bidder will have to provide storage with a capacity to expand storage capacity by 1 PB in future (if required, storage solution which can be expanded for upto 1 PB capacity without additional any additional controller in future). Similarly for server, bidder is responsible to design overall server / compute power required to fulfill the SoW of this RFP, whatever compute power in terms of physical core and cuda core (both for CPU & GPU) is planned by bidder (let's say X cores) in their technical architecture for the SoW of this RFP (bidder will have to clearly mention it in their technical proposal), bidder will have to plan additional 20% compute power capacity of the planned X core capacity while selecting their server chassis for future. Server chassis must have additional slots for same.
5. The bidder must ensure that the installation and commissioning of the server and storage system will not affect the regular operations of the existing data center. All installation activities should be carried out in a professional manner, adhering to industry best practices and safety guidelines.
6. SCADL wishes to establish a new Data Centre (DC) under this project at the same location, where one data center have been established which is currently managed by SASA O&M SI. In the event that SCADL requires cameras installed under the SASA project to store their feeds in a new data centre, the selected bidder will be responsible for coordinating

with the current System Integrator (SI) of the SASA O&M project. This coordination will involve establishing connectivity between old data center and new data center, configuring the necessary network, server, and storage settings to ensure that the camera feeds are properly stored in the new data center setup. To store the video feeds of cameras (approx. 1600 cameras) installed under SASA project (by another SI) into storage installed by the successful bidder of this RFP, successful bidder of this RFP will have to do all required technical coordination with SI of SASA network in terms of providing required storage path details to existing SI's VMS team for configuring into VRs (video recorders) etc.

7. Critical / Core components of the system should not have any requirements to have proprietary platforms and should conform to open standards.
8. The Bidder shall have to install DC Server and Storage as specified in Technical and Functional requirement in Annexure I.
9. For server and storage individual components (for ex. individual server blade / individual Virtual Machine (VM) hosting one application or database), RTO (Recovery Time Objective) must be <=4 hours. For ex.: for all server physical blades, an average quarterly SLA is defined in SLA table, but let's say in the event of complete power failure & abrupt shutdown of servers etc., certain servers / VMs comes up immediately after restoration of power back-up but few servers / VMs needs much more time to become functional due to reconfiguration / reinstallation of application or database etc., then in such case it must not take >4 hours time. This is because such case can impact availability of any critical applications like NMS / VMS / e-Challan etc. In the event, SI will not be able to comply to this requirement, SCADL / AMC will have a right to impose event based penalty of Rs. 5 Lac per each such event.
10. Successful bidder will also have to take data back-up only for applications and their databases (& not for video feeds) in a separate storage drive that must not be connected to external environment outside data center room. Bidder will have to take complete back up once every week and incremental back-up every 24 hours. Accordingly, RPO (Recovery Point Objective) for any critical information must not be >24 hours.

7.5 Storage/Recording Requirement:

The following storage requirements shall be fulfilled by the SI as scope of the project

1. Video feeds of all types of cameras will be stored for 30 days.
2. All events detected in E-Challan application and successfully pushed to ONOC system along with the corresponding images of RLVD & ANPR cameras will be stored for 120 days.
3. All events detected in E-Challan application and not pushed to ONOC system along with the corresponding images of RLVD & ANPR cameras will be stored for 90 days.
4. Raw meta data of ANPR system i.e. vehicle numbers of all the vehicles passed through any ANPR cameras, their time stamp, location details etc. and any audit trail details will be stored for lifetime.
5. If some data is flagged by SCADL / police personnel (or by designated personnel) as important data / evidence data due to some reporting of crime or accident in the area or due to court order or due to suspicious activity, it would need to be stored for longer duration, as per requirements or policy set the by Police Department/Authority. Police department would analyze such flagged data every 6 months to take such decisions for preservation of the flagged data beyond 180 days.

6. SI will be responsible to take the backup of operating system, database, and application as per industry best practices. SI will be responsible to restore the backup in case of failure.
7. Retrieval time for any data stored should comply with the defined service level agreements.
8. The Video feeds being stored should not result in any loss of quality of video data due to further compression at the time of storage.
9. The Recording Servers / System, once configured, shall run independently of the Video Management system, and continue to operate if the Management system is off-line.
10. The system shall support the use of separate networks, VLANs or switches for connecting the cameras to the recording servers to provide physical network separation from the clients and facilitate the use of static IP addresses for the devices.
11. The system shall allow for the frame rate, bit rate and resolution of each camera to be configured independently for recording. The system shall allow the user to configure groups of cameras with the same frame rate, bit rate and resolution for efficient set-up of multiple cameras simultaneously.
12. The system should not limit amount of storage to be allocated for each connected device.
13. The Recording Server / System shall support IP cameras from various manufacturers.
14. The Recording Server / System shall support the PTZ protocols of the supported devices listed by the PTZ's camera OEMs.
15. Bandwidth optimization
16. The Recording Server / System shall offer different codec (H.265, H.264 with better compression, H.264) and video resolution options for managing the bandwidth utilization for live viewing on the Client systems.
17. From the Client systems, the user shall have the option of having video images continually streamed or only updated on motion to conserve bandwidth between the Client systems and the Recording Server.
18. Failover Support
    a. The system shall support automatic failover for Management/Database /Recording Servers, this functionality shall be accomplished by Failover Server as a standby unit that shall take over if one of a group of designated Recording Servers fails. Recordings shall be synchronized back to the original Recording Server once it is back online. (i.e N:1, N:2)
19. The system shall support multiple Failover Servers for a group of Recording Servers.
20. SNMP Support
    a. The system shall support Simple Network Management Protocol (SNMP) for third-party software systems to monitor and configure the system.
    b. The system shall act as an SNMP agent which can generate an SNMP trap because of rule activation in addition to other existing rule actions.

7.6 Network/Backbone Connectivity

Bidder is responsible to design and provide bandwidth from Telecom Service provider for the life cycle of the project. The Bandwidth should be design in redundant mode (Primary and Secondary link at all the Edge Location) and run entire services 24x7 Hours during entire contract duration.

1. The successful SI shall prepare the overall network connectivity establishment plan to provide real time video stream to the Command control center along redundancy to all junction locations for this project. The plan shall comprise of deployment of network

equipment at the locations to be connected over P2MP/L2VPN network,any clearances required from concerned authorities, timelines for setting up of the entire network.

2. The SI is responsible to provision for necessary bandwidth and connectivity (P2MP /L2VPN) during the contract period from the Telecom service provider.
3. The actual bandwidth requirement to meet the SLAs would need to be calculated by the SI. The selected SI shall be responsible to provide the detailed requirement of bandwidth at each identified location with proper justification of the same considering the number of cameras and other factors.
4. SCADL/AMC/Police department also requires the SI to meet the parameters of video feed quality, security & performance and thus SI should factor the same while designing the solution.
5. SCADL/AMC reserves its right to ask the SI to increase the bandwidth if the provided bandwidth is not sufficient to give the functionality of the system mentioned in the RFP and adhere to the SLAs.
6. The bandwidth provisioned needs to adhere to the following minimum benchmark requirements –
    - Latency should be less than 40 ms
    - Jitter should be less than 30 ms
    - Packet loss should be less than 0.5%
7. SI shall ensure that redundant, high quality, seamless connectivity is provided to all locations.
8. The bidder shall install a new two-DC core router, which will be connected to the proposed telco device at the ICCC Paldi location. SCADL will provide the necessary space and power for the installation of the network devices. The connectivity between the Smart City device (the proposed core device within the bidder's scope) and the telco device will be configured as 1+1 redundancy. This redundancy will be established through two separate, diversified fiber optic paths coming to ICCC from different PoP locations of Telco to ensure that in the event of a failure in one link due to issues with the SFP, patch cord, or port, or OFC cut, all traffic from the surveillance locations will automatically switch over to the other aggregator link without requiring manual intervention.
9. Additionally, the bidder shall ensure with telco service provider if primary device at telco end is down or equipment failure or powered off or any fiber cut happened on primary link then traffic coming from all Edge location to the data center should not be impacted. This is the minimum requirement set by SCADL.

10. Selected SI will have to ensure that the Telecom Service Provider (TSP) should provide P2MP/L2VPN connectivity at each surveillance edge locations with two physically diversified paths and the last mile OFC connectivity on both diversified paths should come from two different PoP (Point of Present) locations (eNodeB locations / mini exchange locations / any type of Telco facility). Both the last mile OFC cables should be terminated on same L2 switch at edge location and connectivity should work in redundant mode i.e. in case of LM OFC cable cut of primary link / any equipment failure/Powered off on Telco side PoP of primary link / SFP or port failure of the L2 switch of junction on which primary link is terminated, automatic failover of traffic should happen on secondary link in less than 50 millisecond time.

11. Last Mile to be defined as "the access link from the service provider's PoP – to the edge devices"
12. It is expected that SI shall design the networking solution in such a manner that there is no single point of failures at every Junction box , and solution meets all the uptime and performance.
13. SI shall ensure that the network is available 24x7x365 as per the prescribed SLAs.
14. SI shall be responsible to coordinate with service provider for end-to-end network connectivity at respective site.
15. SI will have to configure Multicast feature in this Network so that when multiple stakeholders demand for live RTSP links of CCTV cameras, the edge location P2MP / L2VPN bandwidth need not to be increased. SI may configure multicast feature for all CCTV cameras at Core layer either within Core router or may consider separate router layer at ICCC along with Core router layer to manage multicast configuration. SI is free to design this architecture as per the specifications they are considering of Core routers to bid for this RFP. Separate line item for any additional router is not provided in financial bid, SI if planning for additional router along with Core router, they will have to accordingly quote prices in the line of Core router
16. SI shall have to request for Right of Way (RoW) from competent authority for laying of OFC cable. SI shall coordinate with relevant government authorities and all stakeholders/agencies, law enforcement agencies, RoW agency and other internal & external stakeholders to obtain necessary clearances for the end-to-end operationalization of the project during the entire contract duration.
17. The IP Pool and network routing requirements are to be finalized by the selected SI in consultation with existing SI which is currently maintaining operation of SASA project network. It is to be noted that the range/class/IP pool may be different. Hence the selected SI should design their solution accordingly and execute only after prior approval from SCADL/AMC.
18. The SI shall be responsible for LAN Connectivity including but not limited to physical cabling, L2 Switch configuration at all Edge location, VLAN configuration, load balancing configuration if required and fail over mechanism. The bidder shall coordinate with the existing SASA O&M Project system integrator while designing and configuring the LAN. Similarly, SI will also be responsible to establish LAN connectivity within ICCC, Paldi building for various requirements like connecting any ICCC computer at 3rd floor of the building with DC room L2 LAN switch on 2nd floor or connecting any computer at any floor of the building with DC room etc.
19. SI shall ensure that the bandwidth estimated and proposed meets the locations' requirement and expected performance level.
20. Network diagrams at all levels shall be maintained and updated regularly by the SI.
21. As per TRAI guidelines, the resale of bandwidth connectivity is not allowed.
22. The bidder shall prepare and sign triparty agreement between SCADL, Selected SI and Telecom service provider.
23. Service Charges (Capex) and recurring Payment (Opex) for the provisioning of bandwidth will be paid to respective Telco service provider directly by SCADL after deducting and SLA / delay penalty.

7.6.1 Network Access:

1. SI shall ensure that Access to network and network resources shall be on need-to-know basis and authorizations shall be obtained from appropriate authorities before providing access.
2. Network and network services required for every job function and role shall be identified and verified by the SI.
3. SI will have to configure & manage access lists in router, traffic policies in firewalls etc. to protect entire network & applications from any internal & external cyber threats.
4. SI will also be responsible for adhering to STQC cyber security guidelines and implementing necessary policies.
5. SI's team will be responsible for taking all necessary steps on routine basis to continuously protect the entire network and applications. These steps will include tasks like configuring all unused ports of the network elements in admin shut mode, preventing use of pen drives and any unauthorized equipment or application on office computers by their employees / staff within ICCC or any government office, preventing their employees from downloading unauthorized and unwanted software applications, encouraging team to regularly update passwords of various systems and adhere to password complexity guidelines, avoiding providing remote VPN access to stakeholders (except the cases where SCADL / AMC has specifically approved providing such remote access to any stakeholder in very specific situations and with proper justification).

7.7 Mounting structure

Bidder is required to supply, install and commission mounting structure as per on-ground requirement for all the infrastructure being deployed under this project. Bidder should ensure following points.

1. This structure should be made of Galvanized Iron (GI) only.
2. The SI shall supply all of the necessary equipment, mounting structure (Cantilever pole / Gantry) for the RLVD & ANPR cameras to meet the project requirements mentioned in the RFP.
3. The SI shall ensure that all the installations to be as per industry standard. Ensure that the power and LAN cable are properly installed in the pole such that they are protected from damage and tempering. During pole installation, the line-of sight/field-of-view should be checked with test cameras.
4. Before the delivery of poles, the design of the pole needs to be approved by the SCADL /AMC departments. All the necessary document needs to be submitted by the SI for the pole design.
5. Successful bidder will have to prepare civil drawings for foundation design and clearly showing general arrangement of gantry, cantilever & pole. The structural safety certificate will be required for these drawings. The certificate needs to be provided by the government approved structural engineer only. So, submission of certificate is under the scope of this project to be provided by the bidder.
6. The standard pole, Cantilever pole and gantry must have a design, which should sustain minimum wind speed of 150 KMPH.
7. SI should use the industry best practices while positioning and mounting the cameras and ensure that the pole implementation is vibration resistant. Arrangements for bird scare

spikes on top of camera shall be made to prevent birds from sitting on top of camera/ camera box.

8. The poles shall be installed with base plate, pole door, pole distributor block and cover.
9. Base frames and screws shall be delivered together with poles and installed by the SI.
10. SI shall coordinate and liaison with concerned authorities / municipalities for installation of Pole/Cantilevers/Gantry.
11. SI shall ensure that physical look of the installation area is restored to its original state after installation of poles, cantilevers etc. The placement shall be designed keeping in mind the normal flow of vehicular traffic and pedestrian movement is not disturbed.
12. The Bidder shall ensure that all the necessary safety requirements for persons working on the signal junctions and Cameras installations. The requirements and precautions to be taken when working on height, on road.
13. The ground clearance for the installation of poles, cantilever arm and gantry should be 6 meters from the centre of the road after installation.
14. The size of the junction box should be able to accommodate the network switch, Fiber trey / Fiber Management System (FMS), surge protection power trip ,MCB, Voltage stabilizers etc. material in it and should be made of the GI material only. Proper locking mechanism must be available in the junction box.
15. Bidder will maintain an inventory of all components procured. This list will be made available to the AMC/SCADL as and when required.

7.8 Earthing System

1. All electrical components are to be earthen by connecting two earth tapes from the frame of the component ring and will be connected via several earth electrodes. The cable arm will be earthen through the cable glands. The entire applicable IT infrastructure i.e., Surveillance pole, RLVD, ANPR junction, shall have adequate earthing. Further, earthing should be done as per Local / state / national standard in relevance with IS standard.
2. Earthing should be done for the entire power system and provisioning should be there to earth Power distribution units, etc. so as to avoid a ground differential.
3. All metallic objects that are likely to be energized by electric currents should be effectively grounded.
4. There should be enough space between data and power cabling and there should not be any cross wiring of the two, in order to avoid any interference, or corruption of data.
5. The earth connections shall be properly made.
6. A complete copper mesh earthing grid needs to be installed for the server farm area, every rack needs to be connected to this earthing grid. A separate earthing pit needs to be in place for this copper mesh.

7.9 Provisioning of Electricity connection

The Bidder shall have to provision for electrical connection at field junction box. Bidder shall carry out end to end process of provisioning of power from Torrent Power/Electricity board. The connection should be taken on the name of SCADL only and necessary document shall be provided by SCADL for the application process.

Bidder shall carry out following activities (included but not limited to) pertaining to the provisioning of electric connection:

1. Submission of application for new connection.
2. Submission of requisite fee including deposit (if any).
3. Liaising with agency, visiting their offices and end to end co-ordination and meeting with utility/electricity boards and their staff.
4. Submission of test report, Requisite certification, Drawing as per the agreed format.
5. Installation and Commissioning of ELCB / MCB, as required by the electricity department.
6. Laying of power cable from junction box point provided by Torrent Power/Electricity board to SCADL's junction box and provisioning of requisite power points for all components.
7. Ensure expedition of provisioning of power connection at desired location.
8. Availability of Bidder's team member during the provisioning of power by the Electrical
9. department.

However, the expense incurred in provisioning of power connection (For Field locations and Data center) including official fees and security deposit etc. shall be reimbursed by SCADL at actuals upon submitting documentary evidence (Electricity board payment receipts, test report payment charges etc.).

For recurring electricity charges also, successful bidder will have to first pay the bill to Torrent Power / Electricity board before due date of payment. Bidder will have to get this expense reimbursed from SCADL as an expense reimbursement without GST later on by submitting payment receipt, expense voucher etc. If bidder fails to pay recurring charges before due date of payment and in such case if Torrent Power / Electricity board cuts the power connection, it will be successful bidder's responsibility to reinstate power connection at their own cost. Downtime of any active equipment due to such power outage will also be bidder's responsibility and no exemption of SLA will be provided by SCADL.

All procedural work related to payment of recurring electricity charges will be bidder's responsibility including timely collection of copy of physical bills from SCADL office, making payment either physically at electricity office / online payment, collecting payment receipt from electricity office (in case of offline payment) and submitting all required documents to SCADL office for claiming expense reimbursement etc. In case, SCADL doesn't receive physical copy of the electricity bills from electricity department, then in such case bidder may opt to check the generated bill online to comply to the requirement of making payment before due date.

If bidder chooses to make online payment, SCADL will only reimburse the actual electricity bill amount. Any additional charges levied by payment gateways on payments through credit / debit cards, net banking etc. (as the case may be) will not be reimbursed by SCADL.

Please note that SCADL shall not reimburse any additional cost (Other than the actual payment made by the Bidder including deposits, if any) towards charges incurred for provisioning of power at desired locations. Bidder may factor any additional cost pertaining to this requirement in their commercial bid.

7.10 Data Centre requirement

SCADL has an established one integrated command control center in Paldi area and TCC, Shahibaug area in Ahmedabad for ICT projects under Smart city. Bidder is required to consider following points with respect to the Data Centre.

1. SCADL wishes to establish a new Data Centre (DC) under this project at the same location, where one (1) data centres have been established. (Location – ICCC building, Paldi, Ahmedabad)
2. Actual DC location within the building shall be shown to the Bidder during Pre-bid meeting. (Tentative size of the New DC room shall be 20 * 20 feet)
3. Bidder may visit the data center at ICCC building to understand the requirement. The space which will be provided shall be a bare shell and all the associated IT and Non-IT components pertaining to the same shall have to be implemented by the Bidder only. Below major components are to be installed under the data centre.
    i. SITC of Data Center Server (includes DB, OS, Virtualization, licences etc.), Storage, Switches, Router etc.
    ii. SITC of UPS along with the requisite battery bank requirement for provisioning of back up of at least 4 hours.
    iii. Provisioning of power from main distribution line.
    iv. Civil work includes floor raise, minor modification in the room if required, installation of Precision Air Conditioning systems (PAC), smart lighting, power and electrical cabling, ELCB / MCB, switches, Overhead cable try, on-floor cable tray, partition, if required, Earthing, fire proof color work, separate entry and exit door according to requirment, wireless fire alarm system, smoke detection, fire extinguisher, water leak identification system, rodent repellent system, ramp etc..
    v. The Bidder is required to install DC server, storage and other devices in new 42U racks.
    vi. The bidder should do structured data cabling from network rack/core switches to each and every equipment in the data center room. The bidder shall also be responsible for testing, proper tagging and certification of the networking in the data center room.
    vii. All the requisite power and network cabling in DC shall be the responsibility of the Bidder only. Entire cabling must be carried out through trey, in-building ducting etc.
    viii. The bidder shall be responsible to provide proper copper mesh earthing grid (with <1V between earth and neutral throughout project tenure) for UPS, Equipment, and Rack etc. Please refer section 7.7 for the earthing requirement.
    ix. The bidder is responsible for supply & installation of I/O box, Faceplate, RJ45 connector, crimping. Conduit pipe, flexible pipe and CAT6 UTP Cable.
    x. SCADL currently has an existing UPS and battery bank room located infront of the proposed data center room. The bidder will have to install new UPS and battery bank in the same room. Therefore, existing UPS and battery bank room will have 2 UPS (one existing & one newly supplied by successful bidder). The Bidder is required to lay 2 separate power cables from the existing UPS room to the proposed data center room. This includes supplying all necessary materials and performing all related activities to ensure a secure and efficient power connection between the two rooms. 2 separate power cables will have to be laid by the bidder to establish

1+1 redundant power connectivity to 2 power distribution points (as mentioned in sr. no. – 13 below) in DC room and further to server racks and network racks.

xi. Bidder shall also supply & install of Industrial Main DB, UPS DB with proper rated MCBs in data center room.

xii. The space between data and power cabling should be as per standards and there should not be any criss-cross wiring of the two, in order to avoid any interference, or corruption of data.

xiii. The bidder shall be responsible for installing Power distribution points on both the left and right walls of the data center room, according to the room's infrastructure. This setup is intended to provide dual power level redundancy from the server/network's racks to the Power distribution point, ensuring a reliable and uninterrupted power supply.The bidder is responsible for laying power cables from the distribution points to racks and from distribution points to the UPS room and installing MCBs as per requirement.

xiv. As part of site preparation, bidder should supply & install 2 Nos of 15Tr PAC system. The SI will be required to design, supply, install and test the successful commissioning and satisfactory completion of the PAC systems in the data center room which includes,

- Connecting the indoor unit with the mains electrical point
- Connecting indoor and outdoor units mechanically (with 18 G hard Gauge Copper piping or better)
- Connecting indoor and outdoor unit electrically.

xv. Please note that the above are only indicative requirements of IT & Non-IT Infrastructure requirements at Data Centre.Bidder may visit the data center at ICCC building to understand the requirement. SCADL shall not be responsible for any assumptions made by the Bidder. Also, if Bidder misses to factor the cost of any item required to deliver the solution successfully or under size the solution, then the Bidder has to provide that without any additional cost to SCADL.

xvi. The SI shall ensure the industry standard is followed while carrying out all the allied activities in the Data center. SCADL shall consider poor workmanship / quality of work very seriously and Bidder may have to face necessary impact on account of the same.

7.11 Insurance

Bidder must maintain valid insurance of all the components during the entire duration of the contract at their own cost. Insurance must cover any damage to any goods supplied under this Contract against loss, theft, flood, fire, cyclone (for wind speeds greater then 80 kmph), vandalism to any of the device and damage due to vehicular accident. Bidder shall submit to the Authority, documentary evidence issued by the insurance company, indicating that such insurance has been taken. Bidder shall be designated as the 'loss payee' in such insurance policies; successful SI shall be liable to pay premium for the insurance policy & shall ensure that each & every policy shall keep updated from time to time till end of contract period. In case of delayed procurement of insurance from selected bidder, all responsibilities of all supplied and/or installed equipment will be on successful bidder before taking the insurance.

Bidder will also be responsible to take Employer's liability and workers' compensation insurance in respect of the Personnel of the bidder / bidder s' Team, in accordance with the relevant provisions of the Applicable Law, as well as, with respect to such Personnel, any such life, health, accident, travel or other insurance as may be appropriate; and Insurance against loss of or damage to (i) equipment or assets procured in full or in part for fulfilment of obligations under this Contract & (ii)the bidder s' assets and property used in the performance of the Services.

In case of any damage due to reasons as mentioned above and the required rectification / repair activities doesn't include any civil foundation activities, then successful bidder will have to repair / rectify / replace any item with new item asap from their inventory. This is because SLA exemption will not be provided for reasons like theft, fire, vandalism and vehicular accident, but SCADL will have a right to grant SLA exemption for reasons of flood & cyclone for the reasonable time for which effects of flood & cyclone continues in field.

In case of any damage due to reasons as mentioned above and the required rectification / repair activities includes any civil foundation activities, then successful bidder will have to repair / rectify / replace any item with new item and make the site functional within 21 days of such event. SCADL will provide SLA exemption for 21 days in such cases, but will not provide SLA exemption after 21 days.

Bidder shall bear all the statutory levies like customs, insurance, freight, etc. applicable on the goods and the charges like transportation charges, loading & unloading charges, octroi, etc. that may be applicable till the goods are delivered at the respective sites of installation shall also be borne by Bidder.

In case of theft, Bidder shall register complaint on behalf of the authorities and carry out end to end follow-up on the case with concerned department.

7.12 General instructions/Key Consideration

1. The Successful Bidder shall have to integrate all IP/ SNMP enable devices with newly procured application as quoted in their technical bid.
2. SI should have their own space / warehouse in Ahmedabad city to keep the project related material at one place. The warehouse / space should be managed for the entire contractual duration by the SI only. SCADL shall not provide any cost thereof to the winning Bidder in this regard.
3. SI is responsible to carry out Civil Work (Supply, Erection and commissioning) of Non-IT infrastructure like poles/frames/fixtures/housing etc. with proper electrical earthing (as per IS-3043) wherever required based on the feasibility study report.
4. The SI has to ensure that on completion of work, site has to be restored to its original condition as per site requirements.
5. The SI shall ensure the industry standard is followed while carrying out all the allied activities as part of the project, should also ensure to carry out the work with industry leading workmanship by keeping the sustainability at the forefront of the execution. SCADL shall consider poor workmanship / quality of work very seriously and Bidder may have to face necessary impact on account of the same.

6. After the completion of contract duration, SI shall hand over the entire solution covering all the components in working condition to AMC / SCADL.
7. Bidder must procure products with same make and model for all the quantity for a particular product. (i.e., Bidder cannot change the make and model of any product once the partial quantity is procured and remaining is to be procured). Violation to this shall not be entertained by SCADL.
8. If in case, it is identified that certain components are required but not quoted by the Bidder, the SI will procure and commission the same without any financial implications. If Bidder misses to factor the cost of any item required to deliver the solution successfully or under size the solution, then the Bidder has to provide that without any additional cost to SCADL
9. The System Integrator shall note that the specification provided is the minimum requirement and the System Integrator shall procure better equipment if it is required to meet the service levels mentioned in the RFP.
10. It will be selected SI's responsibility to check the compatibility of new hardware / software component with existing hardware / software component in all technical & functional aspects of integration to ensure successful working of the entire system.

Details of existing projects are tabulated below.

Existing Components installed in Ahmedabad Smart City Project

#	Components	Make / Model
1	Networking component – Core Router	CISCO – ASR 1013
2	Networking component – L3 Switch	CISCO – Catalyst 3850
3	Video Management Software	Qognify – NiceVision Enterprise Software

1. The Bill of Quantity (BOQ) as estimated by SCADL/AMC is not exhaustive. Any additional items/ components like Hardware, Software, any licenses, accessories, service etc. as required to make the project completely operational may be assessed by the Bidder and the same may be incorporated in the offer. Even at the time of execution, if any additional items/ components like Hardware, Software, any licenses, accessories, service etc. are required to execute the Scope of Work (SoW) as part of this RFP, notwithstanding the BOQ as identified by the Bidder, the same shall be provided by the SI at no additional cost to SCADL.
2. The SI shall be responsible for carrying out security and vulnerability testing on the developed solution & E-Challan Application to be carried out by a CERT-In empanelled vendor prior to Go Live of the Project without any financial implication to SCADL/AMC. As a result of Security Audit and VAPT the cost of suggested rectification of non-compliance related to hardware/software deployed under this project shall be borne by the SI.
3. Bidder will have to conduct cyber security assessment every year including VAPT (Vulnerability Assessment and Penetration Testing) through CERT-IN certified agency for

entire network including software & applications (E-Challan) and will have to resolve identified vulnerabilities. The selected CERT-IN certified agency will be approved by SCADL before onboarding.

4. Ensure that all activities adhere to local, state, and national regulations. Implement industry- standard security and privacy measures to protect data and ensure public trust. Bidder must remain compliant with the recent National Data Policy of Government of India.
5. SI shall place orders on various OEMs directly (via formal delivery channel of OEM) and not through any sub-contractor / partner. All licenses should be in the name of the SCADL/AMC.

8. Testing and Acceptance Criteria

8.1 Inspection

Inspection shall involve scrutiny of documents for various IT / Non-IT components to verify if the specifications conform to the technical and functional requirements mentioned in the Tender and subsequent corrigendum. SCADL/AMC reserves right to conduct physical inspection of the equipment delivered to ensure that they arrive at the sites in good condition and are free from physical damage and incomplete shipments and shall return the products to the supplier at the supplier's expenses if the same is not as per RFP requirements. Physical inspection of hardware will also include physical checking and counting of the delivered equipment in presence of the Successful SI. This equipment will only be acceptable as correct when each received item corresponds with the checklist that will be prepared by the Successful SI prior to shipment. Any shortfalls in terms of number of items received may render the delivered equipment incomplete.

8.2 Final Acceptance Testing

After successful installation of equipment in accordance with the requirements in the RFP, the successful bidder would need to carry out Final Acceptance Testing . The SCADL/AMC shall review and finalize the detailed acceptance test plan proposed by the SI. The SCADL/AMC would also conduct audit of the process, plan and results of the Acceptance Test carried out by the SI for both IT & non-IT components. If required SCADL/AMC may carry out the testing from the third party. The Successful bidder should cooperate with the third-party agency to ensure successful completion of Acceptance tests. The SCADL shall carry out thorough field inspection of all the components commissioned as part of the project and shall share punch points to be resolved with the SI post the field visit, if any. Further, SI to ensure to address those punch points within the span of 8-10 calendar days of receipt of those points and ensure the entire system has achieved the desired functionality for which it was envisaged to be commissioned as part of the project. SI to ensure the quick turnaround in resolution of any concern, that is observed during the entire contractual duration of the project.

The SCADL/AMC would issue certification of completion for which SCADL/AMC shall verify availability of all the defined services as per the RFP. The SI shall be required to demonstrate all the services, features, functionalities as mentioned in the agreement.

Prerequisite for Carrying out FAT activity:

1. Detailed test plan shall be developed by the SI and approved by SCADL/AMC. This shall be submitted by SI before FAT activity to be carried out.
2. All documentation related to Ahmedabad Project and relevant acceptance test document (including IT Components, Non IT Components etc.) should be completed & submitted before the final acceptance test to the AMC /SCADL.
3. The training requirements as mentioned should be completed before the final acceptance test.
4. For both IT & Non-IT equipment's / software manuals / HLD-LLD/ brochures / Data Sheets / CD / DVD / media for all the Ahmedabad Project supplied components.

The FAT shall include the following:

1. All hardware and software items must be installed at respective sites as per the specification.
2. Availability of all the defined services shall be verified.
3. The SI shall be required to demonstrate all the features / facilities / functionalities as mentioned in the RFP.
4. The SI shall be responsible for the security audit of the establishes system to be carried out by a certified third party as agreed by AMC/SCADL.
5. Necessary tests related to civil and electric work covering the pole structure, material, workmanship, etc. will be carried out by the SI as per prevailing standard through government approved entities. SI must carry out cube testing of all the pole / gantry foundations. Necessary certificate for the same shall have to be shared with the SCADL.
6. If it is found that the product/solution is not as per expected parameter, AMC/SCADL may ask the SI to carry out testing through its testing entity and the cost in this regard shall have to be borne by the SI. Further, if during any phase of the project, it has been observed that the proposed device / equipment / solution is not working as per the expectation and in accordance with the SLA parameters set forth in the RFP, SCADL may ask Bidder to replace the product (all the devices would be required to be replaced) at no additional cost to SCADL.

Any delay by the SI in the Final Acceptance Testing shall render SI liable to the imposition of appropriate Penalties. However, delays identified beyond the control of SI shall be considered appropriately and as per mutual agreement between SCADL and SI. Please note that Bidder should initiate formal communication in case the work is not being completed before the deadline because of the reason outside the control of the Bidder and in such scenario, penalty shall not be levied from the invoice. Bidder to submit proper, complete, accurate document to understand the concern. If in case it has been observed that Bidder had taken a wrong benefit, necessary liquidated damages shall be imposed on the Bidder from the consequent invoice however, the damage could be in multiples to the actual penalty (depending upon the scenario).

9. Operations and Maintenance for the entire contract duration

Success of the Project would also depend on how the entire Project is managed once the implementation is completed. From the System Integrator perspective too, this is a critical phase since the quarterly payments are linked to the SLAs in the post implementation phase. SI shall provide comprehensive operations and maintenance services for the software, hardware and other IT and Non-IT infrastructure installed as part of project for the entire contract duration. .

System Integrator thus is required to depute a dedicated team of professionals (as per section 10) to manage the Project and ensure adherence to the required SLAs. Please note that no separate payment shall be made to the SI for the deployment of manpower, instead SI is required to adjust such cost in their financial bid.

SI shall ensure complete warranty and support for all equipment from OEMs. All the back-to-back service agreements covering all components including the IT infrastructure, software infrastructure and Non-IT components for the entire contractual duration. The back-to-back service agreements should be submitted at the time of the contract agreement by the bidder.

Hand-over of the system at the end of the contractual period along with all documentation required to operate and maintain the system. After the completion of contract duration, SI shall hand over the entire solution covering all the components in working condition to AMC/SCADL.

SI is responsible for sizing and procuring the necessary hardware and software licenses as per the performance requirements provided in the RFP. SI shall replace or augment or procure higher-level new equipment or additional licenses/hardware at no additional cost to the SCADL/AMC in case the procured hardware or software is not enough or is undersized to meet the service levels and the project requirements.

Following activities to be carried out by SI during O&M Phase:

1. Maintain the entire solution, modify, repair or otherwise make improvements in all components, if any to comply with Technical Specifications, Service Level Agreements specified in RFP.
2. The Successful Bidder is responsible for performing/carrying out preventive maintenance activity as defined below. Necessary PM activities including cleaning, blowing, dirt removal, realignment of cameras as and when required and PM activities for field switches, Junction Box, Data center elements etc. once in a quarter with proper security and safety measures on a quarterly basis. The PM should be carried out as per industry standard maintaining proper checklist. If required, SCADL/AMC may ask to modify the maintenance plan/activity to cover additional components/activities. SI should send the necessary report on a monthly / quarterly basis to AMC/SCADL.
3. The successful bidder is responsible for upgrading firmware, BIOS and software patches to the latest versions available at regular interval, at no additional cost to SCADL.
4. SI shall have to replace the product with equal or higher specification, if in case any product is failing on a repetitive basis and / or disrupts the routine business requirements of AMC / SCADL at no additional cost to SCADL.

5. The SI shall have to stock and provide adequate onsite and offsite spare parts and spare component to ensure that the uptime commitment as per SLA is met. SI shall ensure that at least 5% quantity of all type of Edge devices are available in inventory at any given point of time to avoid any challenges during the O&M phase of the project.
6. In case if breakdown/ maintenance work is required to be carried out during non-working days/ hours, the Bidder shall attend the task(s) during this period at no additional cost to SCADL.
7. If any devise gets faulty, the SI will have to first replace the faulty devise with working devise of same make & model to make the site up & running and parallelly SI can send the faulty devise for RMA to their OEM and get the repaired devise from OEM that can become part of inventory. Any equipment is either breakdown, damaged due to the negligence of SI, or any technical reasons, it should be replaced with new equipment without any additional cost to SCADL.
8. In case the quoted item is declared end of sale or end of support by OEM, then SI will have to supply equal or higher Version of same make that should have matching or higher functional and technical specifications w.r.to previous product. This will be allowed with prior approval of SCADL/AMC at no extra cost. In O&M phase, supply & installation of RMA product / repaired product will be allowed in such case.
9. In case the procured product (Hardware / Software) is unable to perform as per the expectation of AMC / SCADL and also as envisaged in SLA timeline even after multiple attempts, Bidder should replace the device (Entire quantity) with equivalent or higher category of device at no additional cost to AMC / SCADL. SCADL shall provide such observations to take necessary decision for replacing the product completely.
10. The SI will supply all the installation material/ accessories/ consumables (e.g., screws, clamps, fasteners, ties anchor, supports, grounding strips, wires, MCB, ELCB, labelling etc.) necessary for the operation of the systems.
11. Rectification / replacement (as per requirement) of faulty cables (CAT6, power cables etc.) and all types of patch cords in field along with all ancillary accessories. SI will be responsible to repair / replace faulty cables that are damaged / cut by any 3rd party agency irrespective of the purchaser for whom the 3rd party agency might be working. It means rectification / replacement of damaged cable (damaged happened due to any reason whatsoever) will be SI's responsibility. SCADL shall not make any additional payment in this regard. For cables installed in field, selected bidder will be responsible to rectify / replace the cables with the same methodology through which it was installed earlier. For ex.: underground (UG) laid cables will be maintained with UG method only. SCADL may allow temporary change of installation method (for ex. Aerial) considering the field restrictions / challenges in terms of permission availability, technical feasibility etc.
12. Ensure uptime and availability of the proposed system/solution, all times of Contract Period at all locations in relation to the minimum Service Levels specified in this RFP and the scope specified in RFP.
13. Undertake timely updation of password(s) of all the devices installed as part of the project, no device should have default credentials and all of them must be updated during the implementation phase and periodically during the O&M phase of the project.
14. Provide all MIS report specified in RFP, or any other reports required by SCADL/AMC.
15. Bidder shall be responsible to work closely with other implementation agency and operation & maintenance agency of SCADL. Bidder must provide necessary support in

establishing / maintaining / troubleshooting the concerns pertaining to the network connectivity in the field.

16. The SI shall not permit anti-social activities/illegal activities on Project Site during the Contract Period. Any liabilities arising as consequences of such event shall be borne by the SI. On occurrence of such event, the SI shall solely be responsible for legal remedies and SCADL/AMC may consider Termination on occurrence of such event.
17. Take prompt and reasonable action for redressal of each complaint received from users including complaints received by SCADL/AMC.
18. Obtain and keep valid all applicable permits/ Licenses required by it under applicable laws for carrying out its scope of work during the Contract Period.
19. The SI shall be required to hand over all the equipment's under the scope of this project in working condition at the time of completion/termination of the Contract, otherwise the equipment, found faulty, shall be rectified from any external agency and whole replacement/repair cost will be borne by the SI only.
20. Maintaining / updating the existing project documents (network design documents / drawings, as-build drawings, reports, databases etc.) as per any changes happens in the network infrastructure.
21. Attending all the meetings by competent project team members of the selected bidder at the prescribed office location as conveyed by SCADL.
22. The SI shall introduce a comprehensive Assets Management process & appropriate tool to manage the entire lifecycle of every component of the proposed Solution and provide field inventory details to SCADL as and when required
23. SI Shall Configure, Install, and maintain licensed software required for CCTV system with latest antivirus with all critical updates to be installed on the servers.
24. SI should have a governance structure in place to report to SCADL/AMC's team on daily, weekly, and monthly basis.
25. The System Integrator shall provide monitoring and management services during the contract period. The scope of the services shall include Monitoring, Administration and Management of the Data center equipment, Surveillance cameras, Edge/Network switches delivered as a part of this RFP.
26. The SI shall be responsible (including but not limited this) for Preparation/updation of SOPs for STQC audit/ ICCC IMAF audit, Preparation/updation of the Policy Documents for Use & Operations ICCC, Information Security Policy, System Documents, User Documents as per ITIL (Information Technology Infrastructure Library) standards, Operational manuals etc. during the operational phase.

9.1 Network Monitoring Services

The activities shall include:

1. SI shall responsible to monitor network , fault management, change management of Data center equipment, Surveillance System, to maintain performance at optimum levels on a 24 x 7 basis.
2. SI shall responsible for re-configure, troubleshoot etc. related activities for Data center and field devices elements, shall provide requisite support / help troubleshooting to ensure the connectivity is made through till end location / device.
3. The SI will conduct break-fix maintenance for the LAN and power cabling, including any associated civil work.

9.2 Vendor Management Services

The activities shall include:

1. Coordination with all the project stakeholders to ensure that all activities are carried out in a timely manner.
2. SI shall coordinate and follow-up with all the relevant stakeholders and vendors to ensure that the issues are resolved in accordance with the SLAs agreed upon with them.
3. SI shall also ensure that unresolved issues are escalated to respective department.
4. SI shall maintain database of the various vendors with details like contact person, telephone nos., escalation matrix, response time and resolution time commitments etc.
5. SI shall draw a consolidated quarterly SLA performance report across vendors for consideration of the SCADL and Traffic Police.

9.3 Network Management

The objective of this service is to ensure continuous operation and upkeep of the LAN & WAN infrastructure of the project including all active and passive components. The selected SI shall be responsible to coordinate with other agency of SCADL / Telco Service Provider for network related issues between ICCC, DC and field locations. The services to be provided for Network Management include:

1. Ensuring that the network is available 24x7x365 as per the prescribed SLAs (Bidder's responsibility is to coordinate with telco Service provider to maintain uptime of All the locations commissioned under this project).
2. Attending to and support resolving network failures and snags. (Last mile connectivity validation has to be carried out by the selected Bidder)
3. Support and maintain the overall network infrastructure commissioned as part of this project.
4. Provide information on performance of Ethernet segments, including capacity utilization and error statistics for the segment and the top-contributing WAN links.
5. The Successful Bidder is required to maintain uptime of the Data center equipment, cameras, equipment installed inside JBs to meet the SLA. In case the network uptime is not maintained due to non-availability of link/Bandwidth by Service provider, bidder is required to produce documentary proof (Service Desk Complaints/Incidents or Vendor assigned Tickets) in terms of certificate of downtime of network link/b/w from the service providers. Upon submission of documentary proof, these downtime shall be considered in bandwidth service provider SLA and service provider would be liable for penalty. If the bidder fails to provide such documentary proof, the reported downtime shall be treated as non-performance of the SLA and bidder would be liable for penalty on whole duration of downtime.

9.4 Provision of Maintenance Vehicle

SI will have to ensure availability of necessary vehicle along with requisite equipment/components like ladder, machinery etc. to carry out implementation and maintenance work (including transportation of items required for Project) during the Contract Period. All the expenses pertaining to vehicle such as driver's expense, fuel, lubricants, maintenance etc., will have to be borne by the SI only. The SI will have to keep minimum 1 number of loaded 4-wheeler

vehicle with a ladder for maintenance work. If any required, Additional vehicle shall have to be arranged by the SI. The vehicle and related accessories should follow RTO norms of Government of Gujarat.

9.5 License Management

All the software/Applications/OS/dB licenses should be Perpetual and in the name of the TENDERER.

Successful bidder shall keep the record of all the software licenses and track software usage throughout the IT setup so as to effectively manage the risk of effective usage of software's.

The Successful Bidder shall avoid the unauthorized usage of Licensed Software. In the event of any claim asserted by Third Party of Infringement of Copyright, Patent or Trademark arising from the use of IT components or software, the Successful Bidder shall be entirely responsible to extinguish such a claim. If the successful bidder fails to comply and the TENDERER is required to pay the compensation to the Third Party resulting from such infringement, the bidder shall be responsible for the compensation including all expenses, court costs and lawyer fees.

9.6 Hand-over of the system at the end of contractual period along with all documentation required to operate and maintain the system

System Integrator will provide to the AMC / SCADL the following before the expiry of the contract:

Information relating to the current services rendered and data relating to the performance of the services; Entire documentation relating to various components of the Project, any other data and confidential information related to the Project;

All the devices, which are procured as part of the project must be in the working condition on the day of hand-over of the project. Bidder may have to provide device working demonstration to AMC / SCADL / representative of SCADL / new vendor to whom the task is being assigned.

All other information (including but not limited to documents, records, and agreements) related to the project's products and services must be provided to SCADL, its nominated agencies, or the new SI . This will help them review everything and smoothly take over the project.

9.7 System Documents, User Manuals and Training

The SI shall provide documentation as the project undergoes various stages of implementation and provide all traceability documentation on changes done on the IT components during the course of the implementation of the solution. Indicative list of documents include:

1. Project Commencement: Project Plan – should provide micro level activities with milestones & deadline, Resource deployment plan, Unpriced Purchase Orders etc.
2. Delivery of Material: Original Manuals from OEMs, Delivery Challans.
3. Installation and Commissioning: User Acceptance Test sign-off documents, As built drawing along with the actual location of the installed cable / components etc., Simple Line Diagram (SLD), Inventory of the material utilized under this project, serial no. of the device, MAC address of the device, TAG ID, Latitude /Longitude of installed devices etc.

4. Training/Presentation: Training Material will be provided which will include the presentations used for trainings and also the required relevant documents for the topics being covered.
5. Training/Presentation to the staff of SCADL/AMC, Command and Control Centre Operators, Police Department's staff and SCADL's appointed agencies on related operations of the Project.
6. The Successful bidder shall provide the necessary Training, technical support, Standard Operating Procedure (SOP), HLD,LLD documents and other information to the TENDERER'S.
7. SI has to provide the above-mentioned required training/presentation as and when requested by the SCADL/AMC/Police Department without any additional cost to SCADL/AMC throughout the contract period.
8. User Manuals: For all the Application Software Modules, required for operationalization of the system.
9. System Manual: For all the Application Software Modules, covering detail information required for its administration.
10. Operational Manual: The bidder shall be responsible for preparing the Operational Manual relating to operation and maintenance of each service as mentioned in this RFP. The prepared process document shall be formally signed off by Ahmedabad smart city development limited (SCADL) before completion of final acceptance test.
11. Configuration Manuals for various devices procured under this project shall have to be provided by the Bidder.
12. Also preparation of daily, weekly, monthly project reports and presentation as per the requirement of the project and guideline provided by SCADL.
13. The SI shall be responsible for documenting configuration of all devices and keeping back up of all configuration files, so as to enable quick recovery in case of failure of devices.

Note: The successful bidder will ensure upkeep & updating of all documentation and manuals during the contractual period. The ownership of all documents, supplied by the Successful Bidder, will be with SCADL. Documents shall be submitted in two copies each in Printed & in Softcopy Formats.

10. Manpower Requirement

1. The minimum requirement of manpower resources, their qualification and responsibility (mentioned in below table is indicative and not limited to this only) of each resource is given below. The Bidder has to ensure that appropriate qualified manpower with requisite skill sets is deputed for the project.
2. The complete and true details of all the proposed resources such as educational qualification with year and stream of any degree, all past employment records with month and year of deployment under all the projects, all the certifications and training undertaken etc. must be mentioned in the CVs while submitting the same in the bid proposal. The CVs of all the proposed resources must be submitted as per the format provided in Section 14.18.
3. The successful Bidder shall depute the resources as per the requirements for carrying out the implementation activities as well as O&M Activities and maintaining the SLA. This is minimum indicative list of resources and based on actual requirements, the Bidder may deploy any number of resources to meet the SLA. No additional charge shall be paid to the Bidder for any additional manpower deployment. Please note that Bidder shall have to deploy adequate field resources over and above the mentioned proposed list of resources. Bidder should make an estimation for the field resource requirement and should increase if in case the number of manpower is not sufficient to manage the entire project without any additional cost to SCADL/AMC.
4. There are no separate line items for the manpower deployment for the project, however, Bidder is required to deploy adequate manpower to cater to the requirement stated in this RFP document. Bidder shall be penalized for non-deployment of required manpower during the course of the project.
5. The manpower deployed for the project should be without any criminal background / record. The successful Bidder must submit declaration certificate of all deployed manpower to SCADL before deputation in this regard. SCADL reserves right to undertake interview of the proposed resources at the beginning of the deployment or prior to approval of change request. Also, SCADL reserves the right to carry out background verification of the personnel proposed on the Project for verification of criminal record, at the beginning of deployment or during deployment.
6. The successful Bidder shall have to provide replacement for any employee who is either leaving the firm / not suitable for assignment. The replacement personnel should be of the same or higher technical capabilities and with prior approval from SCADL.
7. Please note that it is a minimum requirement for the manpower deployment, Bidder is free to deploy additional resources by keeping SCADL informed about their deployment.
8. Deployment of full / part time Civil engineer is in the scope of the Bidder. SCADL reserves the right to impose necessary penalty on non-availability of the this resource.

Sr. No.	Designation	Qty	Roles & Responsibilities	Desired Qualification
1.	Project Manager *(required during implementation and O&M phase)*	1	• Overall in-charge ofimplementation of the complete project for the entire contract duration • Coordinating with third party agencies, Telco service provider and software/equipment's vendors. • Should be the single point contact (SPOC) for managerial responsibilities and direct interface with the SCADL. • Responsible for ensuring timely delivery of all the milestones and timely resolution of all the concerns.	• BE /B. Tech (CE, CS, IT or EC) with M.Tech / MBA • 15+ Years of Post Qualification Experience in large scale ICT Infrastructure projects **Relevant Exp.**: • Relevant Exp.: 7+ Years of experience as a project manager of large-scale ICT infrastructure or WAN/MAN Projects
2.	Network Expert (required during implementation phase and O & M phase)	1	• The resource should be able to manage the NMS Tools • Installation, Configuration, Commissioning, Managing and monitoring Network operations • Responsible for monitoring of adherence to defined SLA for system by making effective utilization of NMS tools	• BE /B. Tech (EC,IT,CE) • Must have CCNP or higher (or equivalent) certification • 7+ Years of Post Qualification Experience in large scale ICT infrastructure projects. Relevant Exp.: 3+ Years of experience of working on Network implementation/ large-scale ICT infrastructure WAN/MAN Projects
3.	Data Center, Server & Storage Expert (required during implementation and O&M phase)	1	• Should be responsible for designing, installation, configuration, testing, managing, maintaining, monitoring, supporting, and troubleshooting all server, storage & backup components of the Data	• BE/B.Tech/MCA in computer science/ IT/E.C with CDCP or CDCS certification (or equivalent) • 7+ years of Post Qualification experience in supporting servers,

Sr. No.	Designation	Qty	Roles & Responsibilities	Desired Qualification
			Centre • Management of virtual machines • Resource allocation for any new requirement • Real-time monitoring, log maintenance and reporting of backup status on a regular basis. Prompt problem resolution in case of failures in the backup processes. • Monitoring and enhancement of the performance of scheduled backups, schedule regular testing of backups and ensure adherence to related	configuring network and storage, server environment, antivirus administration and administer DNS and DHCP • Relevant Experience: 5+ years of experience with physical servers, blade servers, and rack servers. • Expertise in SAN (Storage Area Networks), NAS (Network Attached Storage), RAID configurations, and backup solutions. • Vmware, Hyper-V, and other hypervisors for virtualized environments , for large scale ICT project implementations.
4.	Cyber Security Expert	1	• Should be responsible for develop and implement comprehensive cybersecurity strategies and policies to safeguard the organization's digital assets. • Should be involved in regular security assessments, vulnerability assessments, and penetration testing to identify and mitigate risks. • Monitor and respond to security incidents and breaches, conducting thorough investigations and recommending corrective actions. • Design and implement security controls and threat	• Minimum Education: BE/BTech/MCA • Total Experience: At least 8 years in IT sector • Certification: CCNA/CCNP & CISSP • Should have experience of more than 3 years as Cyber Security Expert in large projects of similar nature

Sr. No.	Designation	Qty	Roles & Responsibilities	Desired Qualification
			protection measures, including firewalls, intrusion detection systems, and encryption technologies.	
5.	CCTV /VMS expert (required during implementation and O&M phase)	1	• Should be responsible for configuring, commissioning, monitoring & managing entire CCTV surveillance network • Able to configure alerts, analytics & manage Video management software. • Should be responsible for monitoring of adherence to defined SLA for system by making effective utilization of CCTV surveillance.	• BE/B.Tech or higher • 5+ Years of Post Qualification Experience in large scale ICT projects • Relevant experience: Experience in configuration, installation and commissioning of IP cameras for surveillance, VMS and Video analytics.
6.	Site Civil Engineer (required on an ad-hoc basis)	1	• Should be responsible for undertaking, managing and monitoring all the civil activities involved in the project • Engineer must remain available during the civil work is in progress.	• B.E. / B.Tech (Civil) or higher • 2+ years of Post qualification experience
7.	Network Engineers (required during implementation and O&M phase)	6	• Installation, commissioning, Troubleshooting of all the network equipment • Maintenance, Monitor & Support for network equipment • Regular update of software patches, antivirus etc. • Any other activities as and when required.	• BE /B. Tech with CCNA or higher certification. • 3+ years of similar type post qualification experience
8.	NOC engineer (Required Implantation and during O&M phase)	4	• Should be responsible for undertaking, managing and monitoring all the field activities involved during the Operation andmaintenance	• BE /B. Tech (EC/IT/CE) with CCNA or higher certification • Relevant Exp.: 3 -5 years of experience in network

Sr. No.	Designation	Qty	Roles & Responsibilities	Desired Qualification
			(O&M) phase of the project • Minimum 4 resources should be available during the entire contractual duration, Bidder shallhave to have additional resources to maintain rotation. • Willingness to work in shifts, including nights, weekends, and holidays, as NOC operations often require 24/7 coverage • Responsible for monitoring of adherence to defined SLA by vendors by making effective utilization of deployed NMS tools	operations, network support, or a related field. Experience of working of NMS Tool • Hands-on experience with diagnosing, troubleshooting, and resolving network issues
9.	Field manpower	It is up to selected bidder to plan field manpower / teams to fulfill all the terms & conditions of the RFP.		

11. Project Timelines and Payment Terms

Project completion timeline is considered from the date of issuance of the work order to the SI.

T = Date of issuance of Work Order

T1 = Team mobilization / deployment period = T+15 days

11.1 Implementation timeline for Central Hardware Infrastructure (Data Center)

Sr. No.	Milestone for the Implementation	Payment Schedule	Time Schedule	Penalty for Delay	Deliverables
M1	Completion of Site Survey and Successful Installation, commissioning of PAC, UPS and readiness of Data center room w.r.t SOW mentioned the RFP	10% of the Sum, Total A of schedule I of financial bid	Within 2 Month from date of issuance of work order (T+ 2 Months)	A penalty of 0.25% of the Sum, Total A of schedule I of financial bid for Delay for every Week or part thereof. Delay beyond T+ 4 - month, TENDERER may terminate the Work Order/Contract and forfeit the PBG	1. Material Delivery Challan 2. Site Photos 3. FAT Sign off & Closure of Observations Report 4. Attendance of the Resources deployed 5. Site Survey Reports, BOQ & Drawings
M2	Successful Delivery and Inspection of Hardware Equipment (Network/Servers/Storage etc.) at the central location/ Bidder's Warehouse	40% of the Sum, Total A of schedule I of financial bid	Within 5 Month from date of issuance of work order (T+ 5 Months)	A penalty of 0.25% of the Sum, Total A of schedule I of financial bid for Delay for every Week or part thereof. Delay beyond T+ 7 - month, TENDERER may terminate the Work Order/Contract and forfeit the PBG	1. Material Delivery Challan 2. Materials photos 3. Material Inspection Sign Off 4. Attendance of the Resources deployed

Sr. No.	Milestone for the Implementation	Payment Schedule	Time Schedule	Penalty for Delay	Deliverables
M3	Successful Installation, commissioning, and FAT of Hardware Equipment along with required OS, DB & virtualization platform at Data Center	40% of the Sum, Total A of schedule I of financial bid	Within 6 Month from date of issuance of work order (T+ 6 Months)	A penalty of 0.25% of Sum, Total A of schedule I of financial bid for Delay for every Week or part thereof. Delay beyond T+ 8 - month, TENDERER may terminate the Work Order/Contract and forfeit the PBG	Installation and commissioning Report (Central Location) Site Photos FAT Sign off & Closure of Observations Report Training Completion Report VA/PT & Security Audit certificate Server and storage Report NMS Report SOP of all IT & Non-IT Infrastructure Attendance of the Resources deployed
M4	Successful Completion of 3 months from the date of Issuance of successful FAT Certificate of all the line item mentioned in Table A of Schedule I of financial bid	10% of the Sum, Total A of schedule I of financial bid			SLA Report Preventive Maintenance Report Attendance of the Resources deployed Go-Live Report of all line item mentioned in Table A of schedule -I of Financial Bid SOP documents, HLD, LLD manuals.

Note:

1. The SI shall prepare and submit the detailed feasibility study report including final Bill of Quantity (BoQ) within the specified time limit from the date of issuance of LOI/Work Order.

2. SCADL will complete FAT & issue FAT completion certificate or issue list of punch points within 7 days of FAT offer from SI. SI should plan activities & their completion accordingly so that FAT completion is achieved within milestone completion timeline to avoid delay penalty.
3. "Go-Live" for data Center means the date on which the FAT of data center equipment as per the Implementation Milestone table has been successfully completed and accepted by the TENDERER.
4. After the go-live phase, the operation and maintenance of data center equipment will commence, and the bidder will be eligible to claim O&M payments as specified in Schedule-II of OPEX Table B3 of the financial bid. 100% SLA and appropriate penalty will be applicable during O&M period once DC moves in to O&M phase. Payments to the bidder will be made after deducting any applicable penalties.
5. Maximum Penalty cap for penalty for delay is 10% of Sum, Total A of schedule I of financial bid.
6. The successful bidder shall submit invoices along with the necessary supporting documents confirming milestone achieved and other documents as required by SCADL for processing of invoices. Invoice should be raised in English language only.
7. SCADL shall verify the Invoices raised against the milestone achieved and shall make the payment.
8. Any delay by the SI in the final acceptance testing shall render him liable to the imposition of appropriate penalties. SCADL will complete FAT of DC equipment within 1 month and therefore, SI shall complete installation of all components accordingly to comply to M3 milestone completion.
9. If TENDERER fails to provide space and related clearances to carry out the job as per the agreement terms, as a result of which the installation of the equipment is delayed, and the selected agency is not able to adhere to the schedule for completing the Acceptance Tests, then delay solely on account of above will not be accounted for SI while ascertaining actual delay and penalties thereof. Informing the client in due time of the cause of such delay falls within the responsibility of the SI. If the delay in implementation or performance is due to reasons not attributable to SI, then the SI is expected to submit proofs of the same to PURCHASER clearly highlighting the reason and agency responsible for the delay. If the submitted proofs are acceptable to PURCHASER, penalty would not be applicable.
10. For calculation of delay any dependencies from TENDERER side will be excluded.

11.2 Implementation timeline for NMS, VMS and Edge Location Infrastructure:

T = Date of issuance of Work Order

T1 = Team mobilization / deployment period = T+30 days

Sr. No.	Milestone for the Implementation	Payment Schedule	Time Schedule	Penalty for Delay	Deliverables
M1	Completion of Site Survey and finalization of BoQ for all the Junction locations		T+2 months	A penalty of 0.1% of Sum, total B of schedule I of financial bid for Delay for every	Site Survey Reports, BOQ & Drawings

Sr. No.	Milestone for the Implementation	Payment Schedule	Time Schedule	Penalty for Delay	Deliverables
				Week or part thereof. Delay beyond T+ 4 months, TENDERER may terminate the Work Order/Contract and forfeit the PBG	
M2	Phase-1 : SITC of City Surveillance infrastructure at 20% of total identified locations SITC of VMS, NMS Applications SITC of basic e-Challan application / solution along with associated database and make it functional with all the requirements (RLVD, ANPR use case and e-Challan Application) and achievement of accuracy %	Monthly : submission of 1 bill / month will be allowed. Successful bidder will include supply & ITC line items (B1 & B2) for all field elements for which UAT is completed in a monthly bill. SCADL will pay 90% amount. Balance 10% of all monthly bills will be paid after 3 months of completion of this milestone. Payment after milestone approval: VMS and NMS: A 20% payment of Line Item 1 and 2 from the B3 table (Schedule-I) of financial bid will be made upon the successful integration of all associated cameras of these milestones into the VMS & all active	T + 5 months	1. Edge Devices: A penalty of 0.15% of total B of schedule I of financial bid of every Week or part thereof. Delay beyond T+ 7 - month TENDERER may terminate the contract and forfeit the PBG 2. E-Challan: A penalty of 0.5% sum of RLVD & ANPR use case line items of table – E schedule I of financial bid for every Week or part thereof. Delay beyond T+ 7 - month TENDERER may terminate the contract and forfeit the PBG **Note :** For any pendency of SITC of surveillance infrastructure and VMS & NMS, penalty – 1 will apply.	IT & Non-IT Infrastructure Installation and commissioning Report (Edge Location) Site Photos Application deployment & Configuration Report UAT Sign off for all software applications with closure of all punch points NMS and VMS node discovery report Server and storage Report Closure of Observations & Punch point Report Attendance of the Resource deployed for Implementation phase Implemented quantities of licenses and events generated report against cameras for RLVD and ANPR use cases. VAPT and Audit Certificate of E-Challan Application from CERT-In empaneled vendor

Sr. No.	Milestone for the Implementation	Payment Schedule	Time Schedule	Penalty for Delay	Deliverables
		component discovery in NMS Payment after milestone approval: E-challan Use case- 80% Payment of these use cases calculated using unit rate of license * Implemented quantities of license. Balance 20% shall pay in O&M phase in equal quarterly installment		For any pendency of e-Challan use cases of RLVD & ANPR, penalty – 2 will apply.	
M3	Phase-2 : SITC of City Surveillance infrastructure at 20% of total identified locations Implementation of RLVD, ANPR use case for cameras installed in this milestone and achievement of accuracy %	Monthly : submission of 1 bill / month will be allowed. Successful bidder will include supply & ITC line items (B1 & B2) for all field elements for which UAT is completed in a monthly bill. SCADL will pay 90% amount. Balance 10% of all monthly bills will be paid after 3 months of completion of this milestone. Payment after milestone approval: VMS and NMS: A 20% payment of Line Item 1 and 2 from the	T + 8 months	1. Edge Devices: A penalty of 0.15% of total B of schedule I of financial bid of for every Week or part thereof. Delay beyond T+ 10 - month TENDERER may terminate the contract and forfeit the PBG. 2. E-Challan: A penalty of 0.5% sum of RLVD & ANPR use case line items of table – E schedule I of financial bid for every Week or part thereof. Delay beyond T+ 10 - month TENDERER may terminate the	IT & Non-IT Infrastructure Installation and commissioning Report (Edge Location) Site Photos NMS and VMS node discovery report Server and storage Report Closure of Observations & Punch point Report Attendance of the Resource deployed for Implementation phase Implemented quantities of licenses and events generated report against cameras for RLVD and ANPR use cases.

Sr. No.	Milestone for the Implementation	Payment Schedule	Time Schedule	Penalty for Delay	Deliverables
		B3 table (Schedule-I) of financial bid will be made upon the successful integration of all associated cameras of these milestones into the VMS & all active component discovery in NMS Payment after milestone approval: E-challan Use case- 80% Payment of these use cases calculated using unit rate of license * implemented quantities of license. Balance 20% shall pay in O&M phase in equal quarterly installment		contract and forfeit the PBG	
M4	Phase-3 : SITC of City Surveillance infrastructure at 20% of total identified locations Implementation of RLVD, ANPR use case for cameras installed in this milestone and achievement of accuracy %	Monthly : submission of 1 bill / month will be allowed. Successful bidder will include supply & ITC line items (B1 & B2) for all field elements for which UAT is completed in a monthly bill. SCADL will pay 90% amount. Balance 10% of all monthly bills will be paid after 3 months of completion of this milestone. Payment after milestone approval:	T + 11 months	1. Edge Devices: A penalty of 0.15% of total B of schedule I of financial bid of every Week or part thereof. Delay beyond T+ 13 - month TENDERER may terminate the contract and forfeit the PBG 2. E-Challan: A penalty of 0.5% sum of RLVD & ANPR use case line items of table – E schedule I of financial bid for every Week or part	IT & Non-IT Infrastructure Installation and commissioning Report (Edge Location) Site Photos NMS and VMS node discovery report Server and storage Report Closure of Observations & Punch point Report Attendance of the Resource deployed for Implementation phase Implemented quantities of licenses and events generated report against

Sr. No.	Milestone for the Implementation	Payment Schedule	Time Schedule	Penalty for Delay	Deliverables
		VMS and NMS: A 20% payment of Line Item 1 and 2 from the B3 table (Schedule-I) of financial bid will be made upon the successful integration of all associated cameras of these milestones into the VMS & all active component discovery in NMS Payment after milestone approval: E-challan Use case- 80% Payment of these use cases calculated using unit rate of license * implemented quantities of license. Balance 20% shall pay in O&M phase in equal quarterly installment		thereof. Delay beyond T+ 13 - month TENDERER may terminate the contract and forfeit the PBG	cameras for RLVD and ANPR use cases.
M5	Phase-4 : SITC of City Surveillance infrastructure at 20% of total identified locations Implementation of RLVD, ANPR use case for cameras installed in this milestone and	Monthly : submission of 1 bill / month will be allowed. Successful bidder will include supply & ITC line items (B1 & B2) for all field elements for which UAT is completed in a monthly bill. SCADL will pay 90% amount. Balance 10% of all monthly bills will be paid after 3 months of	T + 15 months	1. Edge Devices: A penalty of 0.15% of total B of schedule I of financial bid of every Week or part thereof.. Delay beyond T+ 17 - month TENDERER may terminate the contract and forfeit the PBG 2. E-Challan: A penalty of 0.5% sum of RLVD & ANPR use case line	IT & Non-IT Infrastructure Installation and commissioning Report (Edge Location) Site Photos NMS and VMS node discovery report Server and storage Report Closure of Observations & Punch point Report

Sr. No.	Milestone for the Implementation	Payment Schedule	Time Schedule	Penalty for Delay	Deliverables
	achievement of accuracy %	completion of this milestone. Payment after milestone approval: VMS and NMS: A 20% payment of Line Item 1 and 2 from the B3 table (Schedule-I) of financial bid will be made upon the successful integration of all associated cameras of these milestones into the VMS & all active component discovery in NMS Payment after milestone approval: E-challan Use case- 80% Payment of these use cases calculated using unit rate of license * implemented quantities of license. Balance 20% shall pay in O&M phase in equal quarterly installment		items of table – E schedule I of financial bid for every Week or part thereof. Delay beyond T+ 17 - month TENDERER may terminate the contract and forfeit the PBG	Attendance of the Resource deployed for Implementation phase Implemented quantities of licenses and events generated report against cameras for RLVD and ANPR use cases.
M6	Phase-5 : SITC of City Surveillance infrastructure at 20% of total identified locations Implementation of RLVD, ANPR use case for cameras installed in this milestone and	Monthly : submission of 1 bill / month will be allowed. Successful bidder will include supply & ITC line items (B1 & B2) for all field elements for which UAT is completed in a monthly bill. SCADL will pay 80% amount. Balance 10% of all monthly bills will be paid after 3 months of	T + 18 months	1. Edge Devices: A penalty of 0.15% of total B of schedule I of financial bid of every Week or part thereof. Delay beyond T+ 20 - month TENDERER may terminate the contract and forfeit the PBG	IT & Non-IT Infrastructure Installation and commissioning Report (Edge Location) Site Photos NMS and VMS node discovery report Server and storage Report Closure of Observations & Punch point Report

Sr. No.	Milestone for the Implementation	Payment Schedule	Time Schedule	Penalty for Delay	Deliverables
	achievement of accuracy %	completion of this milestone and 10% will be paid after Final Go- Live of the Solution Payment after milestone approval: VMS and NMS: A 20% payment of Line Item 1 and 2 from the B3 table (Schedule-I) of financial bid will be made upon the successful integration of all associated cameras of these milestones into the VMS & all active component discovery in NMS Payment after milestone approval: E-challan Use case- 80% Payment of these use cases calculated using unit rate of license * implemented quantities of license. Balance 20% shall pay in O&M phase in equal quarterly installment		2. E-Challan: A penalty of 0.5% sum of RLVD & ANPR use case line items of table – E schedule I of financial bid for every Week or part thereof. Delay beyond T+ 20 - month TENDERER may terminate the contract and forfeit the PBG	Attendance of the Resource deployed for Implementation phase Implemented quantities of licenses and events generated report against cameras for RLVD and ANPR use cases.
M7	Submission of SOP & Final Go- Live of the Solution	Balance 10% of all monthly bills of field elements of Milestone – M6	T + 20 month		SOP of all IT & Non-IT Infrastructure Closure of Observations & Punch point Report Server and storage Report NMS and VMS report

Sr. No.	Milestone for the Implementation	Payment Schedule	Time Schedule	Penalty for Delay	Deliverables
					Attendance of the Resource deployed for Implementation phase VAPT and Audit Certificate from CERT-In empaneled vendor

Note:

1. The SI shall prepare and submit the detailed feasibility study report including final Bill of Quantity (BoQ) within the specified time limit from the date of issuance of LoI /Work Order.
2. Bidder should commence installation and commissioning of the project, right after the completion of site survey milestone (M1).
3. SCADL will complete FAT & issue FAT completion certificate or issue list of punch points within 7 working days of FAT offer from SI. The FAT offer date for the edge components is the invoice submission date to SCADL.SI should plan all field activities & their completion accordingly so that FAT completion is achieved within milestone completion timeline to avoid delay penalty.
4. The FAT will be provided in each respective milestone as mentioned in above table.
5. The milestone completion date is defined as the date on which the FAT for the respective 20% location components, as specified in the milestone, has been successfully completed and accepted by the TENDERER and which is "Go-live" date of that milestone.
6. After the go-live phase of the respective milestone, the operation and maintenance of Edge device components will commence. At this point, the bidder and TSP will be eligible to claim O&M payments as outlined in Schedule-II of the OPEX Table B1 and Table B2, respectively, of the financial bid. 100% SLA and appropriate penalty will be applicable during O&M period once milestone moves into O&M phase. Payments to the bidder and TSP will be made after deducting any applicable penalties.
7. If 10% or less of work is pending due to the factors beyond the control of the bidder for the respective Milestone than the Go-live can be initiated of the respective phase by SCADL and SI will be paid on pro rata basis. SCADL reserves the final authority to make decisions regarding the issuance of Go-live certificates in each milestone. Any decisions made by SCADL in this context will be final and binding to SI. No claims from the Bidder concerning this matter will be entertained.
8. "100% Go-Live" means the date on which the FAT of all project component's including all milestones as per the Work order has been successfully completed and accepted by the TENDERER.
9. P2MP/L2VPN connectivity will be required for FAT of any junction locations. Therefore, it is up to successful bidder to decide and provide junction locations to TSP (Telecom Service provider) to provision any link considering all parameters like time required to make RoW applications, RoW permission availability from authority, time required for field work etc. Any delay in link provisioning will be responsibility of the bidder & TSP both as the case may be and

accordingly, delay penalty will be levied (please refer detailed point – 13 below in this regards). SCADL & AMC will extend full support to provide RoW permission at earliest possible time & not letter than 30 days from submission of RoW application (also refer example given below in sr. no. – 11).

10. Power connection availability will also be required for FAT of any junction / location. Therefore, it is up to successful bidder to submit an application to Torrent Power at earliest after completion of field survey for junctions locations. SCADL & AMC will extend full support to provide RoW permission to Torrent Power (wherever required) at earliest possible time. Informing the client in due time of the cause of such delay falls within the responsibility of the SI.
11. Example : Let's say 20 junctions are to be completed in 1 quarter (90 days). TSP / SI submits RoW applications for all 20 junctions at various intervals in first 50 days. At the end of the quarter, let's say work of 3 junctions remains incomplete (FAT not completed). Out of 3, 2 junctions are pending due to lack of RoW permission availability from AMC and 1 junction is pending due to SI. Both these RoW application's aging is 40+ days in this example. Let's say last RoW permission of this milestone for 2nd junction (out of 2 pending) is given by AMC on 100th day which is 50th day from submission of RoW application. Therefore, 20 days (50 – 30) relaxation will be provided to SI while calculating delay penalty provided if SI has completed (FAT completion) 1 pending junction in its own bucket before release of last RoW permission. If SI doesn't complete (FAT completion) 1 pending junction in its own bucket before release of last RoW permission, no relaxation will be provided in such case.
12. If TENDERER fails to provide space and related clearances for the installation of devices in field to carry out the job as per the agreement terms, as a result of which the installation of the equipment is delayed, and the selected agency is not able to adhere to the schedule for completing the Acceptance Tests, delay solely on account on above will not be accounted while ascertaining actual delay and penalties thereof. Informing the client in due time of the cause of such delay falls within the responsibility of the SI. If the delay in implementation or performance is due to reasons not attributable to SI, then the SI is expected to submit proofs of the same to PURCHASER clearly highlighting the reason and agency responsible for the delay. If the submitted proofs are acceptable to PURCHASER, penalty would not be applicable.
13. TSP will have to submit OTC bill directly to SCADL as per the terms & conditions of the tripartite agreement once link is successfully commissioned for any junction / location. TSP will be allowed to submit 1 bill every month for OTC charges of commissioned links. Before making a payment to TSP, SCADL will inform successful bidder to check if any delay in implementation is attributable to TSP. Upon joint agreement & consensus of both successful bidder (SI) & TSP on delay penalty attributable to TSP, SCADL will pay to TSP within one month.
14. The delay penalty for field surveillance infrastructure and VMS & NMS for the System Integrator (SI) and the Telco Service Provider (TSP) is capped at 10% of total B of schedule I and total C of schedule I respectively in Capex phase which will deducted from monthly/Quarterly bill of SI and TSP respectively.

11.3 Implementation timeline for Video Analytics Use cases

T = Date of issuance of Work Order

Sr No	Milestone for the Implementation	Payment Schedule	Time Schedule	Penalty for Delay	Deliverables
M1	Successful functioning of 7 use cases out of 15 use cases (No Helmet, More than 2 passengers on two-wheeler, No Seat belt ,Cattle on road, Spitting, Faded stop line & Zebra Crossing, video summarization) and achievement of accuracy % of this milestone use cases as per SoW + Dashboard commissioning after customization as required to comply SoW of this RFP	80% Payment of these use cases calculated using unit rate of license * implemented quantities of license. Balance 20% shall pay in O&M phase in equal quarterly installment	T+6 Month	A penalty of 0.5% of sum of this milestone use case line items of table – E schedule I of financial bid for every Week or part thereof. Delay beyond T+ 8 -month TENDERER may terminate the contract and forfeit the PBG	Implemented quantities of licenses and events generated report against each use cases.
M2	Successful functioning of 8 use cases out of 15 use cases (garbage on road, Damage Infrastructure, potholes, uncovered debris in truck, Mobile phone while driving, Wrong side driving, Water logging, Facial recognition + Additional Feature) and achievement of accuracy % of this milestone use cases as per SOW	80% Payment of these use cases calculated using unit rate of license * implemented execution quantities of license. Balance 20% shall pay in O&M phase in equal quarterly installment	T+10 Month	A penalty of 0.5% sum of this milestone use case line items of table – E schedule I of financial bid for every Week or part thereof. Delay beyond T+ 10 -month TENDERER may terminate the contract and forfeit the PBG	Implemented quantities of licenses and events generated report against each use cases.

Note for for E-challan use cases:

1. SCADL / any authorized agency from SCADL will check the detection accuracy of e-Challan system for all use cases by manually viewing recorded video feed in VMS for violation cases and

comparing the number of generated events (only true +ve events) with the actual number of the violations found out manually from the video feed. (Detection Accuracy = Total Events detected by SI's Application - False positive events /Total events manually recorded by SCADL).

2. For calculation of accuracy % for all use cases, only those events will be considered which can be detected through naked human eye. The authorities will calculate the accuracy manually.
3. No milestone will be approved during implementation phase till the time accuracy of all use cases of that milestone is achieved as per RFP. Once all use cases outlined in Milestone are implemented with the required accuracy percentage, the milestone shall be approved..
4. For all false positive events, there shall be no penalty in implementation phase.
5. SCADL shall pay the license cost to the bidder by calculating unit rate of license * implemented quantities of license. For the cameras that have not generated events and for which the bidder claims that licenses have been implemented as per RFP quantities, then the bidder shall provide evidence by supplying a server snapshot or a system-generated report showing that the licenses for the use cases have been configured on the remaining cameras. Based on the evidence provided, SCADL authorities may acknowledge that the bidder has successfully implemented licenses on the cameras as per RFP demanded quantities and may proceed to pay the license cost to the bidder. However, SCADL reserves the right to issue the payment to the bidder in regard to this matter.
6. The delay penalty for implementation of all use cases (RLVD & ANPR use cases mentioned in clause 11.2 + all use cases mentioned in clause 11.3) is capped at 10% of total E of schedule I.
7. In O&M Phase (for remaining 20% payment), If a surveillance location where the bidder has implemented licenses on cameras is dismantled, SCADL will temporarily stop payment for those camera licenses until the licenses are re-implemented on other cameras.

11.4 Timelines & Payment Terms for Operation and Maintenance (O&M) phase

Selected Bidder will be responsible for successful O&M of all the components/sub-components of the project.

Sr No	Milestone for O&M	Payment Schedule	Payable Amount	Penalty	Deliverables
1	Operation and Maintenance (O&M) bill of SI	Quarterly	For Data Center components: Quarterly payment derived from Schedule-II in Table B3 of Opex Financial bid table/4 For Field Elements: Quantity of active elements discovered in NMS (only up / down) and corresponding	Penalty will be applicable as per the SLA and Operations Penalties	SLA report of the devices by SI through NMS Preventive Maintenance Report Attendance of the Resource deployed for O&M

Sr No	Milestone for O&M	Payment Schedule	Payable Amount	Penalty	Deliverables
			passive elements of each line items given in Table – B1 in Schedule – II of Opex financial bid * (Unit rate quoted for respective line item of Table – B1 in Schedule – II of Opex financial bid table / 4)		
2.	Operation and Maintenance (O&M) bill of TSP	Quarterly	All those links / circuits for which FAT is successfully completed for respective junction / location * (Unit rate quoted for respective line item of Table – B2 in Schedule – II of Opex financial bid table / 4)	Penalty will be applicable as per the SLA and Operations Penalties	SLA report of the uptime of link / circuit as shared by SI through NMS

Note:

1. On successful completion of FAT of all Phase – 1 locations (all 20% surveillance locations) included / considered under implementation milestone – M2 (phase – 1), Go-Live certificate will be issued for M2 & all assets installed under M2 will go into O&M phase. Bidder will be eligible to claim 100% O&M payment as per formula mentioned in above table for each quarter. This consideration will also apply to remaining 4 implementation milestones M3 (phase – 2) to M6 (phase – 5). Bidder will have to carry out O&M activities till end of contract. 100% SLA and appropriate penalty will be applicable during O&M period once milestone moves into O&M phase.
2. The Bidder and TSP shall be paid on a quarterly basis for the operation and maintenance phase of the project.
3. Payment will be made after verifying the invoice and supporting documents & deducting all applicable penalties.
4. TSP will have to submit recurring charges / bill directly to SCADL as per the terms & conditions of the tripartite agreement every quarter for all those links / circuits for which link is successfully commissioned for respective junction / location. Before making a payment to TSP, SCADL will inform successful bidder to check if any SLA / downtime penalty is attributable to TSP. Upon joint agreement & consensus of both successful bidder (SI) & TSP on SLA penalty attributable to TSP, SCADL will pay to TSP within one month.

11.5 Miscellaneous

A. Currency of payment

All payments shall be made in Indian rupees (INR).

B. Mode of Billing and Payments

i. The Bidder shall submit the proforma invoice along with the actual work undertaken against the respective milestone / time period.

ii. If the progress is not satisfactory and according to the agreed work program/schedule the payment may be withheld until such times the Bidder rectifies the required shortfall.

iii. The Bidders shall thereupon promptly make any necessary corrections, and upon completion of such correction, the foregoing process shall be repeated.

All payments under this contract shall be made to the accounts of the Bidders with the Bidders Banker.

C. Suspension of payments

SCADL may at any time during the term of the Contract, issue a written notice of suspension and suspend all payments to the qualified Bidder under the Contract, if the qualified Bidder fails to perform any or all of their obligations under this Contract. The SCADL shall, prior to the suspension of the payments, request the qualified Bidder to remedy such failure within a period of 15 days from the date of' issue of such notice of suspension. The notice of suspension shall specify the nature of the failure. In the event the Bidder does not rectify the failure within the specified time prescribed, the SCADL/AMC may have the right to terminate the Contract.

11.6 Commercial Bid Format

Bidder is requested to add one section in their technical bid containing any additional items that may be required to execute the task defied in the RFP; However, the cost pertaining to the same shall have to be considered in the below financial bid only by the Bidder. No additional cost shall be given to the Bidder under any circumstances whatsoever.

This is a Turnkey kind of project. Wherein, bidder is required to propose an appropriate solution to meet the outcome envisaged. However, Bidder is responsible for any other components inadvertently missed out but it is required as per the proposed solution of the bidder and is essential for overall solution to successfully run during entire project duration than bidder has to consider the same in his proposed solution. Purchaser will not be liable for payment of any additional cost outside of financial bid.

Capital Expenditure (CAPEX)

Table: I

Sr. No.	Description	UoM	Quantity (No.)	Unit Price (INR, excluding tax)	Total Amount (INR, excluding tax)	Taxes and Duties (As applicable) in %
	(A)	(B)	I	(D)	(E=C*D)	(F)
Schedule-I						
Table A) Central Infrastructure: For Command Control Centre						
1	SITC of Storage Capacity-(For Application-Capacity-5 TB)	No.	1			
2	SITC of SAN Switch along with all necessary SFP with port licenses and other required accessories for DC Infra	No.	2			
3	SITC of minimum 5.5 PB NAS Storage along with all required Hardware, software with scalable solution for future expansion as per quantity variation clause	No.	1			
4	SITC of minimum 5.5 PB Unified Storage along with all required Hardware, software with scalable solution for future expansion as per quantity variation clause	No.	1			
5	SITC of DC GPU server including OS, DB software licenses, virtualization platform etc for the proposed solution mentioned in the SOW (No. Of physical server with total physical cuda cores to be mentioned in the technical bid)	Lumpsum	1			
6	SITC of DC server including OS, DB software licenses, virtualization platform etc for the proposed solution mentioned in the SOW (No. Of physical server with total physical cores to be mentioned in the technical bid)	Lumpsum	1			

Sr. No.	Description	UoM	Quantity (No.)	Unit Price (INR, excluding tax)	Total Amount (INR, excluding tax)	Taxes and Duties (As applicable) in %
7	SITC of DC Core Router along with Line Card,SFPs and Port Licenses	No.	2			
8	SITC of 48*10G port L3 Core Switch along with all necessary SFP, Port Licenses	No.	2			
9	SITC of 48*10G Port L2 Network Switch along with all necessary SFP, Port Licenses	No.	4			
10	SITC of 48 Port L2 Switch with 10/100/1000BaseT ports with all necessary SFP, Port Licenses	No.	2			
11	SITC of UTM along with all necessary SFP, Port Licenses	Nos.	2			
12	42U Network Rack	Nos.	2			
13	42U Server Rack	Nos.	5			
14	SITC of Online 100 KVA UPS with 4 hours of battery backup at ICCC	Nos.	1			
15	SITC of Data Center as per SOW mentioned in the RFP	Lumpsum	1			
16	SITC of 15Tr PAC in the Data Centre Server farm area	Nos.	2			
Total A						
Table B) Site Infrastructure: End Point Items						
B1) Supply of elements						
1.	Gantry	Nos.	48			
2.	Galvanized Cantilever with earthing	Nos.	428			
3.	Poles including mounting/installation	Nos.	208			
4.	IP Camera : RLVD with 8 MP with required license for VMS integration	Nos.	476			
5.	IP Camera : ANPR, Speed detection with required license for VMS integration	Nos.	1278			
6.	IP Camera : PTZ with required license for VMS integration	Nos.	163			

Sr. No.	Description	UoM	Quantity (No.)	Unit Price (INR, excluding tax)	Total Amount (INR, excluding tax)	Taxes and Duties (As applicable) in %
7.	IP Camera for Surveillance with 4MP (For Bridge Location) required license for VMS integration	Nos.	90			
8.	IP Camera for Surveillance (Front Facing Cameras for video Analytics) with required license for VMS integration	Nos.	300			
9.	External IR (For ANPR, Bridge Location surveillance camera and Front Facing Cameras)	Nos.	2144			
10.	Junction box with Adjustable mounting tray along with Voltage stabilizers, Surge Protection Power strip and other associated components	Nos.	163			
11.	Outdoor Industrial grade 8 port POE+ network switch with minimum 2 Nos. of 1G compatible SFP	Nos.	446			
12.	Pole Mount JB including Power strip and other associated components, power cable, OFC cable and data cable	Nos.	45			
Total B1						
B2) Installation, testing & commissioning (ITC) of elements						
1.	Gantry	Nos.	48			
2.	Galvanized Cantilever with earthing	Nos.	428			
3.	Poles including mounting/installation	Nos.	208			
4.	IP Camera : RLVD with 8 MP with required license for VMS integration	Nos.	476			
5.	IP Camera : ANPR, Speed detection with required license for VMS integration	Nos.	1278			
6.	IP Camera : PTZ with required license for VMS integration	Nos.	163			
7.	IP Camera for Surveillance with 4MP (For Bridge	Nos.	90			

Sr. No.	Description	UoM	Quantity (No.)	Unit Price (INR, excluding tax)	Total Amount (INR, excluding tax)	Taxes and Duties (As applicable) in %
	Location) required license for VMS integration					
8.	IP Camera for Surveillance (Front Facing Cameras for video Analytics) with required license for VMS integration	Nos.	300			
9.	External IR (For ANPR, Bridge Location surveliiace cameras and Front Facing Cameras)	Nos.	2144			
10	Junction box with Adjustable mounting tray along with Voltage stabilizers, Surge Protection Power strip and other associated components	Nos.	163			
11	Outdoor Industrial grade 8 port POE+ network switch with minimum 2 Nos. of 1G compatible SFP	Nos.	446			
12	Pole Mount JB including Power strip and other associated components, power cable, OFC cable and data cable	Nos	45			
Total B2						
B3) SITC of software applications						
1	SITC of base product of VMS with required OS & DB along with client licenses for 100 concurrent users and required licenses to integrate all cameras installed under this contract as well as future expansion as per quantity variation clause	Lumpsum	1			
2	SITC of Enterprise Management System (EMS) /NMS with required OS & DB along with client licenses for 30 concurrent users and required licenses to integrate all active	Lumpsum	1			

Sr. No.	Description	UoM	Quantity (No.)	Unit Price (INR, excluding tax)	Total Amount (INR, excluding tax)	Taxes and Duties (As applicable) in %
	equipment installed under this contract as well as future expansion as per quantity variation clause					
Total B3						
Total B = B1+B2+B3						
Table C) Network Connectivity						
Sr. No.	**Bandwidth**	**UoM**	**No. of circuits**	**One Time Charge (OTC) (INR excluding tax)**	**Total Amount (INR excluding tax)**	**Taxes and duties (As applicable) in %**
1	OTC charge for provisioning of P2MP/L2VPN 10 Mbps Connectivity from ICCC, Paldi to field location	Nos.	2			
2	OTC charge for provisioning of P2MP/L2VPN 20 Mbps Connectivity from ICCC, Paldi to field location	Nos.	2			
3	OTC charge for provisioning of P2MP/L2VPN 30 Mbps Connectivity from ICCC, Paldi to field location	Nos.	15			
4	OTC charge for provisioning of P2MP/L2VPN 50 Mbps Connectivity from ICCC, Paldi to field location	Nos.	37			
5	OTC charge for provisioning of P2MP/L2VPN 70 Mbps Connectivity from ICCC, Paldi to field location	Nos.	45			
6	OTC charge for provisioning of P2MP/L2VPN 80 Mbps Connectivity from ICCC, Paldi to field location	Nos.	45			
7	OTC charge for provisioning of P2MP/L2VPN 100 Mbps Connectivity from ICCC, Paldi to field location	Nos.	30			

Sr. No.	Description	UoM	Quantity (No.)	Unit Price (INR, excluding tax)	Total Amount (INR, excluding tax)	Taxes and Duties (As applicable) in %
8	OTC charge for provisioning of P2MP/L2VPN 150 Mbps Connectivity from ICCC, Paldi to field location	Nos.	5			
9	OTC charge for provisioning of P2MP/L2VPN 500 Mbps Connectivity from ICCC, Paldi to field location	Nos.	2			
10	OTC charge for provisioning of P2MP/L2VPN 1 Gbps Connectivity from ICCC, Paldi to field Location	Nos.	2			
11	OTC charge for provisioning of P2MP/L2VPN 10 Gbps Connectivity from ICCC, Paldi to New CP office,Shahibaug	Nos.	1			
Total C						
Table D) Removal and Re-installation of items						
1	Rate for dismantling of CCTV Camera includes supporting accessories (Active/Passive)	Nos.	50			
2	Rate for reinstalling of CCTV Camera includes supporting accessories (Active/Passive)	Nos.	50			
3	Rate for dismantling Pole including all accessories, civil work, labor work, foundation removal, related work like cabling, earthing, transportation etc.	Nos.	50			
4	Rate for reinstalling Pole including all accessories civil work, labor work, foundation, related work like cabling, earthing, transportation etc.	Nos.	50			
5	Rate for reinstalling cantilever including all accessories civil work, labor work, foundation, related work like cabling,	Nos.	50			

Sr. No.	Description	UoM	Quantity (No.)	Unit Price (INR, excluding tax)	Total Amount (INR, excluding tax)	Taxes and Duties (As applicable) in %
	earthing, transportation etc.					
6	Rate for reinstalling cantilever including all accessories civil work, labor work, foundation, related work like cabling, earthing, transportation etc.	Nos.	50			
7	Rate for dismantling Gantry including all accessories, civil work, labor work, foundation removal, related work like cabling, earthing, transportation etc.	Nos.	50			
8	Rate for reinstalling Gantry including all accessories, civil work, labor work, foundation, related work like cabling, earthing, transportation etc.	Nos.	50			
9	Rate for dismantling Junction Box (with all components inside the Junction Box) including civil work, labor work, foundation removal, related work like cabling, earthing, transportation etc.	Nos.	50			
10	Rate for reinstalling Junction Box (with all components inside the Junction Box) including civil work, labor work, foundation, related work like cabling, earthing, transportation etc.	Nos.	50			
11	Rate for dismantling Pole mount Junction Box (with all components inside the Junction Box) including transportation, labor work, related work like cabling, earthing, etc.	Nos.	10			

Sr. No.	Description	UoM	Quantity (No.)	Unit Price (INR, excluding tax)	Total Amount (INR, excluding tax)	Taxes and Duties (As applicable) in %
12	Rate for reinstalling Pole mount Junction Box (with all components inside the Junction Box) including transportation, labor work, related work like cabling, earthing, etc.	Nos.	10			
	Total D					
Table E) SITC and O&M of e-Challan application & related database						
1	License cost for one license for Detection of garbage on road.	Nos	490			
2	License cost for one license for Detection of damaged infrastructure	Nos	490			
3	License cost for one license for Detection of Potholes on Road	Nos	490			
4	License cost for one license for Detection of Cattle on road	Nos	490			
5	License cost for one license for Detection of uncovered debris in truck	Nos	490			
6	License cost for one license for Spitting Detection	Nos	490			
7	License cost for one license for Detection of faded stop lines & zebra crossings	Nos	490			
8	License cost for one license for Detection of water logging	Nos	123			
9	License cost for one license for Red Light Violation Detection / Stop Line Violation Detection along with integration with One Nation with One Challan	Nos	490			
10	License cost for one license for Not wearing seat belt detection	Nos	490			
11	License cost for one license for driving on wrong side.	Nos	1225			

Sr. No.	Description	UoM	Quantity (No.)	Unit Price (INR, excluding tax)	Total Amount (INR, excluding tax)	Taxes and Duties (As applicable) in %
12	License cost for one license for Detection of more than two passengers on two-wheeler	Nos	1225			
13	License cost for one license for Automatic Number Plate Recognition (ANPR)	Nos	1225			
14	License cost for one license for Use of Mobile Phone while driving	Nos	490			
15	License cost for one license for Detection of two-wheelers riding without Helmet	Nos	1225			
16.	License cost for one license for Detection of lane violation blocking free left traffic by entering wrong lane	Nos.	100			
17.	License cost for one license for Facial Recognition as per SOW mentioned in RFP	Nos.	100			
18.	License cost for one license for Video summarization as per SOW mentioned in RFP	Nos.	100			
19.	License cost for one license for Parking Violation Detection/Stalled Vehicle Detection	Nos.	100			
Total E						
Ao= Total A+ Total B + Total C + Total D+ Total E						

Operational and Maintenance Expenditure (OPEX)

The total operations and maintenance cost (OPEX) for one year (sum of B1 + B3) in Schedule-II of below table **should be greater than or equal to 10%** of the Capex Project Value (Sum of A+B) of Schedule -I. **If any bidder quote OPEX of one year less than 10%, bid will be rejected.**

Sr. No.	Description	UoM	Quantity (No.)	Unit Price for O&M of One year (INR, excluding tax)	Total Amount for O&M of One year (INR, excluding tax)	Taxes and Duties (As applicable) in %
	(A)	(I(C)	(D)	(E=C*D)	(F)	
Schedule-II						
Table B1 : Operational Expenditure (OPEX) for Field Network						
1.	IP Camera : RLVD with 8 MP with required license for VMS integration	Nos.	476			
2.	IP Camera : ANPR, Speed detection with required license for VMS integration	Nos.	1278			
3.	IP Camera : PTZ with required license for VMS integration	Nos.	163			
4.	IP Camera for Surveillance with 4MP (For Bridge Location) required license for VMS integration	Nos.	90			
5.	IP Camera for Surveillance (Front Facing Cameras for video Analytics) with required license for VMS integration	Nos.	300			
6.	External IR (For ANPR, Bridge Location surveillance cameras and Front Facing Cameras)	Nos.	2144			
7.	Junction box with Adjustable mounting tray along with Voltage stabilizers, Surge Protection Power strip and other associated components	Nos.	163			
8.	Outdoor Industrial grade 8 port POE+ network switch with	Nos.	446			

Sr. No.	Description	UoM	Quantity (No.)	Unit Price for O&M of One year (INR, excluding tax)	Total Amount for O&M of One year (INR, excluding tax)	Taxes and Duties (As applicable) in %
	minimum 2 Nos. of 1G compatible SFP					
9.	Pole Mount JB including Power strip and other associated components, power cable, OFC cable and data cable	Nos	45			
	Total O&M cost for One years – B1					
Table B2 : Operational Expenditure (OPEX)- Network Connectivity						
1	Recurring charge for bandwidth provisioning of P2MP/L2VPN 10 Mbps Connectivity from ICCC, Paldi to field location	Nos.	2			
2	Recurring charge for bandwidth provisioning of P2MP/L2VPN 20 Mbps Connectivity from ICCC, Paldi to field location	Nos.	2			
3	Recurring charge for bandwidth provisioning of P2MP/L2VPN 30 Mbps Connectivity from ICCC, Paldi to field location	Nos.	15			
4	Recurring charge for bandwidth provisioning of P2MP/L2VPN 50 Mbps Connectivity from ICCC, Paldi to field location	Nos.	37			
5	Recurring charge for bandwidth provisioning of P2MP/L2VPN 70 Mbps Connectivity from ICCC, Paldi to field location	Nos.	45			
6	Recurring charge for bandwidth provisioning of P2MP/L2VPN 80	Nos.	45			

Sr. No.	Description	UoM	Quantity (No.)	Unit Price for O&M of One year (INR, excluding tax)	Total Amount for O&M of One year (INR, excluding tax)	Taxes and Duties (As applicable) in %
	Mbps Connectivity from ICCC, Paldi to field location					
7	Recurring charge for bandwidth provisioning of P2MP/L2VPN 100 Mbps Connectivity from ICCC, Paldi to field location	Nos.	30			
8	Recurring charge for bandwidth provisioning of P2MP/L2VPN 150 Mbps Connectivity from ICCC, Paldi to field location	Nos.	5			
9	Recurring charge for bandwidth provisioning of P2MP/L2VPN 500 Mbps Connectivity from ICCC, Paldi to field location	Nos.	2			
10	Recurring charge for bandwidth provisioning of P2MP/L2VPN 1 Gbps Connectivity from ICCC, Paldi to field Location	Nos.	2			
11	Recurring charge for bandwidth provisioning of P2MP/L2VPN 10 Gbps Connectivity from ICCC, Paldi to New CP office,Shahibaug	Nos.	1			
	Total O&M cost for One years– B2					
Table B3 : Operational Expenditure (OPEX)- Data Center Equipment						
1	Successful O&M of all the Data Centers and its components (including IT & Non-IT equipment, software and other elements, AMC and Comprehensive warranty to achieve	Lumpsum	1			

Sr. No.	Description	UoM	Quantity (No.)	Unit Price for O&M of One year (INR, excluding tax)	Total Amount for O&M of One year (INR, excluding tax)	Taxes and Duties (As applicable) in %
	desired SLA / uptime to comply all the terms & conditions of this RFP					
Total O&M cost for One years– B3						
B0= Total B1+ Total B2 + Total B3						

Commercial Bid Summary

Table C

Sr.No.	Commercial Bid Summary	Total Cost (Excluding GST) (INR)	Total Cost (Including GST) (INR)
1	**CAPEX(A0)**		
2	**OPEX (B0) (OPEX of One years)**		
3	**OPEX (Total OPEX of Five years)**		
	C0= Total Project Cost (INR) (CAPEX+ OPEX- 5 year)		
	Total Project Cost In words		

Note:

The quoted rate for all OPEX line items for one year will be applicable for all the years throughout the entire contract period. In the event that both parties agree to extend the contract, the established rate will continue to apply for the 6th and 7th years in O&M phase.

Note for financial bid:

1. All the above-mentioned line items should comply to technical specifications and Scope of work including all applicable Licenses, Active and passive Cabling and Accessories, Installation, Commissioning and Configuration with AMC, Warranty and back to back Support during entire contract duration.
2. The current proposed quantity in the table above are indicative and shall be use for commercial evaluation. The purchaser will give the order as per the actual requirement at the time of the placing order.
3. The actual quantity for the proposed bandwidth may very base on the actual survey conducted on the field. SCADL will issue a work order to the TSP after the bidder completes the site survey and confirms the bandwidth requirements for the locations.
4. The quantities mentioned in the financial bill are based on the current assessment. However, at the time of implementation actual/available qty. will be considered. Payment will be made

based on the actual quantities executed, in accordance with the rates specified in the financial bid of this RFP.

5. PURCHASER has the rights to delete any of the product/equipment before final implementation. Also, PURCHASER reserves the right to remove any of the line components (as per BOQ provided).
6. Bidder shall reduce the bandwidth rates if the prevailing rate as per TRAI, are decreased during the contract period (reduction in bandwidth rate shall be in proportion to the TRAI rate reductions).
7. Bidder needs to upload detailed priced BOQ and pricing of all the line items in on-line mode only. Bidder should not leave any field blank.
8. The Bidder needs to account for all Out-of-Pocket expenses due to Boarding, Lodging and other related items. No additional/separate payment shall be made regarding the same.
9. The bidder shall refer quantity variation clause in section 13.25.
10. The rate mentioned for Dismantling and Reinstalling Charges shall be valid for the entire contract duration. The above-mentioned quantity are indicative. In the future, if the request for Dismantling and Shifting goes beyond the indicative quantity the bidder is bound to perform Dismantling and Reinstallation activities at the mentioned rate in financial bid under this RFP for the entire contract period. Please note that such cost should be inclusive of all the allied activities and no additional cost shall be given to the Bidder for this activity.
11. It is mandatory to provide breakup of all Taxes, Duties and Levies wherever asked for.
12. Smart City Ahmedabad Development Limited reserves the right to ask the SI to submit proof of payment against any of the taxes, duties, levies indicated.
13. If in case during the tenure of the project, GST bracket is changed, as per the Govt. norms, corresponding effect shall be extended in the consequent billing of the successful Bidder. (e.g., If the GST bracket is reduced from 18% to 12%, further pending amount shall be paid at 12% GST rate on their base rate and same applies vice versa as well). Please note that Bidder shall have to submit requisite documentary evidence against the same.
14. The Contract Price shall be firm and not subject to any alteration. No escalations of prices will be considered under any circumstances.
15. The rate/cost quoted for this project may be considered for additional procurement/payment in future.
16. **Wherever present, the items mentioned as Lump Sum will have quantity as One (1) in the BoQ, the Bidder should consider the same as Lump Sum and submit the commercials as a wholesome package/solution against the requirement under this project.**
17. No additional cost other than the cost quoted under various items shall be given to the Bidder for the execution of the project. Bidder may factor any other cost associated with the project in their commercial bid. No claim pertaining to the any other cost shall be entertained by SCADL during the entire contractual duration.
18. **Bidder will have to fill quantities of those line items for which quantities are not given in financial bid column. This is because**,
    i. For line items like ANPR cameras, 2 models are allowed in this RFP for network design. Therefore for such line items like ANPR cameras, field switches, E-challan use cases licenses (such as a Driving on wrong side, More than two passengers on two-wheeler, license for Automatic Number Plate Recognition (ANPR),two-wheelers riding without Helmet) etc., bidder will have to fill quantities as per their network design along with unit rate of all line items of the financial bid (also refer

table given in clause – 7.3). For ex.: When the bidder fills the quantity of ANPR licenses of the above mentioned use cases in the financial bid of their scope, they should also include 700 cameras license qty installed under the SASA project (by another SI, also refer table given in clause – 7.3) in the total financial bid quantity. For instance, if the bidder specifies a quantity of 1000 ANPR licenses of their scope, they should add this to the 700 cameras installed under the SASA project, resulting in a total of 1700 camera licenses in the financial bid.

ii. For line items like Surveillance (Front Facing Cameras for video Analytics), 2 models are allowed in this RFP for network design. Therefore, for such line items like Surveillance cameras, E-challan use case licenses (Not wearing seat belt detection and Mobile Phone while driving) etc., bidder will have to fill quantities as per their network design along with unit rate of all line items of the financial bid.

iii. The RFP allows bidders to consider one of the 2 options for storage, one is combination of SAN + NAS and second option is Unified storage. Therefore, if bidder is considering unified storage in their data centre design, then bidder will have to mention 0 (zero) in the unit rate column of SAN + NAS line items in financial bid and vice versa in case of considering 2nd option in design.

iv. Without filling all required quantities & unit rates, bidder will not be able to submit the bid

12. Service Level Agreement & Penalties

The purpose of this Service Level Agreement (hereinafter referred to as SLA) is to clearly define the levels of service which shall be provided by the System Integrator to SCADL for the entire duration of this Agreement.

SLA defines the terms of the successful bidder's responsibility in ensuring the performance of the network based on the agreed performance indicators as detailed in the agreement. Successful bidder has to co-ordinate with Telecom service provider and get the complaint closed and also has to produce documentary evidence regarding failure of link by TSP & not by Network equipment's. It shall beSI's responsibility to attend the complaint initially in case of link down and then as per the requirement, the ticket may be transferred to the concerned stakeholder. However, SI must take necessary follow-up to resolve the same in a timely manner.

12.1 SLA for Manpower During the Joining Period, Implementation, and O&M Phase

Definition	Bidder is required to propose the CVs of the required Manpower as mentioned in Section 11. It is vital that such manpower is available to SCADL/AMC and performs to the expected levels. For the below mentioned SLA breach shall specify penalty amount for non-availability of these manpower.
Service Level Requirement	Availability of the required manpower should be 100%. Bidder is required to register the biometrics of all the deployed manpower in the Biometric Attendance System of AMC/SCADL so that the attendance report of each resource proposed as a part of team can be generated on monthly/quarterly basis by SCADL.
Measurement of Attendance during Joining Period	Following instances would be considered as SLA non-compliances: • Bidder is required to deploy the resources proposed in the bid within 30 days of receipt of the Work Order issued date (T) by SCADL. • If manpower is not deployed from T+30 days, a penalty of INR 3000 per day will be imposed for the Project Manager, and a penalty of INR 2000 per day per resource will be imposed for other technical experts. The penalty will stop once all the resources needed for the project have joined and have been approved by SCADL.
Penalty for Non-achievement ofManpower Requirement during Implementation and O&M Phase	For every SLA non-compliance reported and proved, there shall be apenalty as given below. • During the implementation and Operations & Maintenance (O&M) phases, resources will be entitled to take up to 24 days of leave within a financial year. At the beginning of the financial year, these 24 leave days will be credited to each resource's account. If a resource's leave balance becomes negative during any specific quarter, a penalty will be imposed for that quarter as detailed below. A penalty of INR 2000 will be imposed for each day of absence per resource (Project Manager/Other Technical Experts).

	• Penalty of INR 1,00,000 will be levied per instance if Project Manager is not available for 30 continuous days in implementation period and O&M Period. • Penalty of INR 50,000 will be levied per instance per resource if Technical Expert is not available for 30 continuous day in implementation period and O&M period.

Note: Manpower related penalty will be levied as per actual calculation without any cap limit.

12.2 Service Level Agreement for Operation & Maintenance Phase

- During the O&M phase, the individual penalty for the System Integrator (SI) and the Telco Service Provider (TSP) is capped at 10% each of their respective quarterly billing per quarter. If cap limit of respective O&M SLA penalty is crossed for 3 consecutive quarters for SI and TSP, then SCADL will have a right to levy one time penalty of Rs. 20 Lacs to SI / TSP (as the case may be) for every such instances. After 3 instances of levying Rs. 20 Lacs penalty, SCADL will have a right to terminate the contract with SI and terminate the tripartite agreement with TSP along with forfeiture of PBG.
- During the O&M phase, if the critical infrastructure is impacted on a repetitive basis and no action being taken to resolve the issue on permanent basis, SCADL reserves the right to invoke the termination clause and forfeit the PBG of an implementation agency.

<table>
<tr><th>Sr. No.</th><th>SLA</th><th>Target</th><th>Penalties</th></tr>
<tr><td>1.</td><td>Availability / Uptime of Applications and database</td><td>99% (Avg quarterly uptime of all Application & related databases – NMS will have to provide uptime of respective VMs)</td><td>
<table>
<tr><th>SLA</th><th>Penalty</th></tr>
<tr><td>>= 99%</td><td>No penalty</td></tr>
<tr><td><99% to >=98.5%</td><td>2% of quarterly OPEX cost of Data Canter (as derived from Table B3 of schedule II)</td></tr>
<tr><td><98.5% to >=98%</td><td>3% of quarterly OPEX cost of Data Canter (as derived from Table B3 of schedule II)</td></tr>
<tr><td><98% to >=97%</td><td>4% of quarterly OPEX cost of Data Canter (as derived from Table B3 of schedule II)</td></tr>
<tr><td><97%</td><td>5% of quarterly OPEX cost of Data Canter (as derived from Table B3 of schedule II)</td></tr>
</table>
Penalty shall be deducted from quarterly bill of the SI/bidder.
</td></tr>
</table>

<table>
<tr><th>Sr. No.</th><th>SLA</th><th>Target</th><th>Penalties</th></tr>
<tr><td>2.</td><td>Availability / Uptime of Data Centre Elements (Network, Servers, Storage, UPS etc.)</td><td>99.95%
(Avg quarterly uptime for each category (physical servers, storage, network (routers, switches, firewalls, UPS))</td><td>
<table>
<tr><th>SLA</th><th>Penalty</th></tr>
<tr><td>>= 99.95%</td><td>No penalty</td></tr>
<tr><td><99.95% to >=99.50%</td><td>1% of quarterly OPEX cost of Data Canter (as derived from Table B3 of schedule II)</td></tr>
<tr><td><99.50% to >=99%</td><td>2% of quarterly OPEX cost of Data Canter (as derived from Table B3 of schedule II)</td></tr>
<tr><td><99%</td><td>5% of quarterly OPEX cost of Data Canter (as derived from Table B3 of schedule II)</td></tr>
</table>
Individual calculations will be done for all 3 categories and separate penalty amounts will be calculated based on above table.
Penalty shall be deducted from quarterly bill of the SI/bidder.
</td></tr>
<tr><td>3.</td><td>Availability / Uptime of End field Devices (Cameras/Network Switch)</td><td>98.50%
(Avg quarterly uptime of all pingable devices of field attributable to SI)</td><td>
<table>
<tr><th>SLA</th><th>Penalty</th></tr>
<tr><td>>= 98.50%</td><td>No penalty</td></tr>
<tr><td><98.50% to >=97%</td><td>2% of quarterly OPEX cost of field infrastructure (as derived from Table B1 of schedule II)</td></tr>
<tr><td><97% to >=95%</td><td>5% of quarterly OPEX cost of field infrastructure (as derived from Table B1 of schedule II)</td></tr>
<tr><td><95% to >=92%</td><td>8 % of quarterly OPEX cost of field infrastructure (as derived from Table B1 of schedule II)</td></tr>
<tr><td><92%</td><td>10 % of quarterly OPEX cost of field infrastructure (as derived from Table B1 of schedule II)</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Sr. No.</th><th>SLA</th><th>Target</th><th>Penalties</th></tr>
<tr><td></td><td></td><td></td><td>Refer point no.2 and point no.3 in note for calculating penalty.</td></tr>
<tr><td>4</td><td>Availability / Uptime of P2MP / L2VPN links</td><td>98.50% (Avg quarterly uptime of all Links Availability for Telco)</td><td><table><tr><th>SLA</th><th>Penalty</th></tr><tr><td>>= 98.50%</td><td>No penalty</td></tr><tr><td><98.50% to >=97%</td><td>2% of quarterly OPEX cost of links (as derived from Table B2 of schedule II)</td></tr><tr><td><97% to >=95%</td><td>5% of quarterly OPEX cost of links (as derived from Table B2 of schedule II)</td></tr><tr><td><95% to >=92%</td><td>8 % of quarterly OPEX cost of links (as derived from Table B2 of schedule II)</td></tr><tr><td><92%</td><td>10 % of quarterly OPEX cost of links (as derived from Table B2 of schedule II)</td></tr></table>Refer point no.2 and point no.3 in note for calculating penalty.</td></tr>
<tr><td>5.</td><td>Preventive Maintenance (PM) activity for field switches, racks & data center elements</td><td>Once in a quarter (at least)</td><td>• Penalty of Rs. 5000 per devise per quarter for all missed no. of devices</td></tr>
<tr><td>6.</td><td>Preventive Maintenance (PM) activity for field cameras</td><td>As & when required</td><td>• SCADL will have rights to levy Rs. 2 Lacs (maximum) penalty per quarter if SCADL observes that even after multiple verbal reminders / emails / notices, SI has failed to effectively do PM activities. This is purely subjective penalty at the discretion of SCADL & therefore SCADL will have a right to decide the penalty amount within cap limit of Rs. 2 lacs.</td></tr>
<tr><td>7.</td><td>Latency</td><td>Avg quarterly latency for each individual link</td><td>• Successful bidder has to analyze, report, escalate to TSP and get the issue resolved.<table><tr><th>SLA</th><th>Penalty</th></tr><tr><td>< 40 ms</td><td>No penalty</td></tr></table></td></tr>
</table>

<table>
<tr><th>Sr. No.</th><th>SLA</th><th>Target</th><th>Penalties</th></tr>
<tr><td></td><td></td><td></td><td>
<table>
<tr><td>>40 ms to <=60 ms</td><td>INR 2000 of quarterly OPEX cost of links (as derived from Table B2 of schedule II))</td></tr>
<tr><td>>60 ms to <=80 ms</td><td>INR 3000 of quarterly OPEX cost of links (as derived from Table B2 of schedule II)</td></tr>
<tr><td>>80 ms</td><td>INR 5000 of quarterly OPEX cost of links (as derived from Table B2 of schedule II)</td></tr>
</table>
</td></tr>
<tr><td>8.</td><td>Jitter</td><td>Avg quarterly jitter for each individual link</td><td>
Successful bidder has to analyze, report, escalate to TSP and get the issue resolved.
<table>
<tr><th>SLA</th><th>Penalty</th></tr>
<tr><td>< 30 ms</td><td>No penalty</td></tr>
<tr><td>>30 ms to <=50 ms</td><td>INR 2000 of quarterly OPEX cost of links (as derived from Table B2 of schedule II))</td></tr>
<tr><td>>50 ms to <=70 ms</td><td>INR 3000 of quarterly OPEX cost of links (as derived from Table B2 of schedule II)</td></tr>
<tr><td>>70 ms</td><td>INR 5000 of quarterly OPEX cost of links (as derived from Table B2 of schedule II)</td></tr>
</table>
</td></tr>
</table>

Note:

i. Uptime % will be the % for which the selected bidder (SI) is solely responsible.

ii. For calculating SLA of Sr.3 and Sr.4 of above table, SI will have to clearly define the detailed process of bifurcating total downtime of any device into different buckets of various stakeholders with evidence.

a. For example: if any camera/end point device remains unreachable through NMS for total 60 hours in a quarter, it could remain unreachable due to issue in P2MP / L2VPN links for let say 30 hours for which TSP (Telecom Service Provider) will be responsible. Penalties for 30 hours downtime shall be applied to TSP's quarterly bill.

b. It could remain unreachable due to faulty hardware / any other issue related to hardware or its firmware / issue related to EMS (Element Management System) or NMS (Network Monitoring System) / issue related to any other software application or database / issue related to server environment including physical servers or storage or virtualization platform / issue related to fault in power cable or CAT cable or any patch cord etc. for 25 hours for which selected SI will be responsible and penalties shall be applied to SI's quarterly bill.

It could remain unreachable due to raw power failure at torrent power junction for 5 hours for which SCADL will be indirectly responsible. As far as power connectivity is concerned, AMC's / SCADL's responsibility will be limited to connecting power at Torrent's junction box only and required coordination for this matter with Torrent team. Any other work required to connect power at smart city network junction box including (but not limited to) laying power cable between Torrent junction box & smart city network junction box, rectification of this power cable in case fault done by any agency etc. will be the bidder's responsibility and same will be considered in SLA as part of SoW of the bidder.

For individual pingable device of the field, SI will have to take out uptime report from NMS. SI will have to establish a detailed process to bifurcate total downtime into 3 buckets as explained in above example – 3 buckets of SI, TSP and SCADL. SI will have to first discuss and take agreement with SCADL on downtime reported on SCADL's bucket. After SCADL's consent, SI will have to discuss bifurcation of 2 buckets (SI & TSP) with TSP and SI & TSP will have to jointly submit agreed upon report to SCADL. Accordingly, SCADL will calculate SLA penalties for both SI & TSP as per sr. no. – 3 and Sr.4 of above SLA table. Till the time SI & TSP will not come to agreement for downtime bifurcation into SI & TSP buckets, SCADL will not be able to process bills of both SI & TSP.

Devices put under maintenance category (for ex.: devices which are under maintenance category and going to remain down / unreachable for long time/short time due to various field construction activities like metro train work / over bridge construction work / road expansion or resurfacing work etc. only if approved by SCADL on case-to-case basis) will be excluded from SLA calculation. SCADL will notify the bidder separately to carry out the dismantling and relocation of all active and passive materials to the bidder's warehouse or any newly designated site and reinstallation, commissioning of the active and passive materials at new site or same site. SCADL will reimburse these activities cost to the bidder based on rate discovered in the financial bid. The bidder will not receive O&M payment from SCADL during the O&M phase for such devices that are categorized under maintenance bucket and quarterly O&M payment will be reduced proportionately.

For calculating SLA of Sr.4 of above table for Telecom service provider, System Integrator (SI) is required to monitor, report, and ensure the uptime and downtime of all P2MP/L2VPN links. For Non achieving SLA, Penalty shall be applied to TSP's quarterly OPEX bill .

Requirements:

- The SI shall submit quarterly SLA reports detailing the uptime and downtime statistics of all P2MP/L2VPN links.
- Reports shall include the exact start and end times of any downtime incidents, along with the duration and cause of each downtime occurrence.
- The formula for calculating network availability is as follows:
- Network Availability (%)= (Total Uptime / Total Time - Schedule Downtime)×100

1. **Accuracy of e-Challan application:**

i. In O&M phase, SCADL / any authorized agency from SCADL will randomly check the detection accuracy of e-Challan system for all use cases by viewing recorded video feed in to VMS and comparing the number of generated e-Challans/events with the actual number of the violations as per video feed (Detection Accuracy = Total Events detected by SI's Application - False positive events /Total events manually recorded by SCADL). For calculation of accuracy % for all use cases, only

those use cases will be considered which can be detected through naked human eye. The authorities will calculate the accuracy manually.

ii. During O&M phase, accuracy as mentioned in SOW of each use cases will have to be achieved, otherwise penalty of Rs. 25,000/- per each defaulted use case per quarter will be levied to selected SI.

iii. For all wrongly identified numbers/events (false positives), below penalty per each false positive will be levied to selected SI.

 # Description False Positive Penalty

- Up to 5% of false positive cases identified- Rs 1,000 per case
- >5% to <=15% false positive cases identified- Rs 5,000 per case
- >15% of false positive cases identified- Rs 10,000 per case

For ex.: Let's say there are 20 cases of "Not wearing helmet" on 2-wheeler in a video feed of 2 hour that is manually watched/checked by representatives of SCADL. Let's say the proposed e-Challan application has generated total of 16 challans of "Not wearing helmet" during this 2 hour. Out of 16, 14 challans are correct (true positives) that will prove 70% detection accuracy. The remaining 2 challans (out of 16) those were false positive (actually 2-wheeler rider had worn the helmet, but e-Challan application generated challan wrongly) will attract the penalty as per below.

Two false positive challans generated with respect to 20 legitimate incidents identified manually results in 10% of false positive cases. Hence, the total penalty would be 2 x Rs. 5,000 per case = Rs. 10,000.

i. The above-mentioned penalty will be deducted from SI's 20% payment bill which has been hold in implementation phase and the maximum penalty ceiling will be 10% of quarterly O&M bill. This 20% Payment will be made after verifying the invoice and supporting documents & deducting all applicable penalties.

ii. In addition to the above-mentioned penalties, a penalty of Rs. 1 Lac / instance will be levied in case if video footage of any event is not available.

iii. In addition to the penalties mentioned above, a penalty of Rs. 3 lakh per year will be imposed if the bidder fails to conduct an annual cybersecurity assessment, including Vulnerability Assessment and Penetration Testing (VAPT), through a CERT-IN certified agency.

iv. SI will have to submit reports from NMS application in pdf and excel / csv formats.

v. NMS will be a single source to calculate SLA data.

12.3 .Software support – for which SI is responsible

Any Software bug / application related issue identified by SCADL / any stakeholder will be classified in 3 types:

- Priority # 1: System outage/ performance related issue affecting the overall functionality of the application. For ex.:
  - Entire application is down / end users are not able to log into the application.

- Priority # 2: Partial impact on the day to day functioning of the deployed system / application. For ex.:
  - Availability of few modules of the application & some of the modules are not working properly / having issues (part functionality of the application)

- Unable to provide / fetch the necessary parameters / details to other software system (issues in functioning of APIs) etc.

- Priority # 3: No direct impact on the day to day functioning of the deployed system. For ex.:
  - Providing resolution for all the observations / vulnerability captured in VAPT / other audit.
  - Any other minor issue not impacting the day to day functioning of the deployed system / application as raised by end user.

Resolution time & the penalty component for the bug fixing / issue resolution is given below (applicable on 24 * 7 basis):

Type of Issue	Resolution time (from the time of reporting of incident in the system or ticketing tool)	Penalty amount (exceeding resolution time)
Priority #1	2 hours	Rs. 10,000/- (per hour)
Priority #2	4 hours	Rs. 5,000/- (per hour)
Priority #3	24 hours	Rs. 1,000/- (for every 24 hour or part thereof)

Note for clause – 12.3 (Software support – for which SI is responsible) :

1. There will not be any maximum ceiling for this penalty section. Actual penalty will be deducted from quarterly bill of selected SI.

13. Instructions to the Bidders

Bidders are advised to study all instructions, forms, terms, requirements and other information in the Bid Documents carefully.

i. Every page of the proposal should necessarily be numbered and signed with seal.
ii. The Bidder should not tamper the templates, and file types. If any additional information, it should be provided in a separate sheet where required.
iii. Submission of bid shall be deemed to have been done after careful study and examination of the Bid Document with full understanding of its implications.
iv. The response to this Bid Document should be full and complete in all respects. Failure to furnish all information required in the Bid Documents or submission of a proposal not substantially responsive in every respect will be at the Bidder's risk and may result in rejection of its Proposal.
v. Additionally, proposals of only those Bidders who satisfy the Conditions of Eligibility, stated herein, will be considered for evaluation by Smart City Ahmedabad Development Limited.
vi. Any past projects where the Bidder executed other works in addition to what is asked in Pre-Qualification Criteria in a single order, the Bidder should consider only the value of asked project part and highlight only those components.
vii. SCADL may request Bidder(s) to submit their justification / additional documentary evidence during the evaluation of the bid to ascertain their qualification. However, SCADL may not ask for any justification during the bid evaluation phase at its own discretion.

13.1 Availing RFP Documents

RFP document can be downloaded from the web site (n)Procure (https://www.nprocure.com/) up to the date and time mentioned in the RFP Notice (Section – 2).

13.2 Completeness of the RFP Response

Bidders are advised to study all instructions, forms, terms, requirements and other information in the RFP documents carefully. Submission of bid shall be deemed to have been done after careful study and examination of the RFP document with full understanding of its implications. The response to this RFP should be full and complete in all respects. Failure to furnish all information required by the RFP document or submission of a proposal not substantially responsive to the RFP documents in every respect will be at the 'Bidder's risk and may result in rejection of their proposal.

13.3 Tender Fee and Earnest Money Deposit (EMD)

Bidder should submit the tender fee (INR 18,000) in the form of Demand Draft / Banker's Cheque in favor of "Smart City Ahmedabad Development Limited" drawn on any scheduled / nationalized bank and payable at Ahmedabad.

The bidder should also pay EMD of Rs. 4,00,00,000(Four Crores Only) in favour of "Smart City Ahmedabad Development Limited" payable at Ahmedabad in the form of DD of any nationalized bank / scheduled banks with validity of 180 days beyond the original validity period for the bid.

1. No interest will be payable by the SCADL on the Earnest Money Deposit (EMD).

2. In case bid is submitted without EMD or Bid fees as mentioned above then SCADL reserves the right to reject the bid without providing opportunity for any further correspondence to the bidder concerned.
3. The EMD of unsuccessful Bidders will be returned by the Authority, without any Interest, as promptly as possible on acceptance of the Proposal of the Selected Bidder or when the Authority cancels the Bidding Process.
4. The Selected Bidder's EMD will be returned, without any interest, upon the Selected Bidder signing the Agreement and furnishing the Security Deposit / Performance Guarantee in accordance with the provision thereof.
5. The decision of SCADL regarding forfeiture of the EMD and rejection of bid shall be final & shall not be called upon question under any circumstances.
6. The EMD may be forfeited:
    a. If a Bidder withdraws their bid or increases their quoted prices during the period of bid validity or its extended period, if any; or
    b. In the case of a successful bidder, if the Bidder fails to sign the Contract or to furnish Performance Bank Guarantee within specified time.
    c. During the bid process, if a Bidder indulges in any such deliberate act as would jeopardize or unnecessarily delay the process of bid evaluation and finalization.
    d. During the bid process, if any information found wrong / manipulated / hidden in the bid.

13.4 Performance Bank Guarantee

The successful Bidder shall at his own expense, deposit with department, within 15 days of the notification of award (done through issuance of the Letter of Intent), an unconditional and irrevocable Performance Bank Guarantee (PBG) from Nationalized or Scheduled Banks except Co-operative Banks in favor of "Smart City Ahmedabad Development Limited" for the due performance and fulfilment of the contract by the Bidder.

The Successful bidder who is awarded the Work Order shall be required to deposit a Performance bank guarantee @ 5% of the Co value (Table C of Section 11.6) in the form of unconditional Bank Guarantee from any scheduled bank in favor of "Smart City Ahmedabad Development Limited, Ahmedabad (from all Nationalized banks including the Public sector –anks - IDBI Ltd. Or Private sector –anks - AXIS Bank, ICICI Bank and HDFC Bank) within 15 days of award of work, covering the period of contract and 180 days beyond the contract period. In case, the contract is further extended beyond the initial period, the Bank Guarantee will have to be accordingly extended/renewed by the successful agency/bidder. All incidental charges whatsoever such as premium, commission etc. with respect to the Bank Guarantee shall be borne by the successful bidder. Non-deposit of PBG within the stipulated time shall render the award of contract invalid at the discretion of SCADL.

The Performance Bank Guarantee letter format can be found in the Section 14.12 of this document.

The Performance Bank Guarantee may be discharged/ returned by department upon being satisfied that there has been due performance of the obligations of the Bidder under the contract. However, no interest shall be payable on the Performance Bank Guarantee.

If the Bidder, fails to furnish the Performance Guarantee, it shall be lawful for the Authority to forfeit the EMD and cancel the contract or any part thereof

In the event of the Bidder being unable to service the contract for whatever reason or receive frequent complaints from Citizens, SCADL would evoke the PBG. Notwithstanding and without prejudice to any rights whatsoever of SCADL under the Contract in the matter, the proceeds of the PBG shall be payable to SCADL as compensation for any loss resulting from the Bidder's failure to complete its obligations under the Contract. SCADL shall notify the Bidder in writing of the exercise of its right to receive such compensation within 14 days, indicating the contractual obligation(s) for which the Bidder is in default.

13.5 Bid Validity Period

The bid validity period shall be 180 days from the date of submission of bids. In exceptional circumstances, the AMC/SCADL may solicit the Bidder's consent for an extension of the period of bid validity. Any such request by the AMC/SCADL and the response thereto shall be made in writing and such extension of Bid validity period by the Bidder should be unconditional. A Bidder may refuse AMC/SCADL's request for such extension. A Bidder accepting the request of AMC/SCADL shall not be permitted to modify its Bid.

13.6 Proposal Preparation Cost

The bidder is responsible for all costs incurred in connection with participation in this process, including, but not limited to, costs incurred in conduct of informative and other diligence activities, participation in meetings/discussions/presentations, preparation of proposal, in providing any additional information required by AMC/SCADL to facilitate the evaluation process. AMC/SCADL will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process. All materials submitted by the bidder shall become the property of the AMC/SCADL and may be returned at its sole discretion.

13.7 Submission of RFP Queries

1. A prospective Bidder requiring any clarification on the RFP Document may submit his queries, via email, to the following e-mail id till pre-bid meeting date up to 15:00 noon. Email Id for submission of queries: smartcity@ahmedabadcity.gov.in, scadl.amc@gmail.com
2. The queries should necessarily be submitted in the following format and in excel only:

Bidders Request for Clarification			
Name and Address of the Organization submitting request		**Name and Position of Person submitting request**	**Contact Details of the Organization / Authorized Representative**
			Tel: Mobile: Fax: Email:
#	**RFP Document Reference (Section No., Page No.)**	**Content of the RFP requiring clarification**	**Clarification Sought**

1. Queries submitted post the above mentioned deadline or which do not adhere to the above mentioned format may not be considered.

13.8 Amendment of RFP Document

1. At any time before the deadline for submission of bids, the SCADL, may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the RFP Document by an amendment.
2. The bidders are advised to visit the, https://amc.nprocure.com, www.ahmedabadcity.gov.in , https://smartcityahmedabad.com/ on regular basis for checking necessary updates. SCADL also reserves the rights to amend the dates mentioned in this RFP for bid process.
3. In order to afford prospective Bidders reasonable time in which to take the amendment into account in preparing their bids, the SCADL may, at its discretion, extend the last date for the receipt of Bids.

13.9 AMC/SCADL's rights to terminate the selection process

1. SCADL may terminate the RFP process at any time and without assigning any reason. SCADL makes no commitments, express or implied, that this process will result in a business transaction with anyone.
2. This RFP does not constitute an offer by SCADL.

13.10 AMC/SCADL Right to Accept or Reject Any Bid or All Bids

AMC/SCADL reserves the right to accept or reject any bid and annul the bidding process and reject all bids at any time prior to award of contract, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders of the ground for AMC/SCADL's action.

13.11 Sealing, Marking and Submission of Bids

The proposal documents shall be put in a large envelope having two separate envelopes containing

1. **1st Envelope:** Original Tender Fee & EMD shall be super scribed as "Tender Fee & EMD"
2. **2nd Envelope:** Original copy of only those documents that are required on notarized stamp paper document for ex. Land border document, POA etc.
3. **3rd large Envelope**: Containing 1st & 2nd envelope and Pen drive containing the soft copy of the entire proposal with PQ, TQ and all the required supporting documentation, signed and stamped by the authorized signatory. It shall necessarily include (i) original copy of the tender fee & EMD, (ii) Pre-qualification criteria related documents, (iii) Duly signed RFP, Addenda & Corrigendum, (iv) Technical proposal related documents like MAF, Datasheets etc. All the soft copy documents shall be clearly readable. In case, any document is not readable clearly, the document will not be considered for evaluation.
4. Pre-qualification and technical proposal should be signed by an authorized person of the bidder. The pre-qualification proposal should be submitted along with a certified true copy of a board resolution/power of attorney empowering authorized signatory to sign/act/execute documents binding the bidder organization to the terms and conditions detailed in this proposal.
5. Each page of the above should bear the initials of the Applicant along with the seal of the Applicant in token of confirmation of having understood the contents
6. The large envelope / outer envelope containing above envelopes must be sealed and super scribed and shall be sent as under.

Details to be mentioned exactly on sealed envelop	
RFP Details • **Notice No.:** SCADL_RFP_25-26_04 • RFP For Selection of Implementation Agency for SITC, Operation, and Maintenance of Surveillance System and e-Challan system with advanced analytics in Ahmedabad City • **Last date of Submission:** On or before 17/12/2025 up to 05:00 pm.	To, The Chief Executive Officer, Smart City Ahmedabad Development Ltd., Command and Control Centre, Opp. Divan Ballubhai School, Nr. Sanskar Kendra, Paldi, Ahmedabad: 380007

1. The bid proposal shall mandatorily be uploaded on the be uploaded online on the nProcure website: https://amc.nprocure.com as on last date of bid submission. All the soft copy documents uploaded online shall be clearly readable. In case any document is not readable clearly, the document will not be considered for evaluation.

The Bid envelope must be sent strictly by **Postal Speed Post or Registered Post AD or in person by the representative of the bidder only** on or before the due date. Documents received in any other manner or mode (like email, fax etc.) will not be considered. SCADL won't be responsible for any postal delays.

AMC/SCADL will not accept submission of a proposal in any manner other than that specified in the RFP document. Proposals submitted in any other manner shall be treated as defective, invalid and rejected.

If the envelopes are not sealed and marked as instructed above, the SCADL assumes no responsibility for the misplacement or premature opening of the contents of the application and consequent losses, if any suffered by the Bidder.

Each Bidder shall submit only one RFP proposal containing documents as below. A bidder who submits more than one proposal under this contract will be disqualified.

Proposals must be direct, concise, and complete. AMC/SCADL will evaluate bidder's proposal based on its clarity and completeness of its response to the requirements of the project as outlined in this RFP. The Chairman, AMC/SCADL reserves the right to accept or reject any or all the proposals without assigning any reason.

13.12 Late Bids

The Bids received after the due date and the specified time (including the extended period if any) shall not be entertained. The Bids submitted by telex/telegram/fax/e-mail/ etc. shall not be considered. No correspondence will be entertained on this matter. SCADL shall not be responsible for any delay or non-receipt/ non-delivery of the documents. No further correspondence on the subject will be entertained. SCADL reserves the right to modify and amend any of the above-stipulated condition/Criteria depending upon project priorities vis-à-vis urgent commitments.

For the online bid submission, it is advised that the SI takes all necessary precaution for the same, including submitting the Bid well in advance to avoid any last-minute hassles, ensuring that the names/ formats of the files to be uploaded are as per the e-tendering portal requirements, using the prescribed browser for

upload etc. SCADL shall not entertain any bids which could not be uploaded or uploaded properly in the portal for whatsoever reasons.

13.13 Language of Bids

The Bids prepared by the Bidder and all correspondence and documents relating to the bids exchanged by the Bidder and AMC/SCADL, shall be written in English language, provided that any printed literature furnished by the Bidder in another language shall be accompanied by an English translation in which case, for purposes of interpretation of the bid, the English translation shall govern.

If any supporting documents submitted are in any language other than English, Notarized copy of the translation of the same in English language shall be submitted by the Bidder.

13.14 Proposal Submission Format

The entire proposal shall be strictly as per the format specified in this RFP. Bids with deviation from this format shall be liable for rejection.

13.15 Acceptance of Terms & Conditions

The bidder will, by taking participation in the bidding process and submitting the bid documents, be deemed to have thoroughly read, studied and understood the bid documents including scope of work, the terms and conditions, instructions, etc. referred there in and the same are acceptable to the bidder.

13.16 Documents to be submitted

Following list is provided as the guideline for submitting various important documents along with the bid.

1. Cover Letter
2. Board Resolution / Power of Attorney executed by the bidder authorizing the signing authority to sign/execute the proposal as a binding document and also execute all relevant agreements forming part of RFP
3. B'dders' Particulars as per format given in RFP
4. Certificate of Registration/Certificate of Incorporation
5. Audited Financial statements and relevant certificates
6. Copy of Work Order/Work Completion Certificate/Go live Certificate & Self Declaration
7. GST Registration and Income Tax Certificate
8. Declaration regarding blacklisting in the given format
9. Signed & Stamped RFP document along with Addenda & Corrigendum if any
10. Any other document necessary for the bid proposal

13.17 Bid Evaluation Process

2. The bids that are submitted online & Physically (as mentioned in RFP Clause – 13.11 (only)) successfully shall be opened online & offline as per date and time given in Proposal Data Sheet, through proper procedure only in the presence of bidders.
3. Bids shall be opened either in the presence of bidders or it's duly authorized representatives. The bidder representatives who are present shall sign a register evidencing their attendance. Two representatives per applicant shall be permitted to be present at the time of opening the tender.
4. Total transparency will be observed and ensured while opening the Proposals/Bids.

5. SCADL always reserves the rights to postpone or cancel a scheduled Bid opening.
6. Bid opening will be conducted in three stages
    a. In the first stage, Pre-qualification Proposals would be opened. The EMD & tender fee of the Bidders will be opened on the same day and time, on which the Pre-qualification Proposal is opened.
    b. In the second stage, Technical Proposals of Bidders who pass the Pre-qualification criteria will be opened.
    c. In the third stage, Commercial Proposal of those Bidders whose Technical Proposals qualify, would be opened.
    d. In the event of the specified date of Bid opening being declared a holiday for SCADL, the bids shall be opened at the same time and location on the next working day. In addition to that, if their representative of the Bidder remains absent, SCADL will continue process and open the bids of all Bidders.

13.18 Selection Process for Bidders

1. SCADL will appoint a Bid evaluation committee (BEC) to scrutinize and evaluate the prequalification of bidders, technical and commercial bids received. The TEC will examine the Bids to determine whether they are complete and whether the Bid format conforms to the Bid Document requirements. SCADL may waive off any informality or nonconformity in a Bid which does not constitute a material deviation according to SCADL.
2. The evaluation process of the RFP proposed to be adopted by SCADL is indicated under RFP section 19.19 below. The purpose of this clause is only to provide the Bidder(s) an idea of the evaluation process that the SCADL may adopt. However, SCADL reserves the right to modify the evaluation process at any time during the Tender process, without assigning any reason, whatsoever, and without any requirement of intimating the Bidder(s) of any such change.

13.19 Evaluation of Bids

1. SCADL shall constitute a Bid evaluation committee to evaluate the responses of the bidders. The Bid evaluation committee shall evaluate the responses to the RFP and all supporting documents/documentary evidence. Inability to submit requisite supporting documents/documentary evidence by bidders may lead to rejection of their bids.
2. The Committee may seek inputs from their professional and technical experts in the evaluation process.
3. SCADL reserves the right to do a reference check of the experience stated by the Bidder. Any feedback received during the reference check shall be considered during the technical evaluation process.
4. The decision of the Bid evaluation committee in the evaluation of bids shall be final. No correspondence will be entertained outside the process of evaluation with the Committee. The Bid evaluation committee may ask for meetings or presentation with the Bidders to seek clarifications or conformations on their bids.
5. The Bid evaluation committee reserves the right to reject any or all bids. Each of the responses shall be evaluated as per the criteria and requirements specified in this RFP.
6. Proposal Presentations: The Bid evaluation committee will invite each pre-qualified Bidder to make a presentation to SCADL at a date, time and venue decided by SCADL. The purpose of such presentations would be to allow the Bidders to present their proposed solutions to the Committee and orchestrate the key points in their Proposals.

7. During the bid evaluation, SCADL may at its discretion, ask the bidder for a clarification of its bid. The request for clarification and the response shall be in writing, and no change in the price or substance of the bid shall be sought, offered, or permitted. SCADL is entitled to ask for clarifications as many times as possible from the bidders to the satisfaction of the Bid evaluation committee.
8. If the bidder fails to provide the clarification or additional information sought in the stipulated time, the information provided in the technical proposal only will be used for evaluation. It is clearly understood that the additional information or clarification on the technical proposal provided by the bidders will not be the basis for affecting any changes in the Commercial Proposal already submitted by the bidders.
9. Commercial bid needs to be submitted online only.
10. The steps for evaluation are as follows:

Stage 1: Pre-Qualification

1. SCADL will examine the bids to determine whether they are complete, responsive, whether required Tender Fee and EMD has been furnished, whether the letters/certificates have been properly signed, and whether the bids are generally in order. Any bids found to be non-responsive for any reason or not meeting any criteria specified in the tender, will be rejected by SCADL and shall not be included for further consideration. Any deviations in proposal response may make the bid liable for rejection.
2. All eligible bids will be considered for further evaluation by an Evaluation Committee according to the evaluation process defined in this Bidding document.
3. Each of the Pre-Qualification condition mentioned in Pre-qualification criteria Section is MANDATORY. In case, the Bidder does not meet any one of the conditions, the bidder shall be disqualified.
4. Bidders would be informed upon their request of their qualification/disqualification based on the Pre-Qualification criteria through email and/or Phone and subsequently, the Bid Security amount shall be returned to the respective disqualified Bidders after the submission of Performance Bank Guarantee by the successful Bidder.

Stage 2: Technical Evaluation

1. Technical bid will be evaluated only for the bidders who succeed in Stage 1.
2. SCADL will review the technical bids of the short-listed bidders to determine whether the technical bids are responsive. Bids that are not responsive are liable to be disqualified.
3. The bidders' technical solutions proposed in the bid document shall be evaluated as per the requirements specified in the RFP and technical evaluation framework as mentioned in RFP.
4. Each Technical Bid will be assigned a technical score (T) out of a maximum of 100 marks. **Only the bidders who get total of minimum 70 marks will qualify for commercial evaluation stage.** Failing to secure minimum marks shall lead to technical rejection of the Bid.

Stage 3: Commercial Evaluation

1. The commercial bids shall not be opened by SCADL until the evaluations of technical bids have been completed. The technically shortlisted Bidders will be informed of the date and venue of the opening of the Commercial Proposals through email or written communication or phone.

2. Total Price shall be calculated based on the format provided in Section Format for Financial Bid (Section 11.6). The Total Price (Tp) for each responsive bid shall be sum of Capex cost and Opex cost, where, Opex cost should be all inclusive of the costs of necessary goods such as spare parts, software license renewals, comprehensive warranty, labour, Insurance etc. needed for the continued and

proper operation of the system. i.e. **value of Co mentioned in Table – C of financial bid format (Section 11.6).**

3. The Lowest Total Price (Tl) as calculated above shall be given a commercial score (CS) of 100 points. The Commercial score of the other bidders shall be calculated with respect the Lowest Total Price (L1) by any bidder. The methodology of Commercial marks shall be as follows.

   Commercial score of the SI under consideration = [Lowest Total Price from all Commercial Bids (L1) / Total Price based on the Commercial bid by the SI under consideration] X 100

Stage 4: Total Bid Evaluation

1. Evaluation criteria proposed to be adopted will be Quality cum Cost Based System (QCBS) where Technical Bid Score will get a weightage of 70% and Commercial Bid Score a weightage of 30%.

2. The bidder would be technically evaluated out of 100 marks. All the bidders who secure overall minimum of 70% (70 Marks out of 100 across all the components together) will be considered as technically qualified. Technical score of all bidders will be calculated based on the following formula:

   Technical Score of bidders (TS) = Technical Marks received by the bidder x 70%

3. The Bid having the Lowest Commercial Quote shall be termed as the Lowest Evaluated Bid and will be awarded 100 marks. Commercial score of all the other bidders will be calculated based on the following formula:

$$\text{Commercial Score of bidders (CS)} = \frac{\text{Commercial Quote of the lowest bidder} \times 100 \times 30\%}{\text{Commercial Quote of the bidder}}$$

4. Final Score of the bidder: Final Score of each bidding party will be computed by adding the Technical score and Commercial Score based on the following formula:

   Total Score = TS + CS

5. The bidder whose bid has secured the "Highest Total Score" out of 100 as per above evaluation will be considered as best evaluated Bid and and considered as winner. The bidder with Highest total score will be declared as H1, the bidder with second highest total score will be declared as H2, then H3, and so on.

6. The bidder with the Highest total score will be winner and selected as successful bidder. The successful bidder may be invited for negotiations for awarding the contract. In case of a tie where two or more bidders achieve the same Highest total score, the bidder with the higher Technical Score will be invited first for negotiations for awarding the contract.

7. If H1 bidder fails to comply to any of the RFP terms and conditions, it will be considered as a non-performance of the H1 bidder and SCADL will have the rights to give the scope of the selected bidder

to a next successful bidder as per the requirement. SCADL's decision will be final in such cases. In this case, H2 bidder will be given a chance to match H1 rate and if bidder agrees, work will be awarded to the H2 bidder. In case of failure of H2 bidder, the same process will continue till Hn bidder (where Hn is the last qualified bidder).

8. In case of abnormally low bid, SCADL will also have a right to reject the bid of successful bidder(s) H1, if the evidence supplied does not satisfactorily account for the low price or costs proposed. If a bid is rejected due to this reason, SCADL will have a right to make a similar determination for the next-ranked bid. SCADL may award the contract to the next-ranked bidder, provided that the bid is not determined to be similarly abnormally low. The same process will continue till Hn bidder (where Hn is the last qualified bidder).

9. PURCHASER is not bound to accept the best evaluated bid or any bid and reserves the right to accept any bid, wholly or in part.

10. The bid should clearly indicate the price to be charged without any qualifications whatsoever and should exclude all taxes, duties, fees, levies and other charges as may be applicable in relation to the activities proposed to be carried out. SCADL reserves the right to ask the Bidder to submit proof of payment against any of the taxes, duties, levies indicated.

11. It is mandatory to provide break up of all taxes, duties and levies wherever applicable and/or payable. The taxes quoted in the offer should be as per the prevailing tax rates. Any subsequent increase in the tax rates or introduction of new tax will be paid by SCADL. Similarly, any benefits arising due to downward revision in tax rates, or any exemptions availed by the Bidders organization should be passed on to SCADL.

12. Commercial of BoQ line items must be entered online only.

13. An adjustable price quotation or conditional proposal shall be treated as non-responsive and the bid may be rejected.

14. Bidders are advised to exercise adequate care in quoting the prices. No excuse for corrections in the quoted figures will be entertained after the commercial proposals are received.

15. Errors & Rectification: Arithmetical errors will be rectified on the following basis:
    a. If there is a 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 the total price shall be corrected.
16. If there is a discrepancy between words and figures, the amount in words will prevail.

17. Bidders shall indicate the unit rates and total Bid Prices of the equipment/ services, it proposes to provide under the Contract. Prices should be shown separately for each item as required in the tender.

18. Bidder should not leave any field blank. In case the field is not applicable, Bidder must indicate "0" (Zero) in all such fields.

19. If there is no price quoted for certain material or service, the bid shall be declared as disqualified. The bidder has to bid for total products and solutions.

20. The Bidder needs to account for all Out-of-Pocket expenses related to Boarding, Lodging and other related items in the commercial bids. Any additional charges must be borne by the bidder. For evaluation of Commercial Bids, SCADL shall make appropriate assumptions as mentioned below to arrive at a common bid price for all the Bidders. This however shall have no co-relation with the Contract value or actual payment to be made to the Bidder.

21. The bid amount shall be inclusive of packing, forwarding, transportation, insurance, delivery charges and any other charges as applicable. Any other charges as applicable shall be borne by the bidder.

13.20 Notifications of Award and Signing of Contract

Prior to the expiration of the proposal validity period, the Bidders will be notified in writing through email that its proposal has been accepted.

Smart City Ahmedabad Development Limited shall facilitate signing of the contract within the period of 15 days of the notification of award. However, it is to be noted that the date of commencement of the project and all contractual obligations shall commence from the date of issuance of Work Order.

The notification of award (LOI) will constitute the formation of the Contract.

Smart City Ahmedabad Development Limited will send the Bidder the Performa for Contract, incorporating all clauses/agreements between the parties. Within 15 days of receipt of the Contract, the successful Bidder shall sign and date the Contract and return it to Smart City Ahmedabad Development Limited.

13.21 Failure to agree with the Terms & Conditions of the RFP

Failure of the bidder to agree with the Terms & Conditions of the RFP shall constitute sufficient grounds for the annulment of selection.

13.22 Naming Convention for files

The bidders need to strictly follow the above-mentioned File Nomenclature rules while uploading the documents in the bidding portal. For documents mentioned under Eligibility Criteria, the file naming should be Eligibility Criteria_ [Document _Name] For example:

- Eligibility Criteria_ Copy_of_Certification_of_Incorporation
- Eligibility_Criteria_PAN_Card
- Eligibility_Criteria_GST Registration
- Eligibility_Criteria_Financial_Statement_Turnover
- Eligibility_Criteria_Financial_Statement_Networth
- Eligibility_Criteria_OEM_PO Copy
- Eligibility_Criteria_OEM_Undertaking Letter
- Eligibility_Criteria_Self_Declaration_Blacklisting

For the documents in Annexures, the file naming should be: Anx_ [S.no of Annexure] _ [Annexure Name]

For example:

- Anx_I_CoverLetter
- Anx_II_Bidder Information Sheet

In case of any large file (exceeding 3MB) which need to be split in two parts or more, the naming should be:

- Anx_I_CoverLetter _Part_1
- Anx_I_CoverLetter _Part_2

For any other file not covered under this, should be named appropriately as per its contents. All files should be in .pdf formats and should not be password protected or encrypted. The files should not be zipped. Any other format of the file other than pdf shall not be considered as part of the submitted bid.

13.23 Right to vary the scope of the work at the time of award

Smart City Ahmedabad Development Limited reserves its right to make changes to the scope of the work at the time of execution of the resultant Agreement. If any such change causes an increase or decrease in the cost of, or the time required for the SI's performance of any part of the work under the Agreement, whether changed or not changed by the order, an equitable adjustment (if required) shall be made in the Contract Value or time schedule, or both, and the Agreement shall accordingly be amended. SCADL also reserves the right to omit one or more than one (1) component / sub- component of the project for the purpose of the execution and accordingly winning Bidder shall be awarded a work order for the remaining component / sub-component only. No claim from the Bidder shall be entertained in this regard.

13.24 Modification or Withdrawal of Bids

A Bidder wishing to withdraw its bid shall notify Smart City Ahmedabad Development Limited by e-mail prior to the deadline prescribed for bid submission. A withdrawal notice may also be sent by electronic means such as e-mail, but it must be followed by a signed confirmation copy, postmarked at least one day prior the deadline for submission of bids.

The notice of withdrawal shall be addressed to Smart City Ahmedabad Development Limited at the address named in the bid Data Sheet, bear the Contract name, the <Title> and < bid No.>, and the words "bid Withdrawal Notice."

Bid withdrawal notices received after the bid submission deadline shall be ignored, and the submitted bid shall be deemed to be a validly submitted bid.

No bid may be withdrawn in the interval between the bid submission deadline and the expiration of the specified bid validity period. Withdrawal of a bid during this interval may result in the forfeiture of the Bidder's EMD.

13.25 Quantity variation

The quantity mentioned in the Commercial Bid format is only for indicative in nature. The actual quantity depends on the actual site survey conducted by the Bidder and after same is approved by Smart City Ahmedabad Development Limited for installation of equipment at Data center and at field locations. Smart City Ahmedabad Development Limited reserves the right to vary quantity at the time of award of the contract or after the contract is awarded.

i. During contract period, Smart City Ahmedabad Development Limited reserves its right to increase or decrease the quantity by 30% of the original quantity at the same price and terms and conditions quoted in original contract. Accordingly, all software applications like EMS/NMS ,VMS etc. must support up to 30% additional quantities of respective active

equipment in addition to the quantities mentioned in Financial bid table against respective line items from all types of license perspectives.

ii. Smart City Ahmedabad Development Limited also reserves right to award change request work order +/- 25% of the original project cost for the work needed to execute the work defined in scope of work defined in original contract.

iii. For any change request/shifting Selected Bidder & OEM will be solely responsible and AMC/SCADL will not pay any additional cost.

13.26 Price Variation

During the validity of the contract including the extended period if any, if the Bidder supplied any item included in BoM of this RFP to any other department / organization / individual at a price lower than the price fixed in the contract, the Bidder must voluntarily pass on the price difference with immediate effect.

13.27 Governing Law

The Bidding Process shall be governed by, and construed in accordance with, the laws of India and the Courts at Ahmedabad shall have exclusive jurisdiction over all disputes arising under, pursuant to and/or in connection with the Bidding Process.

13.28 Restriction on Transfer of Agreement

The Bidder shall not assign or transfer its right in any manner whatsoever under this agreement to a third party or enter into any agreement for sub-contracting and/or partnership relating to any subject matter to the agreement to any third party or any sister-concerned firm within a group either in whole or in any part i.e., partnership/third party interest shall be created.

13.29 Limitation of liability

Successful bidder's cumulative liability for its obligations under the contract shall not exceed the contract value.

If the contract is partially completed, then in such case successful bidder's cumulative liability will not exceed the contract value of remaining/pending work of the contract.

13.30 Sub contracting

The Bidder would not be allowed to sub-contract the work, except for the following:

- Cabling and fixtures work, Civil work
- Electric work
- Establishment of passive components of network infrastructure

Sub-contracting of the above scope of work by the bidder shall be allowed only with prior written approval of Authority. However, even if the work is sub-contracted, the sole responsibility of the work shall lie with the lead bidder. SI shall be held responsible for any delay/error/non-compliance etc. of its sub-contracted vendor

13.31 Force Majeure

In the event that any Damages to items due to Force Majeure events (such as earthquake, war, act of God etc.) of any kind during contract period shall be the liability of Smart City Ahmedabad Development Limited. In such case, Smart City Ahmedabad Development Limited shall request the successful Bidder to repair/replace the damaged unit and reinstall the same. All costs towards the same shall be reimbursed by SCADL/Authority to the System Integrator if need of replacement so arise then replacement shall be on tender rates only.

The Bidder shall not be liable for forfeiture of its Performance Guarantee, imposition of liquidated or termination for default, if and to the extent that it's delay in performance or other failure to perform its obligations under the contract is the result of an event of Force Majeure. For purposes of this Clause, "Force Majeure" means an event beyond the "reasonable" control of the Bidder, not involving the Bidder's fault or negligence and not foreseeable. Such events may include Acts of God & acts of Government of India in their sovereign capacity.

In the event of delay in performance attributable to the presence of a force majeure event, the time for performance shall be extended by a period(s) equivalent to the duration of such delay. If the duration of delay continues beyond a period of 30 days, Smart City Ahmedabad Development Limited and the SI shall hold consultations with each other in an endeavor to find a solution to the problem.

Notwithstanding anything to the contrary mentioned above, the decision of the Smart City

Ahmedabad Development Limited shall be final and binding on the SI.

13.32 Resolution of Dispute

If any dispute arises between the Parties hereto during the subsistence or thereafter, in connection with the validity, interpretation, implementation or alleged material breach of any provision of the Agreement or regarding a question, including the questions as to whether the termination of the Contract Agreement by one Party hereto has been legitimate, both Parties hereto shall endeavor to settle such dispute amicably.

The attempt to bring about an amicable settlement is considered to have failed as soon as one of the Parties hereto, after reasonable attempts [which attempt shall continue for not less than 30 (thirty) days], give 15 days' notice thereof to the other Party in writing.

In the case of such failure, the dispute shall be referred to the Chairman, SCADL as a first level of arbitration. The place of the arbitration shall be Ahmedabad, Gujarat.

The Arbitration proceeding shall be governed by the Arbitration and Conciliation Act of 1996 as amended. The proceedings of arbitration shall be in English language. The arbitrator's award shall be substantiated in writing. The arbitration tribunal shall also decide on the costs of the arbitration procedure.

13.33 Discount

The SIs are advised not to indicate any separate discount in the Financial Bid. Discount, if any, should be merged with the quoted prices. Discount of any type, indicated separately, shall not be considered for evaluation purpose. However, in the event of such an offer is found to be the lowest without considering the discount, the Purchaser shall avail such discount at the time of award of contract.

13.34 Site visit and verification of information

SIs are encouraged to submit their respective Bids after doing a thorough survey of project site and ascertaining for themselves the site conditions, traffic, location, surroundings, climate, availability of power, water and other utilities for construction, access to site, handling and storage of materials, weather data, applicable laws and regulations, and any other matter considered relevant by them.

It shall be deemed that by submitting a Bid, the SI has made a complete and careful examination of the Bidding Documents

- Received all relevant information requested from the Authority
- Accepted the risk of inadequacy, error or mistake in the information provided in the Bidding Documents or furnished by or on behalf of the Authority relating to any of the matters
- Satisfied itself about all matters, things and information including matters herein above necessary and required for submitting an informed Bid, execution of the Project in accordancewith the Bidding Documents and performance of all of its obligations thereunder.
- Acknowledged and agreed that inadequacy, lack of completeness or incorrectness of information provided in the Bidding Documents or ignorance of any shall not be a basis for any claim for compensation, damages, extension of time for performance of its obligations, loss of profits etc. from the Authority, or a ground for termination of the Concession Agreement by the Concessionaire
- Acknowledged that it does not have a Conflict of Interest; and agreed to be bound by the undertakings provided by it under and in terms hereof.

13.35 Ownership and Licenses

The ownership of all hardware/software developed/customized/ configured/ procured as part of the project and related documentation for the project would always lie with the SCADL. All licenses for software procured related to project to be perpetual and in the name of Smart City Ahmedabad Development Limited. The SI will be required to produce the Licenses/ATS/Warranty and other documents from the respective OEMs clearly mentioning the product name, quantity, duration, type of support, etc.

13.36 General Clause related to Any SIs/Sub-Selected vendor from a Country which shares a Land Border with India

i. Any SI from a country which shares a land border with India will be eligible to bid in this tender only if the SI is registered with the Competent Authority (Registration committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT))"
ii. "SI" (including the term 'tenderer', 'consultant', 'OEM' or 'service provider' in certain contexts) means any person or firm or company, every artificial juridical person not falling in any of the descriptions of SIs stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.
iii. "SI from a country which shares a land border with "India" means:
    a. An entity incorporated, established or registered in such a country; or
    b. A subsidiary of an entity incorporated, established or registered in such a country; or
    c. An entity substantially controlled through entities incorporated, established orregistered in such a country; or
    d. An entity whose beneficial owner is situated in such a country; or
    e. An Indian (or other) agent of such an entity; or
iv. A natural person who is a citizen of such a country; or the beneficial owner for the purpose of (iii) above will be as under:

v. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person,has a controlling ownership interest or who exercises control through other means.
   Explanation:
   a. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per Cent. of shares or capital or profits of the company
   b. "Control" shall include the right to appoint majority of directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders agreements or voting agreements

vi. In the case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership.

vii. In case of an unincorporated association or body of individuals, the beneficial owner is thenatural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals

viii. Where no natural person is identified under i or ii or iii above, the beneficial owner is the relevant natural person who holds the position of senior managing official

ix. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trustthrough a chain of control or ownership.

x. An Agent is a person employed to do any act for another, or to represent another in dealings with third person.

xi. The successful SI shall not be allowed to sub-contract works to any selected vendor from a country which shares a land border with India unless such selected vendor is registered with the Competent Authority (Registration committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT)).

13.37 Risk purchase clause

i. Purchaser on identifying any material breach of contract by Bidder, shall give Bidder a cure period of 90 days to correct the breach. If Bidder fails to cure the breach in the said time duration and accept its inability to correct, purchaser may terminate the part of the contract that is breached and employ a third party to do the work on behalf of purchaser.

   Bidder shall not be liable for any compensation for the work executed this way. This procurement from a third party will be done at the selected Bidder's (who has failed to performits obligations & thus defaulted) risk, cost and responsibility. Any incremental cost borne by the Tenderer in procuring such Hardware / Services / Deliverables shall be borne by the selected Bidder (who has failed to perform its obligations & thus defaulted). Any such incremental cost incurred in the procurement of such Hardware / Services / Deliverables from other source will be recovered from the pending due and payable Payments / Security Deposit/ Bank Guarantee provided by the selected Bidder (defaulted Bidder) under this scope of this RFP and if the value of the Hardware / Services / Deliverables under risk purchase exceeds the amount of pending payable payments / Security Deposit and / or Bank Guarantee, the same may be recovered, if necessary, by due legal process.

ii. Bidder shall execute the balance part of work as agreed under the contract.

13.38 Termination

The Tenderer may, terminate this Contract in full or in part by giving the SELECTED BIDDER a prior and written notice indicating its intention to terminate the Contract under the following circumstances:

i. Where the Tenderer is of the opinion that there has been such Event of Default on the part of the SELECTED BIDDER which would make it proper and necessary to terminate this Contract and may include failure on the part of the SELECTED BIDDER to respect any of its commitments with regard to any part of its obligations under its Bid, the RFP or under this Contract including the following:
    a. failure to perform the obligations under the Contract;
    b. the SELECTED BIDDER and its team have failed to conform with any of the service
    c. specifications as set out in the RFP and the Contract;
    d. the SELECTED BIDDER has failed to demonstrate or sustain any representation or warranty made by it in this Contract, with respect to any of the terms of its Proposal, the RFP and this Contract;
    e. The SELECTED BIDDER has failed to comply with any terms and conditions of this RFP & the Contract;
    f. There is an undue delay in achieving the agreed timelines for delivering the services under this Contract due to reasons solely attributable to the SELECTED BIDDER;
    g. If it comes to knowledge of the Tenderer that the SELECTED BIDDER or any of their personnel have been involved in any fraudulent or corrupt practices or any other practice of similar nature;
    h. Where it comes to the Tenderer's attention that the SELECTED BIDDER (or the SELECTED BIDDERs' Team) is in a position of actual conflict of interest with the interests of the Tenderer, in relation to any of the terms of the SELECTED BIDDER's Bid, the RFP or this Contract.
    i. Where the SELECTED BIDDER's ability to survive as an independent corporate entity is threatened or is lost owing to any reason whatsoever, including inter-alia the filing of any bankruptcy proceedings against the SELECTED BIDDER, any failure by the SELECTED BIDDER to pay any of its dues to its creditors, the institution of any winding up proceedings against the SELECTED BIDDER or the happening of any such events that are adverse to the commercial viability of the SELECTED BIDDER. In the event of the happening of any events of the above nature, the Tenderer shall reserve the right to take any steps as are necessary, to ensure the effective transition of the project to a successor SELECTED BIDDER and to ensure business continuity.

ii. Where there has been an occurrence of such Event of Defaults, inter alia, as stated above, the SCADL shall issue a notice of default to the SELECTED BIDDER, setting out specific defaults / deviances / omissions and providing a period of up to thirty (30) days to enable the SELECTED BIDDER to remedy the default/ deviances / omissions committed. It shall be the responsibility of the SELECTED BIDDER to maintain the agreed Quality of Service, even during the period when the notice for termination of agreement is pending and if the Quality of Performance of Solution is not maintained, during the said notice period, it shall be treated as material breach liable for termination at risk and consequent of SELECTED BIDDER and Performance Bank Guarantee shall be forfeited, without any further notice.

Termination for Insolvency: The Tenderer may at any time terminate the Contract by giving written notice to the SELECTED BIDDER, without compensation to the SELECTED BIDDER, if the SELECTED BIDDER becomes bankrupt or otherwise insolvent, provided that such termination shall not prejudice or affect any right of action or remedy which has accrued or shall accrue thereafter to the Tenderer.

Termination for Convenience: The Tenderer may, by prior written notice sent to the SELECTED BIDDER at least 3 months in advance, terminate the Contract, in whole or in part at any time for its convenience. The notice of termination shall specify that termination is for the Tenderer's convenience, the extent to which performance of work under the Contract is terminated, and the date upon which such termination becomes effective.

iii. The SELECTED BIDDER may, subject to approval by the Tenderer, terminate this Contract before the expiry of the term by giving the Tenderer prior and written notice at least 6 months in advance indicating its intention to terminate the Contract.

13.39 Consequences of termination

i. In the event of termination of this contract due to any cause whatsoever, the contract with stand cancelled effective from the date of termination of this contract.
ii. In case of exigency, if the Tenderer gets the work done from elsewhere, the difference in the cost of getting the work done shall be borne by the SELECTED BIDDER as mentioned in clause –13.37 (Risk Purchase) unless the Termination is due to any act and/or omission by the reason solely attributable to Tenderer.
iii. Where the termination of the Contract is prior to its stipulated term on account of a Default on the part of the SELECTED BIDDER or due to the fact that the survival of the SELECTED BIDDER as an independent corporate entity is threatened/has ceased, or for any other reason, whatsoever, the Tenderer through re-determination of the consideration payable to the SELECTED BIDDER as agreed mutually by the Tenderer and the SELECTED BIDDER or through a third party acceptable to both the parties may pay the SELECTED BIDDER for that part of the Services which have been authorized by the Tenderer and satisfactorily performed by the SELECTED BIDDER up to the date of termination. Without prejudice to any other rights, the Tenderer may retain such amounts from the payment due and payable by the Tenderer to the SELECTED BIDDER as may be required to offset any losses caused to the Tenderer as a result of any act/omissions of the SELECTED BIDDER. In case of any loss or damage due to default on the part of the SELECTED BIDDER in performing any of its obligations with regard to the execution of the scope of work under this Contract, the SELECTED BIDDER shall compensate the Tenderer for any such loss, damages or other costs, incurred by the Tenderer. Additionally, other members of its team shall perform all its obligations and responsibilities under this Contract in an identical manner as were being performed before the collapse of the SELECTED BIDDER as described above in order to execute an effective transition and to maintain business continuity. All third parties shall continue to perform all/any functions as stipulated by the Tenderer and as may be proper and necessary to execute the scope of work under the Contract in terms of the SELECTED BIDDER's Bid, the RFP and this Contract.
iv. Nothing herein shall restrict the right of the Tenderer to invoke the Bank Guarantee and other Guarantees furnished hereunder, enforce the Deed of Indemnity and pursue such other rights and/or remedies that may be available to the Tenderer under law.

v. The termination hereof shall not affect any accrued right or liability of either Party nor affect the operation of the provisions of this Contract that are expressly or by implication intended to come into or continue in force on or after such termination.
vi. Actions pursuant to Termination of Agreement:
vii. Notwithstanding any other rights and remedies provided elsewhere in the agreement, upon termination of this agreement.
    a. Neither Party shall represent the Other Party in any of its dealings.
    b. Neither Party shall intentionally nor otherwise commit any act(s) as would keep a third party to believe that the other Party is still the former Party's service provider, as the case may be.
    c. Each party shall stop using the other Party's name, trademark, etc., in any audio or visual form.

13.40 Exit Management

1. This sets out the provisions, which will apply on expiry or termination of the Master Service Agreement, the Project Implementation, Operation and Management SLA.
2. In the case of termination of the Project Implementation and/or Operation and Management, the Parties shall agree at that time whether and if so during what period, the provisions of this Schedule shall apply.
3. The Parties shall ensure that their respective associated entities carry out their respective obligations set out in this Exit Management Schedule.

a) Cooperation and provision of Information

During the exit management period:

1. The SI will allow the purchaser or its nominated agency access to information reasonably required to define the then current mode of operation associated with the provision of the services to enable the purchaser to assess the existing services being delivered.
2. Promptly on reasonable request by the purchaser, the SI shall provide access to and copies of all information held or controlled by them which they have prepared or maintained in accordance with this agreement relating to any material aspect of the services (whether provided by the System integrator or sub-contractors appointed by the SI). The purchaser shall be entitled to copy of all such information. Such information shall include details pertaining to the services rendered and other performance data. The SI shall permit the purchaser or its nominated agencies to have reasonable access to its employees and facilities, to understand the methods of delivery of the services employed by the SI and to assist appropriate knowledge trans.

b) Confidential Information, Security and data

1. The SI will promptly on the commencement of the exit management period supply to the purchaser or its nominated agency the following:
    a. Information relating to the current services rendered and customer and performance data relating to the performance of sub-contractors in relation to the services;
    b. Documentation relating to Intellectual Property Rights;
    c. Documentation relating to sub-contractors;

d. All current and updated data as is reasonably required for purposes of purchaser or its nominated agencies transitioning the services to its Replacement SI in a readily available format nominated by the purchaser, its nominated agency;
e. All other information (including but not limited to documents, records and agreements) relating to the services reasonably necessary to enable purchaser or its nominated agencies, or its Replacement SI to carry out due diligence in order to transition the provision of the Services to purchaser or its nominated agencies, or its Replacement System integrator (as the case may be).

2. Before the expiry of the exit management period, the SI shall deliver to the purchaser or its nominated agency all new or up-dated materials from the categories set out in schedule above and shall not retain any copies thereof, except that the SI shall be permitted to retain one copy of such materials for archival purposes on

c) Exit Management Plan

1. The *SI* shall provide the purchaser or its nominated agency with a recommended exit management plan ("Exit Management Plan") which shall deal with at least the following
2. aspects of exit management in relation to the MSA as a whole and in relation to the Project Implementation, and the Operation and Management SLA.
    a. A detailed program of the transfer process that could be used in conjunction with a Replacement *SI* including details of the means to be used to ensure continuing provision
    b. of the services throughout the transfer process or until the cessation of the services and of the management structure to be used during the transfer;
    c. Plans for the communication with such of 'he SI's sub-contractors, staff, suppliers, customers and any related third party as are necessary to avoid any material detrimental impact on the purchaser's operations as a result of undertaking the transfer;
3. (If applicable) proposed arrangements for the segregation of 'he SI's networks from the networks employed by purchaser and identification of specific security tasks necessary at termination;
4. Plans for provision of contingent support to purchaser, and Replacement SI for a reasonable period after transfer.
5. The SI shall re-draft the Exit Management Plan annually thereafter to ensure that it is kept relevant and up to date.
6. Each Exit Management Plan shall be presented by the SI to and approved by the Purchaser or its nominated agencies.
7. The terms of payment as stated in the Terms of Payment Schedule include the costs of the SI complying with its obligations under this Schedule.
8. In the event of termination or expiry of MSA, and Project Implementation, each Party shall comply with the Exit Management Plan.
9. During the exit management period, the SI shall use its best efforts to deliver the services.
10. Payments during the Exit Management period shall be made in accordance with the Terms of Payment Schedule.
11. This Exit Management plan shall be furnished in writing to the purchaser or its nominated agencies within 90 days from the Effective Date of this Agreement.

13.41 Indemnity

The SI shall indemnify and defend SCADL, AMC, Police and their representatives & employees and

hold SCADL, AMC, Police, their representatives, employees harmless from:

a) Damages and losses caused by its negligent or intentional act or omission or any damages and losses caused by the negligent act of any third party or sub-contractor or agency engaged by the SI;
b) Damages and losses resulting from the non-compliance with the established obligations; Third Party claim against SCADL or its nominated agency that any Deliverables/Services/Equipment provided by the SI infringes a copyright, trade secret, patents or other intellectual property rights of any third party in which case the SI shall defend such claim at its expense and shall pay any costs or damages that may be finally awarded against SCADL or its nominated agency.
c) Any environmental damages caused by SI and/or its representatives or employees or employees of any third party or sub-contractor or agency engaged by the SI.
d) Breach (either directly by SI or through its representatives and/or employees) of any representation and guarantee declared herein by SI;

Any and all claims, actions, suits, proceedings, taxes, duties, levies, costs, expenses, damages and liabilities, including attorneys' fees, arising out of, connected with, or resulting from or arising in connections with the services provided due to neglect, omission or intentional act.

13.41 Severance

In the event any provision of this Contract is held to be invalid or unenforceable under the applicable law, the remaining provisions of this Contract shall remain in full force and effect.

13.42 Confidentiality

1. The SI shall not use Confidential Information, the name or the logo of the Tenderer except for the purposes of providing the Service as specified under this RFP;
2. The SI shall not, either during the term or 6 months after expiration of this Contract, disclose any proprietary or confidential information relating to the Services, Contract or the network architecture, Tenderer's business plan or operations without the prior written consent of the Tenderer.
3. The SI may only disclose Confidential Information in the following circumstances to a member of the SI's Team ("Authorized Person") with the prior written consent of the Tenderer if:

    a. the Authorized Person needs the Confidential Information for the performance of obligations under this contract;
    b. the Authorized Person is aware of the confidentiality of the Confidential Information and is obliged to use it only for the performance of obligations under this contract
4. The SI shall do everything reasonably possible to preserve the confidentiality of the Confidential Information including execution of a confidential agreement with the members of the subcontractors and other service provider's team members to the satisfaction of the Tenderer.
5. The SI shall be responsible for any breach of the confidentiality clause by its antecedents or delegates or its subcontractors.

6. The SI shall notify the Tenderer promptly if it is aware of any disclosure of the Confidential Information otherwise than as permitted by this Contract or with the authority of the Tenderer.
7. The Tenderer reserves the right to adopt legal proceedings, civil or criminal, against the SI in relation to a dispute arising out of breach of obligation by the SI under this clause.

14. Format for Pre-Qualification / Bidder's eligibility criteria

14.1 Checklist for Pre-Qualification documents

#	Documents to be submitted	Submitted (Y / N)	Documentary Proof (Page No.)
1.	Bid Fee of Rs 18000/- (including GST) by Demand Draft or Banker's Cheque		
2.	EMD of Rs.4,00,00,000 /- as per section 19.3		
3.	RFP Cover Letter		
4.	Particulars of the Bidders (Form PQ 1)		
5.	Copy of Certificate of Incorporation/Registration Certificate		
6.	Details of Annual Turnover and Net-worth for last three financial years (Form PQ 2 & PQ 3)		
7.	Certificate from the Statutory auditor / CA clearly specifying the average annual turnover (of last 2 financial years) and Net-worth for the specified years (Form PQ 2 & PQ 3).		
8.	Declaration letter that the firm is not blacklisted by any Central Government / Any State Government / Smart City SPV / PSU/ Supreme Court of India/Any Government Agency in India as on the date of bid submission, in the format given in the RFP (Form PQ 8). In case of consortium, all members to submit.		
9.	Affidavit on Non-judicial Rs 300 stamp paper (Form PQ 8,PQ-10)		
10.	Details of the projects executed (Form PQ 4,5,6,7 TQ-2,3,4,5)		
11.	Copy of Audited Balance Sheet for last three financial years. In case of consortium, all members to submit.		
12.	Copy of GST registration.		
13.	Copy of PAN registration.		
14.	Copy of work orders and client certificate for Bidder's Eligibility Criteria		
15.	Copies of any two of Property Tax / Electricity/ Telephone Bill/ VAT/ CST Registration / Lease agreement Or Undertaking to open Office in Gujarat		

#	Documents to be submitted	Submitted (Y / N)	Documentary Proof (Page No.)
16.	Authorization letter/ MAF from OEM		
17.	Land Border : Undertaking on Non – Judicial stamp paper of Rs. 300/- for all quoted product and for OEM on their company letterhead		
18.	Copy of valid licenses for Network Service Provider for P2MP/L2VPN Services		

Note:

- All Pre-qualification bid document(s)/ details should be duly sealed, signed and notarized.

14.2 RFP Cover Letter

<<To be printed on lead Bidder company's letterhead and signed by Authorized signatory>>

Date: dd/mm/yyyy

To,
The Chief Executive Officer
Smart City Ahmedabad Development Limited
Command and Control Centre,
Opp. Divan Ballubhai School,
Nr. Sanskar Kendra, Paldi
Ahmedabad: 380007

Subject: Selection of Implementation Agency for SITC, Operation, and Maintenance of Surveillance System and e-Challan system with advanced analytics in Ahmedabad City

Reference: Tender No :<No> Dated<DD/MM/YYYY>

Dear Sir/ Dear Sir,

Having examined the RFP, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to provide the professional services as required and outlined in the RFP for the **"Selection of Implementation Agency for SITC, Operation, and Maintenance of Surveillance System and e-Challan system with advanced analytics in Ahmedabad City ".**

We attach hereto our responses to pre-qualification requirements and technical proposals as required by the RFP. We confirm that the information contained in these responses or any part thereof, including the exhibits, and other documents and instruments delivered or to be delivered to AMC/SCADL, is true, accurate, verifiable and complete. This response includes all information necessary to ensure that the statements therein do not in whole or in part mislead the department in its short-listing process.

We fully understand and agree to comply that on verification, if any of the information provided here is found to be misleading the selection process, we are liable to be dismissed from the selection process and legal action.

We agree for unconditional acceptance of all the terms and conditions set out in the RFP document and also agree to abide by this RFP response.

We agree that you are not bound to accept any RFP response you may receive. We also agree that you reserve the right in absolute sense to reject all or any of the products/ services specified in the RFP response.

It is hereby confirmed that I/We are entitled to act on behalf of our company/ corporation/ firm/ organization and empowered to sign this document as well as such other documents, which may be required in this connection.

Signature of Authorized Signatory (with official seal)

Name	:
Designation	:
Address	:
Telephone & Fax	:
E-mail address	:

14.3 PQ 1: Bidder Information Format

<<To be printed on lead Bidder company's letterhead and signed by Authorized signatory>>

To whomsoever it may concern

Please find below the details of Bidder for participation in **"Selection of Implementation Agency for SITC, Operation, and Maintenance of Surveillance System and e-Challan system with advanced analytics in Ahmedabad City "** tender:

#	Particulars	Prime/Lead Bidder	Consortium Member (Separate columns)
1	Name of the organization		
2	Type of Organization (Pvt. Ltd/ Public Limited)		
3	Country of registered Office		
4	Address of Registered office		
5	Company Registration Details		
6	Date of Registration		
7	PAN No.		
8	GST Registration No.		
9	Address of Registered office in India		
10	No of years of operations in India		
11	Authorized Signatory Name		
12	Authorized Signatory Designation		

#	Particulars	Prime/Lead Bidder	Consortium Member (Separate columns)
13	Authorized Signatory Contact Details		
14	Authorized Signatory Email ID		

Yours Sincerely,

Signature of Authorized Signatory (with official seal)
Name :
Designation :
Address :
Telephone& Fax :
E-mail address :

Note: Please submit the relevant proofs for all the details mentioned above along with your Bid response.

14.4 PQ 2: Bidder's Annual turnover over last three financial years

<<To be printed on Bidder company's letterhead and signed by Authorized signatory. In case ofConsortium all members are required to submit>>

Date: dd/mm/yyyy

To
The Chief Executive Officer
Smart City Ahmedabad Development Limited
Command and Control Centre,
Opp. Divan Ballubhai School,
Nr. Sanskar Kendra, Paldi,
Ahmedabad: 380007.

Subject: Selection of Implementation Agency for SITC, Operation, and Maintenance of Surveillance System and e-Challan system with advanced analytics in Ahmedabad City.

Dear Sir/ Madam,

I hereby declare that I have scrutinized and audited the financial statement of M/s_____. The Net worth and the Turnover of the bidder for last three financial year as per audited statement is as under:

#	Details	FY 2021-22 (in Crores) (i)	FY 2022-23 (in Crores) (ii)	FY 2023-24 (in Crores) (iii)	Average Turnover [(i)+(ii)+(iii)/3]
1	Overall Annual Turnover				

Contact Details of officials for future correspondence regarding the bid process:

Details	Authorized Signatory	Secondary Contact
Name		
Title		
Company Address		
Mobile		
Fax		
Email Id		

I further certify that I am competent officer in my company to make this declaration. Yours

Sincerely,

Signature of Authorized Signatory (with official seal)
Name :
Designation :
Address :
Telephone& Fax :
E-mail address :

Note: To be submitted with any other supporting details specified as Documentary evidence.

14.5 PQ 3, TQ 1: Auditor's/CA Certificate for net worth for Bidder

<<To be printed on CA/Auditors company's letterhead and signed by Authorized signatory. In case of Consortium all members are required to submit >>

Date: dd/mm/yyyy

This is to certify that the Annual Turnover from **ICT / IT&ITES/ Surveillance business** and Net-worth as per books and records of

_____ for the following financial years are as under and the company is profit making.

#	Financial Year Ending	Annual Turnover (INR)	Net-worth
1	31st March, 2022		
2	31st March, 2023		
3	31st March, 2024		
	Average Turnover		

I further certify that I am competent officer in my company to make this declaration.

Yours Sincerely,

Signature of Auditor/CA (with official seal) Name :

Designation :

Address :

Telephone& Fax :

E-mail address :

14.6 PQ_4,5,6,7 and TQ_2,3,4,5 Details of similar work undertaken

<< To be printed on Bidders' company's letterhead and signed by Authorized signatory >>

Date: dd/mm/yyyy

To,

The Chief Executive Officer

Smart City Ahmedabad Development Limited

Command and Control Centre,

Opp. Divan Ballubhai School,

Nr. Sanskar Kendra, Paldi,

Ahmedabad: 380007

Sir/Madam,

I have carefully gone through the Terms & Conditions contained in the RFP Document for "Selection of Implementation Agency for SITC, Operation, and Maintenance of Surveillance System and e-Challan system with advanced analytics in Ahmedabad City ".

I hereby declare that below are the details regarding relevant work that has been taken up by our company.

Name of the Project	Project Details				
	Project 1	Project 2	Project 3	-	Project - n
General Information					
Client for which the project was executed					
Name of the client contact person(s)					
Designation of client contact person(s)					
Contact details of the client contact person(s)					
Project Details					

Description of the project					
Scope of work of the Bidder					
Work Order Number					
Deliverables of the Bidder					
Outcomes of the project					
Other Details					
Total cost of the project (CAPEX + OPEX) (Rs)					
Capex Cost (Rs.)					
Opex Cost (Rs.)					
Total cost of the services provided by the Bidder					
Duration of the project (number of months, start date, completion date, current status)					
Go Live Date					
Mandatory Supporting Documents:					
Copy of completion / 100% Go Live certificate issued by client,					
Copy of Work order clearly highlighting scope of work, Bill of Material and valueof contract / order along with the components executed					
Copy of contract agreement with client					

If this declaration is found to be incorrect then without prejudice to any other action that may be taken, my/ our security may be forfeited in full and the tender if any to the extent accepted may be cancelled.

Name of the SI	:
Authorized Signatory	:
Seal of the Organization	:
Business Address	:
Date	:
Place	

Note : To be submitted with any other supporting details specified as documentary evidence as mentioned in section 2.1 and 2.2 (PQ and TQ criteria)

14.7 PQ_8: Declaration by the bidder for not being Blacklisted / Debarred

(To be submitted on a 300-rupee stamp paper)

Date: dd/mm/yyyy

To
The Chief Executive Officer
Smart City Ahmedabad Development Limited
Command and Control Centre,
Opp. Divan Ballubhai School,
Nr. Sanskar Kendra, Paldi,
Ahmedabad: 380007.

Sub: Declaration for not being debarred / black-listed by Central / any State Government department in India as on the date of submission of the bid

Sir/Madam,

In response to the Tender Ref. No._____dated _____ for Selection of Implementation Agency for SITC, Operation, and Maintenance of Surveillance System and e-Challan system with advanced analytics in Ahmedabad City , as an owner/ partner/ Director of_____ , I/ We hereby declare that presently our Company/ firm_____is having unblemished record and is not declared ineligible for corrupt and fraudulent practices either indefinitely or for a particular period of time by any Central Government / Any State Government / Smart City SPV / PSU/ Supreme Court of India/Any Government Agency in India as on the date of bid submission.

We further declare that presently our Company/ firm_____is not blacklistedand not declared ineligible for reasons other than corrupt and fraudulent practices by any Central Government / Any State Government / Smart City SPV / PSU/ Supreme Court of India/Any Government Agency in India as on the date of bid submission. Also, there is no any criminal case booked by any Government authority against the bidder in any court in last 7 years as on bid submission date.

If this declaration is found to be incorrect then without prejudice to any other action that may be taken, my/ our security may be forfeited in full and the tender if any to the extent accepted may be cancelled.

Name of the Bidder:
Authorized Signatory:
Seal of the Organization:
Business Address:

Date:
Place:

14.8 PQ_8: Affidavit

(The affidavit format as indicated below to be furnished on non-judicial stamp paper of Rs: 300 and duly notarized)

Name of work: RFP for Selection of Implementation Agency for SITC, Operation, and Maintenance of Surveillance System and e-Challan system with advanced analytics in Ahmedabad City.

1. I, the undersigned, do hereby certify that all the statements made in the required attachments are true and correct.

2. The undersigned also hereby certifies that neither our firm M/s .... nor any of its constituent partners have abandoned any work in India nor any contract awarded to us for such works has been rescinded during last five years, from the date of this bid submission.

3. The undersigned hereby authorize(s) and request(s) any bank, person, authorities, government or public limited institutions, firm or corporation to furnish pertinent information deemed necessary and requested by the SCADL to verify our statements or our competence and general reputation.

4. The undersigned understands and agreed that further qualifying information may be requested, and agrees to furnish any such information at the request of the SCADL.

5. The SCADL and its authorized representative are hereby authorized to conduct any inquiries or investigations to verify the statements, documents, and information submitted in connection with this application and to seek clarification from our bankers and clients regarding any financial and technical aspects. This Affidavit will also serve as authorization to any individual or authorized representative of any institution referred to in the supporting information, to provide such information deemed necessary and requested by you to verify statements and information provided in the tender or with regard to the resources, experience and competence of the Applicant.

6. My/ our offer shall not be considered in case of fake/ forged document(s) found during verification at any stage or at any stage of contract. I/ We are agreed to whatever action (s) taken by competent authority of corporation in the aforesaid circumstances such as forfeiture of security deposit and debarring from participation in future tenders for the period/ years as deemed fit by the corporation and informing the same to all other state/ central level Government/ semi government organizations.

Signed by the Authorized Signatory of the firm

Title of the office:

Name of the firm:

Date:

14.9 PQ – 8 : Self-Declaration – Not insolvent

<<To be printed on company's letterhead and signed by Authorized signatory>>

Date: dd/mm/yyyy

To,

The Chief Executive Officer
Smart City Ahmedabad Development Limited
Command and Control Centre,
Opp. Divan Ballubhai School,
Nr. Sanskar Kendra, Paldi,
Ahmedabad: 380007.

Sir/Madam,

In response to the Tender Ref. No. _____ dated _____ for RFP for Selection of Implementation Agency for SITC, Operation, and Maintenance of Surveillance System and e-Challan system with advanced analytics in Ahmedabad City , as an owner/ partner/ Director of _____, I/ We hereby declare that presently our Company/ firm _____is having unblemished record and is not be insolvent, in receivership, bankrupt or being wound up, not have its affairs administered by a court or a judicial officer, not have its business activities suspended and must not be the subject of legal proceedings for any of the foregoing reasons either indefinitely or for a particular period of time by any State/ Central Government/ PSU.

If this declaration is found to be incorrect then without prejudice to any other action that may be taken, my/ our security may be forfeited in full and the tender if any to the extent accepted may be cancelled.

Name of the SI	:
Authorized Signatory	:
Seal of the Organization	:
Business Address	:
Date	:
Place	:

14.10 PQ – 8 : Self-Declaration – Not convicted in any criminal offense

<<To be printed on company's letterhead and signed by Authorized signatory>>

Date: dd/mm/yyyy

To,

The Chief Executive Officer
Smart City Ahmedabad Development Limited
Command and Control Centre,
Opp. Divan Ballubhai School,
Nr. Sanskar Kendra, Paldi,
Ahmedabad: 380007.

Sir/Madam,

In response to the Tender Ref. No. _____ dated _____
RFP for Selection of Selection of Implementation Agency for SITC, Operation, and Maintenance of Surveillance System and e-Challan system with advanced analytics in Ahmedabad City, as an owner/ partner/ Director of _____, I/ We hereby declare that presently our Company/ firm _____is having unblemished record and does not have our directors and officers convicted of any criminal offence related to their professional conduct or the making of false statements or misrepresentations as to their qualifications to enter a procurement contract within a period of three years preceding the commencement of the procurement process, or not have been otherwise disqualified. either indefinitely or for a particular period of time by any State/ Central Government/ PSU.

If this declaration is found to be incorrect then without prejudice to any other action that may be taken, my/ our security may be forfeited in full and the tender if any to the extent accepted may be cancelled.

Name of the SI	:
Authorized Signatory	:
Seal of the Organization	:
Business Address	:
Date	:
Place	:

14.11 Bank Guarantee format for EMD

FORMAT OF THE UNCONDITIONAL AND IRREVOCABLE BANK GUARANTEE

FOR

EARNEST MONEY DEPOSIT

(To be submitted on Rs. 300/- non-judicial stamp paper)

In consideration of the ..... (*Insert name of the Bidder*) submitting the Bid *inter alia* for "RFP for Selection of Implementation Agency for SITC, Operation, and Maintenance of Surveillance System and e-Challan system with advanced analytics in Ahmedabad City ", for meeting the terms and conditions in response to the RFP DOCUMENT---------- ---- dated ---------- issued by **Smart City Ahmedabad Development Limited** ("SCADL"), and SCADL agreeing to consider the Bid of ..... *[Insert the name of the Bidder]* in accordance with the terms of the E-BID DOCUMENT, the ..... (Insert name and address of the bank issuing the Bid Bond, and address of the head office) (Here in after referred to as "Guarantor Bank") hereby agrees unequivocally, irrevocably and unconditionally to pay to SCADL or its authorized representative at ..... [*Insert Name of the Place from the address of SCADL*] forthwith on demand in writing from SCADL or any representative authorized by it in this behalf an amount not exceeding Rupees .....on behalf of M/s. .....[Insert name of the Bidder].

This guarantee shall be valid and binding on the Guarantor Bank up to and including ..... (*Insert date of validity of Earnest Money Deposit in accordance with the terms of reference of the E-BID DOCUMENT*) and shall not be terminable by notice or any change in the constitution of the Guarantor Bank or by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, or agreed with or without our knowledge or consent, by or between concerned parties.

Our liability under this Guarantee is restricted to Rupees ..... (Rs... .....).

SCADL or its authorized representative shall be entitled to invoke this Guarantee until ..... [*Insert Date, which is six months after the date in the preceding sentence*]. The Guarantor Bank hereby expressly agrees that it shall not require any proof in addition to the written demand from SCADL or its authorized representative, made in any format, raised at the above mentioned address of the Guarantor Bank, in order to make the said payment to SCADL or its authorized representative.

The Guarantor Bank shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection, disputes, or disparities raised by the Bidder or any other person. The Guarantor Bank shall not require SCADL or its authorized representative to justify the invocation of this BANK GUARANTEE, nor shall the Guarantor Bank have any recourse against SCADL or its authorized representative in respect of any payment made hereunder.

This BANK GUARANTEE shall be payable at Ahmedabad.

This BANK GUARANTEE shall be interpreted in accordance with the laws of India and the courts at ..... shall have exclusive jurisdiction.

The Guarantor Bank represents that this BANK GUARANTEE has been established in such form and with such content that it is fully enforceable in accordance with its terms as against the Guarantor Bank in the manner provided herein.

This BANK GUARANTEE shall not be affected in any manner by reason of merger, amalgamation, restructuring, liquidation, winding up, dissolution or any other change in the constitution of the Guarantor Bank.

This BANK GUARANTEE shall be a primary obligation of the Guarantor Bank and accordingly, SCADL or its authorized representative shall not be obliged before enforcing this BANK GUARANTEE to take any action in any court or arbitral proceedings against the Bidder, to make any claim against or any demand on the Bidder or to give any notice to the Bidder to enforce any security held by SCADL or its authorized representative or to exercise, levy or enforce any distress, diligence or other process against the Bidder.

The Guarantor Bank hereby agrees and acknowledges that SCADL shall have a right to invoke this Bank Guarantee either in part or in full, as it may deem fit.

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to Rupees ..... and it shall remain in force until ..... [*Date to be inserted on the basis of Terms of Reference of the E-BID DOCUMENT*], with an additional claim period of 6 (six) months thereafter. We are liable to pay the guaranteed amount or any part thereof under this BANK GUARANTEE only if SCADL or its authorized representative serves upon us a written claim or demand.

In witness whereof the Bank, through its authorized officer, has set its hand and stamp on this ..... day of ..... at .....

Witness:

Signature	Signature
Name	Name
Address	Address
Designation with Bank Stamp Signature	Designation with Bank Stamp Signature

Name and address

Attorney as per power of attorney No. .....

For:..... [Insert Name of the Bank]

Banker's Stamp and Full Address:

Dated this ..... day of ..... 2023.

Note: The Stamp Paper should be in the name of the Executing Bank

14.12 Format for Performance Bank Guarantee

<< To be printed on Rs. 300/- Stamp Paper >>

IN CONSIDERATION OF ..... Through .....

SCADL, Ahmedabad (Smart City Ahmedabad Development Limited) for "Selection of Implementation Agency for SITC, Operation, and Maintenance of Surveillance System and e-Challan system with advanced analytics in Ahmedabad City " (hereinafter referred to as the "said work") on the terms and conditions of the AGREEMENT dated the ..... day of ..... 2024 executed between SCADL on the one part and the Company (Name of the Company) on the other part (hereinafter referred to as "the said AGREEMENT) and on the terms and conditions specified in the Contract, Form of Offer and Form of acceptance of Offer, true and complete copies of the offer submitted by the Company, the said Acceptance of Offer and the said AGREEMENT are annexed hereto.

The Company has agreed to furnish SCADL in Guarantee of the Nationalized Bank for the sum of Rs ..... (Agreement in Words and Figures) only which shall be the Security Deposit for the due performance of the terms covenants and conditions of the said AGREEMENT. We..... Bank Registered in India under Act and having one of our Local Head Office at ..... do hereby guarantee to SCADL in ..... Department.

i. Due performance and observances by the Company of the terms covenants and conditions on the part of the Company contained in the said AGREEMENT, AND
ii. Due and punctual payment by the Company to SCADL of all sum of money, losses, damages, costs, charges, penalties and expenses that may become due or payable to SCADL by or from the Company by reason of or in consequence of any breach, non-performance or default on the part of the Company of the terms covenants and conditions under or in respect of the said AGREEMENT.

AND FOR THE consideration aforesaid, we do hereby undertake to pay to SCADL on demand without delay demur the said sum of Rs. ..... (Rupees ..... only) together with interest thereon at the rate prescribed under ..... from the date of demand till payment or such lesser sum, as may be demanded by SCADL from us as and by way of indemnity on account of any loss or damage caused to or suffered by SCADL by reason of any breach, non-performance or default by the Company of the terms, covenants and conditions contained in the said AGREEMENT or in the due and punctual payment of the moneys payable by the Company to SCADL thereunder and notwithstanding any dispute or disputes raised by the Company in any suit or proceeding filed before the Court relating thereto our liability hereunder being absolute and unequivocal and irrevocable AND WE do hereby agree that –

a) The guarantee herein contained shall remain in full force and effect during the subsistence of the said AGREEMENT and that the same will continue to be enforceable till all the claims of SCADL are fully paid under or by virtue of the said AGREEMENT and its claims satisfied or discharged and till SCADL certifies that the terms and conditions of the said AGREEMENT have fully and properly carried out by the Company.
b) We shall not be discharged or released from liability under this Guarantee by reason of
    a. any change in the Constitution of the Bank or
    b. any arrangement entered into between SCADL and the Company with or without our consent;
    c. any forbearance or indulgence shown to the Company,
    d. any variation in the terms, covenants or conditions contained in the said AGREEMENT;
    e. any time given to the Company, OR
    f. any other conditions or circumstances under which in a law a surety would be discharged.

c) Our liability hereunder shall be joint and several with that of the Company as if we were the principal debtors in respect of the said sum of Rs..... (Rupees ..... Only).
d) We shall not revoke this guarantee during its currency except with the previous consent of SCADL in ..... department in writing;
e) Provided always that notwithstanding anything herein contained our liabilities under this guarantee shall be limited to the sum of Rs..... (Rupees..... only) and shall remain in force until SCADL certifies that the terms and conditions of the said AGREEMENT have been fully and properly carried out by the Company.
f) Bank hereby agrees and covenants that if at any stage default is made in payment of any instalment or any portion thereof due to SCADL under the said AGREEMENT or if the Company fails to perform the said AGREEMENT or default shall be made in fulfilling any of the terms and conditions contained in the said AGREEMENT by the Company, the Bank shall pay to SCADL demand without any demur, such sum as may by demanded, not exceeding Rs..... (Rupees.....) and that the Bank will indemnify and keep SCADL indemnified against all the losses pursuant to the said AGREEMENT and default on the part of the Company. The decision of SCADL that the default has been committed by the Company shall be conclusive and final and shall be binding on the Bank/Guarantor. Similarly, the decision of SCADL as regards the Agreement due and payable by the Company shall be final and conclusive and binding on the Bank /Guarantor.
g) SCADL shall have the fullest liberty and the Bank hereby gives its consent without any way affecting this guarantee and discharging the Bank/Guarantor from its liability hereunder, to vary or modify the said AGREEMENT or any terms thereof or grant any extension of time or any facility or indulgence to the Company and Guarantee shall not be released by reason of any time facility or indulgence being given to the Company or any forbearance act or omission on the part of SCADL or by any other matter or think whatsoever which

under the law, relating to sureties so releasing the guarantor and the Guarantor hereby waives all suretyship and other rights which it might otherwise be entitled to enforce.

h) That the absence of powers on the part of the Company or SCADL to enter into or execute the said AGREEMENT or any irregularity in the exercise of such power or invalidity of the said AGREEMENT for any reason whatsoever shall not affect the liability of the Guarantor/Bank and binding on the bank notwithstanding any abnormality or irregularity

i) The Guarantor agrees and declares that for enforcing this Guarantee by..... against it, the Courts at Ahmedabad only shall have exclusive jurisdiction and the Guarantor hereby submits to the same

1.....
2.....

Being respectively the Director of the Company, who in token thereof, has hereto set his respective hands in the presence of –

1.....
2.....

14.13 Commercial Bid Cover Letter

<<To be printed on letter head of Prime/Sole Bidder and signed by Authorized signatory of Prime/Sole Bidder>>

To,

The Chief Executive Officer
Smart City Ahmedabad Development Limited
Command and Control Centre,
Opp. Divan Ballubhai School,
Nr. Sanskar Kendra, Paldi,
Ahmedabad: 380007.

Sub : RFP for Selection of Implementation Agency for SITC, Operation, and Maintenance of Surveillance System and e-Challan system with advanced analytics in Ahmedabad City.

Reference: Tender No :<No> Dated<DD/MM/YYYY>

Dear Sir/ Madam,

We, the undersigned Bidders, having read and examined in detail all the bidding documents in respect of "Selection of Implementation Agency for SITC, Operation, and Maintenance of Surveillance System and e-Challan system with advanced analytics in Ahmedabad City " do hereby propose to provide services as specified in the Bid Document referred above.

1. PRICE AND VALIDITY

All the prices mentioned in our Tender are in accordance with the terms as specified in the Tender documents. All the prices and other terms and conditions of this Tender are valid for entire contract duration.

We hereby confirm that our Tender prices include all taxes. Taxes are quoted separately under relevant sections, as specified in the Bid Document formats.

We have studied the clause relating to Indian Income Tax and hereby declare that if any income tax, surcharge on Income Tax, Professional and any other corporate Tax in altercated under the law, we shall pay the same.

2. DEVIATIONS

We declare that all the services shall be performed strictly in accordance with the Bid Documents and there are no deviations except for those mentioned in eligibility criteria documents, irrespective of whatever has been stated to the contrary anywhere else in our bid.

Further we agree that additional conditions, if any, found in our bid documents, other than those stated in the deviation schedule in eligibility criteria, shall not be given effect to.

3. QUALIFYING DATA

We confirm having submitted the information as required by you in your Instruction to Bidders. In case you require any other further information/documentary proof in this regard before evaluation of our Tender, we agree to furnish the same in time to your satisfaction.

4. BID PRICE

We declare that our Bid Price is for the entire scope of the work as specified in the Bid Document. The bid price at which the contract is awarded shall hold good for entire tenure of the contract. These prices are indicated in the subsequent sub-sections of this Section.

5. CONTRACT PERFORMANCE GUARANTEE BOND

We hereby declare that in case the contract is awarded to us, we shall submit the contract Performance Bank Guarantee in the form prescribed in the Bid Document.

We hereby declare that our Tender is made in good faith, without collusion or fraud and the information contained in the Tender is true and correct to the best of our knowledge and belief.

We understand that our Tender is binding on us and that you are not bound to accept a Tender you receive. We confirm that no Technical deviations are attached here with this commercial offer.

Thanking you, Yours faithfully,

(Signature of the Authorized Signatory) Name

Designation Seal.

Date:

Place:

Business Address:

14.14 General Instructions on Preparation of the Technical Proposal

Bidders shall have to submit a very structured and organized technical bid, which will be analysed by the Bid evaluation committee for different compliances with regards to the requirements of the project. The document submitted must be searchable and well indexed without any handwritten material. Since the cut-off marks for Technical bid Score is 70, the quality and completeness of the information submitted by the Bidder will matter a lot. All the documents must be submitted in one file only.

Bidder is expected to divide its Bid in following sections / documents:

Bidder's Competence to execute the project:

This document should bring about the capability of the firm to execute this project. Some of the required documents are as follows:

- Financial Capability of the Bidder in required formats and supporting documents
- Experience in Similar projects

Technical Proposal: The technical proposal should specify the following:

- Understanding of the Project
- Clear articulation and description of the design and technical solution and various components including (Infrastructure architecture, Application architecture, data center Architecture)
- Details of the application software proposed
- Details of Data Center computing requirement and proposed BoQ for the same
- Integration approach with existing Infrastructure
- Reasoning for selection of the proposed technology over other options.
- Strength of the Bidder to provide services including examples or case-studies of similar solutions deployed for other clients
- Clearly articulate the Strategy and Approach and Methodology for Design, Installation, Configuration and Maintenance of hosted components of the project.
- Approach and Methodology for Management of SLA Requirements specified in the bid. Bidder is required to clearly articulate how the SLA requirements would be adhered.
  Detailed Project Plan with timelines, resource allocation, milestones etc. for supply, installation and commissioning of the various project components.

Other Details:

Bill of Material: This document should give details of all the proposed IT and Non-IT components, with their proposed make and model and without specifying the costs. Please note that only one Make and Model to be proposed as part of the technical bid by the Bidder. SCADL reserves the right to reject the bid in case of submission of multiple make and model against one product.

Compliance to Technical and Functional Specifications as mentioned in Section 21, Annexure I.

Make and Model of all IT as well as non-IT components along with datasheets highlighting the Technical Specification parameters in each datasheet for compliances. Bidder shall not be allowed to change their product post onboarded on the project. However, during the evaluation phase, Bidder may be asked to provide requisite justification / additional documents to validate the meeting of the specification as per the requirements of RFP. Bidder may also be asked to replace the product if in case it does not meet the RFP criteria. Further, during the project implementation phase (Any stage of the project), if it is observed that the product is not meeting the RFP requirement, Bidder may have to replace the product with better specification(s), from same OEM at no additional cost to tenderer. SCADL reserves the right to seek clarification during the technical bid evaluation, which also includes the further clarification / replacement of the product (if it is not meeting the criteria mentioned in the RFP).

14.15 Checklist for Technical-Qualification Document

#	Documents required	Submitted (Y / N)	(Page No.)
1.	Details of Annual Turnover and Net-worth for last three financial years (Form PQ 2)		
2.	Certificate from the Statutory auditor / CA clearly specifying the annual turnover from ICT / surveillance business and Net-worth for the specified years (Form PQ 3).		
3.	Details of similar work undertaken for showcasing product experience (PQ 4,5,6,7 & TQ-2,3,4,5)		
4.	Authorization letter from OEMs (Form PQ 10)		
5.	Bidder and OEM's Undertaking related to the land border sharing declaration of proposed products and OEMs. (PQ 11)		
6.	Proposed design and technical solution to meet the scope of work of the project.		
7.	Details of the application software proposed		
8.	Integration approach with existing Infrastructure		
9.	Strength of the Bidder to provide services including examples or case-studies of similar solutions deployed forother clients		

14.16 PQ – 10 : MAF

Manufacturer's Authorization Format (MAF) From OEM

Ref: Date:
To
The Chief Executive Officer
Smart City Ahmedabad Development Limited
Command and Control Centre,
Opp. Divan Ballubhai School,
Nr. Sanskar Kendra, Paldi,
Ahmedabad: 380007.

Subject: Manufacturer Authorization Letter for RFP No. .....

Sir,
We, <OEM Name> having our registered office at <OEM address>, hereinafter referred to as OEM are an established manufacturer of the following items quoted by <Bidder Name> having their registered office at <Bidder address>, hereinafter referred to as Bidder.
Item – 1: _____

We <OEM Name> authorize <Bidder's name> to quote our above-mentioned product for above mentioned tender.

We confirm that we have understood the delivery & installation timelines defined in the tender. We confirm that we have worked out all necessary logistics and pricing agreement with **<Bidder name>**, and there won't be any delay in delivery, installation and support due to any delay from our side. Our full support is extended in all respects for supply, warranty and maintenance of our products for entire contract duration. We also ensure to provide the required spares and service support for the supplied equipment for entire contract duration as per tender terms. In case of any difficulties in logging complaint at bidder end, user shall have option to log complaint at our call support Centre.

We hereby declare that the proposed product complies with all the specifications defined and desired in this RFP and subsequent corrigenda.

We herewith certify that the Products/ Equipment/ Solutions quoted by us are not end of the life and we hereby undertake to support this Products/ Equipment/ Solutions for entire contract duration. If the Products/ Equipment/ Solutions is de-supported by us for any reason whatsoever, we will extend our full support to the bidder to enable the bidder to comply to the terms & conditions of this RFP by replacing the Products/ Equipment/ Solutions with an equivalent or better substitute that is acceptable to Tenderer without any additional cost to the Tenderer and without impacting the performance of the solution in any manner whatsoever.

Sr. No.	Type of Product	Name of Products/ Equipment/ Solution as per RFP	Make, model & part number	OEM warranty	Remarks
	Hardware				
	Hardware				
	Software				

Yours faithfully,

Authorized Signatory

Designation

OEM's company name

CC: Bidder's corporate name

NOTE:

1. *The letter should be submitted on the letter head of the manufacturer / OEM and should be signed by the authorized signatory.*

14.17 PQ 11: Land border sharing declaration

Undertaking as per guidelines published by Ministry of Finance, Dept. of Expenditure, Public Procurement division dated 23.07.2020

(To be submitted by Bidder & Consortium member on 300 Rs Stamp paper)

To,

The Chief Executive Officer
Smart City Ahmedabad Development Limited
Command and Control Centre,
Opp. Divan Ballubhai School,
Nr. Sanskar Kendra, Paldi,
Ahmedabad: 380007.

Sub : RFP for Selection of Implementation Agency for SITC, Operation, and Maintenance of Surveillance System and e-Challan system with advanced analytics in Ahmedabad City.

Dear Sir,

Mr._____undersigned authorized representative of **M/s <<Name of Company>>** has read clause regarding restriction on procurement from a bidder of a country which shares a land border with India.

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries; I certify that quoted product from following OEMs are not from such a country or, of if from such a country, these quoted products OEM have been registered with competent authority. I hereby certify that these quoted products & its OEM fulfils all requirements in this regard and is eligible to be considered for procurement for RFP" Selection of Implementation Agency for SITC, Operation, and Maintenance of Surveillance System and e-Challan system with advanced analytics in Ahmedabad City ".

If given information is found to be false, this would be ground for immediate termination and further legal action in accordance with law.

No.	Item Category	Quoted Make & Model
1.		
2.		
3.		
4.		

No.	Item Category	Quoted Make & Model
5.		
6.		
7.		
8.		
9.		
.		
.		
N		

Authorized Signatory:

Name:
Designation:
Name of the Bidder/OEM:
Address:
Company Seal:

(On Letter Head of OEM)

To,

The Chief Executive Officer
Smart City Ahmedabad Development Limited
Command and Control Centre,
Opp. Divan Ballubhai School,
Nr. Sanskar Kendra, Paldi,
Ahmedabad: 380007.

Sub : RFP for Selection of Implementation Agency for SITC, Operation, and Maintenance of Surveillance System and e-Challan system with advanced analytics in Ahmedabad City.

Mr._____ undersigned authorized representative of **M/s. <<Name of Company>>** has read clause regarding restriction on procurement from a bidder of a country which shares a land border with India.

I certify that following quoted product is not from such a country or, of if from such a country, these quoted product(s) & we as OEM has been registered with competent authority. I hereby certify that this quoted product(s) fulfill all requirements in this regard and is eligible to be considered for procurement for RFP" Selection of Implementation Agency for SITC, Operation, and Maintenance of Surveillance System and e-Challan system with advanced analytics in Ahmedabad City ".

No.	Item Category	Quoted Make & Model
1.		
2.		
3.		
4.		
5.		
6.		
.		
.		
N		

In case I'm supplying material from a country which shares a land border with India, I will provide evidence for valid registration by the competent authority; otherwise Purchaser/End user Dept. reserves the right to take legal action on us.

Thanking you,

Yours faithfully

(Signature of the Authorized signatory of the OEM Organization)
Name :
Designation :
Date :
Company Seal :
Business Address :

14.18 TQ 6: CVs of the Key Manpower proposed

1	Name of the Staff				
2	Current Designationin the Organization				
3	Proposed Role in the Project				
4	Proposed Responsibilities in the Project				
5	Date of Birth				
6	Education	Degree / Diploma, College, University, Year of Passing			
7	Summary of Key Training and Certifications				
8	Language Proficiency	**Language**	**Reading**	**Writing**	**Speaking**
9	Employment Record (For the total relevantexperience, Month and Year to be mentioned in each of the experience field)				
		From / To:			
		Employer:			
		Position Held:			
		From / To:			
		Employer:			
		Position Held:			
		From / To:			
		Employer:			
		Position Held:			
10	Total No. of Years of Work Experience				
11	Total No. of Years of Experience for theRole proposed				
	Highlights of relevant assignments handled and significant accomplishments (Use following format for each project)				

12		**Name of assignment or project:**	
		Duration:	
		Location:	
		Client:	
		Main project features:	
		Positions held:	
		Activities performed:	

Note: Bidder to provide exact duration during which the work was undertaken by the proposed resource.

14.19 Bidder's Total Responsibility Certificate

<<<<To be printed on Bidder company's letterhead and signed by Authorized signatory>>

To,

The Chief Executive Officer
Smart City Ahmedabad Development Limited
Command and Control Centre,
Opp. Divan Ballubhai School,
Nr. Sanskar Kendra, Paldi,
Ahmedabad: 380007.

Sub : RFP for Selection of Implementation Agency for SITC, Operation, and Maintenance of Surveillance System and e-Challan system with advanced analytics in Ahmedabad City .

Ref : Tender No: <No> Dated <DD/MM/YYYY>

Dear Sir,

This is to certify that we (M/s Bidder's Name) undertake the Total Responsibility for the defect free comprehensive Surveillance and subsequent ancillary activities and e-Challan system with advanced analytics as per the requirements specified in scope of work of the RFP for the duration mentioned in the RFP.

We also undertake that price that bided for the said scope of work are with appropriate assumptions and Total Responsiveness with fully undertake the minimum guidelines, scope of work and clauses that mentioned in the RFP for the deployment of the service.

Name of the Bidder :
Authorized Signatory :
Seal of the Organization :
Business Address :
Date :
Place :

Notes:

The mode of execution of the Total Responsibility Certificate should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required, the same should be under common seal affixed in accordance with the required procedure.

14.20 No Deviation Certificate

(To be provided on the Company letter head of the Lead Biddder)

To,

The Chief Executive Officer
Smart City Ahmedabad Development Limited
Command and Control Centre,
Opp. Divan Ballubhai School,
Nr. Sanskar Kendra, Paldi,
Ahmedabad: 380007.

Sub : RFP for - Selection of Implementation Agency for SITC, Operation, and Maintenance of Surveillance System and e-Challan system with advanced analytics in Ahmedabad City.

Ref: RFP No. **<<....>> dated << ....>>**

Dear Sir,

a. This is to certify that, the specifications of all the components Hardware, Software, surveillance components, solutions, IT & Non-IT equipment and any other item as per BoQ, which I/ We have mentioned in the Technical bid, and which I/ We shall supply if I/ We am/ are awarded with the work, are in conformity with the minimum specifications of the bidding document and that there are no deviations of any kind from the requirement specifications.
b. Also, I/ we have thoroughly read the tender and by signing this certificate, we hereby submit our unconditional acceptance to all the terms & conditions of the bidding document without any deviations.
c. I/ We also certify that the price I/ we have quoted is inclusive of all the cost factors involved in the end-to-end implementation and execution of the project, to meet the desired Standards set out in the bidding Document.

Thanking you,

Yours faithfully

(Signature of the Authorized signatory of the Bidding Organization)
Name :
Designation :

Date :

Company Seal :

Business Address :

Address:

Seal:

Date:

14.21 : Self Declaration by Bidder on Data Centre Equipment

<<To be printed on letter head of Lead Bidder and signed by Authorized signatory of Bidder>>

To,

The Chief Executive Officer
Smart City Ahmedabad Development Limited
Command and Control Centre,
Opp. Divan Ballubhai School,
Nr. Sanskar Kendra, Paldi,
Ahmedabad: 380007.

Sub : RFP for Selection of Implementation Agency for SITC, Operation, and Maintenance of Surveillance System and e-Challan system with advanced analytics in Ahmedabad City .

Ref: RFP No. **<<....>> dated << ....>>**

Dear Sir/ Madam,

This is to undertake that We_____, (name and address of the bidder) shall procure Data Centre Server, Storage server as per the quantity mentioned in the below table during the implementation phase of the project to meet all the specification mentioned in the RFP.

Sr. No.	Item	Quantity
1.	Server	
2.	Storage	

Yours faithfully,

(Signature of the Authorized Signatory from Bidder)

Name Designation Seal.

Date:

Place:

Business Address:

14.22 Unpriced Bill of Material

The Bidder should provide the proposed Bill of Material (BoM) here. Kindly note that any additional items required should be clearly mentioned under 'additional line items' category towards the end of this table. Also note that details of the make/brand and model against each line item, wherever applicable, should be mentioned. The Bidder may add any additional line item (with adequate details) in the proposed BoM table below (towards the end of the table), that may be required to fulfil the tender and project requirements in totality. Kindly note that the indicative/estimated quantity provided in the RFP would be used for evaluation purposes; however, the payment would be done on actual usage basis.

Unpriced Bill of Material for all components (Edge device, Hardware, network, Server, Storage etc.)

Unpriced Bill of Material						
#	**BoM Line Item**	**Unit of measurement**	**Quantity Proposed**	**Make / Brand**	**Model Details**	**Full Compliance with RFP Requirements (Yes / No)**
1						
n						

Information about all software/Applications components being proposed

#	**Software Component**	**Product Name version and technology**	**Module**	**Sub-module**	**Function / Purpose of the line item**
1					
n					
	Bidder to add lines as required				

14.23 Self Certification on PMA

Format for Affidavit of Self Certificate regarding Domestic Value Addition in quoted items on INR 100/- Stamp Paper.

Date:

I _____S/o, D/o, W/o _____ resident of _____do hereby solemnly affirm and declare as under.

That I will agree to abide by the terms and conditions of the policy of the Government of India issued vide notification no. P-45021/2/2017-PP (BE-II) dated 4th June 2020 and any further amendments released by Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, Government of India

That the information furnished hereinafter correct to best of my knowledge and belief and I undertake to produce relevant records before the procuring agency or any authority so nominated by the Ministry of Electronics and Information Technology, Government of India for the purpose of assessing domestic value addition.

That the domestic value addition for all inputs which constitute the quoted item(s) has been verified by me and I am responsible for the correctness of the claims made therein.

That in event of the domestic value addition of the quoted product is found to be incorrect and not meeting the prescribed domestic value addition norms, based on assessment of an authority so nominated by the Department of Telecommunications, Government of India for the purpose of assessing domestic value addition. I will be disqualified from any Government Tender for period of 36 months. In addition, I will bear all costs of such an assessment.

That I have complied with all the conditions referred to in the notification no. P-45021/2/2017-PP (BE-II) dated 4th June 2020 , wherein preference to domestically manufactured electronic products in Government procurement is provided and that the procuring agency is hereby

authorized to forfeit and adjust my EMD and other security amount toward such assessment cost and I undertake the balance, if any, forthwith.

I agree to maintain the following information in the Company's record for a period of 8 years and shall make this available to any statutory authorities.

1. Name and details of domestic manufacture (Registered office, Manufacturing unit location, nature of legal entity)

2. Date on which this certificate issued

3. Electronic Product for which the certificate is produced

4. Procuring agency to whom the certificate is furnished

5. Percentage of domestic value addition claimed

6. Name and contact details of the unit of the manufacturer

7. Sale price of the product

8. Ex-factory price of the product

9. Freight, insurance and handling

10. Total Bill of Material

11. List and total cost value of inputs used for manufacture of the domestic product

12. List and total cost value of inputs which are domestically sourced. Please attach the certificate from supplier, if the input is not in-house

13. List and total cost value of inputs imported, directly or indirectly.

For and on behalf of _____ (Name of firm/entity)

Authorized Signatory (To be duly authorized by Board of Directors)

<Insert Name, Designation and Contact No.>

15. Annexures

15.1 Annexure I – Technical Specifications

1. Galvanized cantilever pole

S/N	Parameter	Minimum Required Specifications	Compliance (Yes/No)
1.	Pole type	Hot Dip Galvanized after Fabrication with Silver coating of 86 micron as per IS:2629; Fabrication in accordance with IS-2713 (1980)	
2.	Height	The structure of pole should be tall enough so that, after installation, there is at least 6 meters of vertical clearance above the finished level of road from its center point. • Bottom section: 3.2 meter • Middle Section: 1.4 meter • Top Section: 1.4 meter	
3.	Foundation	Casting of Civil Foundation with foundation bolts, to ensure vibration free erection (basic aim is to ensure that video feed quality is not impacted due to winds in different climatic conditions). Expected foundation depth of min. 100cms.	
4.	Pole Diameter (Outer side)	• Bottom section: minimum 97.9mm • Top Section: minimum 65.2mm	
5.	Bottom Base Plate	Minimum 300mm x 300mm x 6mm	
6.	Protection	Lightening arrestor with Earthing shall be provided to protect all field equipment mounted on it, bidder may have common earthing for up-to 4 poles / gantry nearby within the distance of 15 meters.	

7.	Cantilevers	• Based on purpose & location following types of cantilevers may be considered:
		  • For RLVD camera and according to location requirement minimum 1.5-meter to 2.5-meter cantilevers need to be considered.
		  • ANPR & Front facing cameras and according to the location requirement minimum 3.5 meters (or more) up to the maximum	

S/N	Parameter	Minimum Required Specifications	Compliance (Yes/No)
		coverage of 3 lanes, however if number of lanes are more than three then Bidder should consider using gantry for better stability. The cantilever should be fitted such that they can be rotated to change the direction or adjust the angle, if at all required. • The Cantilever should be strong enough so as to mount camera's as per location requirement and associated fixtures like IR, etc., if required and has support mechanism to reduce the vibration due to wind.	
8.	Mounting Facility	Should support pole, cantilever, Junction Box	
9.	Earthing	Separate Earthing as per IS standard provided for each pole	
10.	Cabling	All wiring must be hidden, throughtubes/pipes. No wires should be visible from outside.	
11.	General	SI is required to submit the detailed design of the pole with complete foundation approved by Government approved structural engineer. The actualdesign of pole and foundation will be based on structure stability report issued by structural engineer to sustain a wind speed of 150 KMPH. SI must propose design which is aesthetically matching with city's infrastructure and existing projects. Pole's design should be vibration freeand should not affect the performance of the system on account of any vibration on the pole.	

2. Gantry including mounting/installation

Sr No	Parameters	Minimum Specifications	Compliance (Yes/No)
1.	Pole type	Hot Dip Galvanized after Fabrication with Silver coatingof 86 micron as per IS:2629. Fabrication in accordance with IS-2713 (1980)	
2.	Height	Height should be such that 6 meter ground clearance must be available in the center of the road after installation	
3.	Pole Diameter	Min. 10 cm diameter pole (Bidder to choose larger diameter for higher height / weight, also it must be supported with structural engineer certificate)	
4.	Bottom base Plate	Minimum base plate of size 30x30x1.5 cm	
5.	Mounting Facilities	To mount RLVD Cameras, ANPR cameras,IR Illuminator, etc.	
6.	Pipes, Tubes	All wiring must be hidden, through tubes/pipes. No wiresshall be visible from outside.	
7.	Foundation	Casting of Civil Foundation with GI foundation bolts, to ensure vibration free erection. (Basic aim is to ensure that video feed quality is not impacted due to winds in different climatic conditions). Expected foundation depth of min. 100cms. Proper earthing should be carried out. Bidder to submit structural design document for polefoundation and design considerations to withstand minimum 150 KMPH of wind speed.	
8.	Protection	Lightening arrestor with Earthing shall be provided to protect all field equipment mounted on it, bidder may have common earthing for up-to 4 poles / gantry nearby within the distance of 15 meters. However, each gantry shall have earthing connectivity from at least two earth pits.	
9.	Road Safety	Gantry should be installed with reflective taps along with consideration of road safety standards & Road Engineering	

Sr No	Parameters	Minimum Specifications	Compliance (Yes/No)
10.	Mounting Facility	Should support Junction Box	
Specify the proposed Make			
Specify the proposed Model			

3. Pole for surveillance cameras

Sr. No.	Parameter	Minimum Specifications	Compliance (Yes/No)
1	Pole type	Hot Dip Galvanized after Fabrication with Silver coating of 86 micron as per IS:2629; Fabrication in accordance with IS-2713 (1980)	
2	Height	6-8 Meters (or higher), as-per-requirements for different type of cameras & Site conditions. Height of pole will befinalized during the feasibility study.	
3	Pole Diameter	The pole should have a minimum bottom diameter of 97.9 mm with 4 mm wall thickness and a suitable base plate for a 6-meter height. For taller poles (up to 8 meters), the bidder must select a larger bottom diameter of minimum 135 mm. Bidder may be required to amend the pole diameter based on the structural design proposed by the authorized structural engineer to sustain 150 KMPH of wind speed	
4	Cantilevers	Cantilever arm length of minimum 1.5 meter (if, required)Design must be finalized during the initial phase of the project.	
5	RCC Foundation	Casting of Civil Foundation with GI foundation bolts (Must be corrosion free), to ensure vibration free erection(basic aim is to ensure that video feed quality is not impacted due to winds in different climatic conditions). The pole with cantilever should be strong enough to caterto the weight of 2 – 3 cameras mounted on it.	

Sr. No.	Parameter	Minimum Specifications	Compliance (Yes/No)
		Bidder must install 40 mm diameter pipe in the foundation.	
6	Protection	Lightening arrestor with Earthing shall be provided to protect all field equipment mounted on it, bidder may have common earthing for up-to 4 poles / gantry nearby within the distance of 15 meters.	
7	Junction Box	SI to provide suitable size of junction box for termination of cables as per their proposed solution	
8	Cabling	All wiring must be hidden, through tubes/pipes. No wires shall be visible from outside.	
9	General	SI is required to submit the detailed design of the pole with complete foundation approved by Government approved structural engineer. The actual design of pole and foundation will be based on structure stability report	

4. Armored Power Cable

Sr. No.	Component	Minimum Specifications	Compliance (Yes/No)
	Cables		
1.	No's of core	3 Core 2.5 Sq. mm XLPE multi strand armored copper cable	
2.	Materials	XLPE (Cross Linked Polyethylene)	
3.	Certification	ISI Marked	
4.	Standards	IS:7098(I)-88 ISI & Indian Electricity Act and Regulation	
5.	Cable Laying	Cable must be laid as per relevant IS standard Termination should be carried out in a proper manner with lugs etc. accessories.	

Sr. No.	Component	Minimum Specifications	Compliance (Yes/No)
6.	General	SI to submit the relevant test certificate as per IS standard	
Specify the proposed Make			
Specify the proposed Model			

Other cables required as part of the project should be armored for outdoor cabling

5. Junction Box, with adjustable mounting frames

S/N	Parameter	Specification	Compliance (Yes/No)
1.	Built	The Outdoor Utility Cabinet will be constructed with a front sheet steel door with 3-point Locking system to ensure the security of the cabinet. Side and Wall Panels shall be thick wall constructed, with fixing bolts internal to the cabinet. The Cabinet should have the required frames to mount the required components like, network device, power, Stabilizer, surge protector etc.	
2.	Utility & IP rating	Should be Made for 24X7X365 Outdoor Applications; The Utility Cabinet shall be IP 55 rated (Regulatory Standard Compliance) for ingress protection. It shall have cooling mechanisms including fans & air filters (avoid dust ingress).	
3.	Cabinet Material	GI with powder coated	
4.	Size	Suitable size as per site requirements to house the field equipment including but not limited to Edge Level Switch, etc. depending on the solution at particular junctions. SI to submit the detailed layout considering solution requirement prior to supply	
5.	PDU	Minimum 5x 5 Amp. Indian Standard PDU's has to be provided to support the site equipment. No. of PDUs should be as per actual requirement.	
6.	Installation	Each Cabinet will be mounted on a raised height Plinth, 700 - 1000 mm high, as per site requirements. FAN Cooling unit shall be inherent in the design.	
7.	Cable Management	Proper cable management with cable tagging should be provided	

S/N	Parameter	Specification	Compliance (Yes/No)
		Cable Routing: Power connection cable shall be provided from the nearest access point provided by Power utility company to the Outdoor Utility Cabinet through Power meter enclosure.	
8.	Earthing	Separate Earthing as per IS standard provided for each Junction Box	
9.	Other Features	Rain Canopy, Cable entry with glands, proper earthing and Fans/any other accessories as required for operation of equipment's within junction box	
Specify the proposed Make			
Specify the proposed Model			

6. Surge Protection Power Strips

S/N	Parameter	Minimum Specification	Compliance (Yes/No)
1.	Clamping Voltage	240 V	
2.	Response time	<10 ns	
3.	Energy Dissipation	Min 500 joules	
4.	Max voltage Spike protection	Up to 400 Volts	
5.	Max current Spike Protection	5000 Amps	
6.	Cable	Heavy duty Cable of standard Length	
7.	Power Outlet	Min. 4 Nos. 5 Amp Indian Standard Power Outlets	
8.	Operating Temperature	0-55 ° C. The bidder has to take into consideration of the internal temperature adjustment of the junction box	
Specify the proposed Make			
Specify the proposed Model			

7. Voltage Stabilizers at Junctions

S/N	Parameter	Minimum Specification	Compliance (Yes/No)
1.	Device capacity	3 KVA	
2.	Voltage Correction	Automatic, IC Controlled	
3.	Input Voltage Range	130 V to 280 V	
4.	Frequency Range	50 Hz +/- 5 %	
5.	Output Voltage Range	200 V to 230 V, +/-5 %	
6.	Efficiency	> 95%	

S/N	Parameter	Minimum Specification	Compliance (Yes/No)
7.	Protection/Cut off	Over Voltage and over Current Protection, Thermal and Electronic Overload	
8.	Warranty	Comprehensive warranty with parts for entire contract duration	
Specify the proposed Make			
Specify the proposed Model			

8. Camera Type : (Box Cameras for ANPR, RLVD - Minimum 3 video streams shall be available for all the cameras)

S/N	Parameter	Minimum Specification	Compliance (Yes/No)
1.	Image sensor and Effective Pixels (Resolution)	a. Sensor size: • 1/2.8" or better, CMOS Progressive Scan for 2MP cameras • ½" or better, CMOS Progressive Scan for 4MP cameras • 1/1.2" or better, CMOS Progressive Scan for 8MP cameras b. Resolution: • For ANPR Cameras: Model – 1 : Bidder can consider 1 ANPR camera per traffic lane (minimum resolution – 2 MP). Model – 2 : Bidder can consider 1 ANPR camera per 2 traffic lanes (minimum resolution – 4 MP) • For RLVD Camera: 8 MP or better	
2.	Electronic Shutter	1 to 1 / 10,000 s or better	
3.	Focus	Manual	
4.	Automatic Gain Control	Automatic / Manual	
5.	S/N Ratio	>50 dB	
6.	Frame Rate	Cameras shall support following minimum frame rate at different resolution as applicable - 50/60 FPS @ 2MP Resolution 25/30 FPS @ 4MP Resolution 20 FPS @ 8MP Resolution	
7.	Codec	H.265, or better	

S/N	Parameter	Minimum Specification	Compliance (Yes/No)
8.	Multi Focal Lens	Following Variant of lens is required a. For ANPR - 5 mm* to 50 mm** b. (*Lower Focal Length Range – Between 5mm to 8mm **Higher Focal Length Range - 40mm or higher) b. For RLVD - 2.8* to 12mm** (*Lower Focal Length Range – Between 2.8mm to 4mm **Higher Focal Length Range - 10mm or higher) ***Note: -*** • Flexibility to choose lenses as mentioned depending on project requirement. • OEM to provide compliance of both types of lenses mentioned above to be provided as part of this tender document.	
9.	Minimum Illumination	0.5 Lux (Colour) & 0.01 Lux (B/W)	
Video			
10.	Day and Night functionality	Automatic, Color, Mono	
11.	WDR	True WDR 120 dB or better	
12.	Video Streams	Individually configurable min 03 video streams (H.265), Unicast/ Multicast	
13.	On board Analytics	Motion detection, Tampering Alert, Out of focus	
Network & Interface			
14.	Interface	RJ-45 for 10/100 base-T Ethernet	
15.	Network Protocols support	IPv4, IPv6, TCP/IP, HTTP, DHCP, UDP, DNS, SMTP, RTP, RTSP, SNMP protocols/Should meet all functional requirement of the project	
16.	Alarm Event (Non-working, tampering,)	Events / alerts send via FTP, HTTP, email, Pre-Post alarm video buffering.	
17.	Compliance	ONVIF Profile S,G,M, &T compliant	
Security			
18.	General	• Password Protection, IP Address filtering, User Access Log, HTTPS encryption. • Encryption: TLS 1.0, SSL, DES, 3DES, AES-256 (edge encryption)	

S/N	Parameter	Minimum Specification	Compliance (Yes/No)
		• The cameras offered must be cyber security certified with STQC /NDAA/UL Cyber security certificate / CERT-In empaneled organization	
General Camera Features			
19.	Operational Temperature °C	0°C to 50 °C	
20.	Outer Casing	Vandal Proof IK10 or above rated, NEMA 4X/ IP66 rated Housing	
21.	Alarm	Alarm Support Required (1 Input and 1 Output)	
22.	Audio	Audio Support Required (1 Input and 1 Output)	
23.	Power	PoE (802.3 af, 802.3at) OR AC 24V/ DC12V	
24.	Certifications	CE/EN/Equivalent Indian Standards, FCC/Equivalent Indian Standards, /UL 62368-1/Equivalent Indian Standards, IEC/BIS/Equivalent Indian Standards certified at the time of bidding	
25.	Undertaking	The MAC ID's of the CCTV Cameras to be supplied against this tender shall be registered in the name of the OEM of the CCTV Cameras.	
26.	Local Storage should (memory card of Min 64 GB to be included)	In the event of failure of connectivity to the central server the camerashall record video internally or on the SD card automatically.	
27.	Mounting Accessories	For pole/gantry/ surface mount with L/C Brackets with bird scare spikes to prevent birds from sitting on top of camera.	
28.	Warranty	Comprehensive warranty with parts for entire contract duration.	
Specify the proposed Make			
Specify the proposed Model			

9. *Camera Type: Fix Box Camera for Bridge Surveillance -- Minimum 3 video streams shall be available for all the cameras*

#	Parameter	Minimum Specifications or better	Compliance (Yes/No)
1	Video Compression	H.265 or better	
2	Video Resolution	2560 * 1440 or better	
3	Frame rate support	25/30 FPS	
4	Image Sensor	1/3" or better, Progressive Scan CMOS	
5	Lens Type	Manual Vari-Focal Lens (Autofocus), IR Correction	
6	Lens	Auto IRIS, 5 – 50 mm (+- 1mm), F1.2/F1.4	
7	IR	External IR with minimum 100 mtr Range, Power requirement & connectivity should be part of the solution. Illumination (Colour & b/w) should be sufficient to capture Objects/Faces at night time when there is not sufficient illumination at site.	
8	Minimum Illumination	Color: 0.1 lux, B/W: 0.01 lux (at 50 IRE), IR: 0 lux	
9	IR Cut Filter	Automatically Removable IR-cut filter	
10	Day/Night Mode	Color, Mono, Auto	
11	Multiple Streams	Individually configurable minimum 03 video streams (H.265), Unicast/ Multicast	
12	Auto adjustment + Remote Control of Image settings	Color, brightness, sharpness, contrast, white balance, exposure control, backlight compensation, Gain Control, Remote Focus, Remote Zoom (Digital Zoom)	
13	Wide Dynamic Range	True WDR >= 120 dB	
14	Audio	Audio Capture Capability (Optional)	
15	Local storage	Micro SD card up to 64 GB. (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 such that no manual intervention is recording required to transfer the SD card-based recordings to recording server (1 Nos. of 64 GB SD card to be provided with each camera)	
16	Network Interface	RJ45 10 Base-T/100 Base-TX, POE	
17	Alarm I/O	Minimum 1 Input & 1 Output contact for 3rd party interface	

#	Parameter	Minimum Specifications or better	Compliance (Yes/No)
18	Protocol	IPV4, IPV6, HTTP, HTTPS, FTP, RTSP, RTP, TCP, UDP, RTCP, DHCP, QoS, ONVIF profile S, G, M, & T	
19	Onboard Analytics	Motion Detection, tampering alert, Out of focus	
20	Security	Password Protection, IP Address filtering, User Access Log, HTTPS encryption, TSL/SSL	
21	Power	POE /POE+ to follow IEEE 802.3 af /at	
22	Operating conditions	0 to 50°C (temperature), 50 to 90% (humidity)	
23	Casing	NEMA 4X/IP-66 and IK 10	
24	Certification	UL, EN/CE, FCC, BIS ER, STQC: OEM should have valid STQC certificate for the Cameras to be quoted. If valid STQC certificate for any particular camera is not available at the time of bidding, bidder and OEM can quote that camera with STQC application proof submitted in bid and will have to ensure that valid STQC certificate is obtained before start of supply of camera.	
25	Undertaking	The MAC ID's of the CCTV Cameras to be supplied against this tender shall be registered in the name of the OEM of the CCTV Cameras.	
26	Mounting Accessories	For pole/gantry/ surface mount with L/C Brackets with bird scare spikes to prevent birds from sitting on top of camera.	
27	Warranty	Comprehensive warranty with parts for entire contract duration	
Specify the proposed Make			
Specify the proposed Model			

10. Camera Type: Front Facing Camera for Video Analytics – Minimum 3 video streams shall be available for all the cameras.

#	Parameter	Minimum Specifications or better	Compliance (Yes/No)
1	Video Compression	H.265 or better	
2	Video Resolution	For Front Facing Cameras: Model – 1 : Bidder can consider 1 no. of camera per arm (minimum resolution – 16	

#	Parameter	Minimum Specifications or better	Compliance (Yes/No)
		MP). Bidder can consider 1 no. of camera per 2 numbers of lane having minimum resolution of 8 MP.	
3	Frame rate support	25/30 FPS	
4	Image Sensor	1/3" or better, Progressive Scan CMOS	
5	Lens Type	Manual Vari-Focal Lens (Autofocus), IR Correction	
6	Lens	Auto IRIS, 5 – 50 mm (+- 1mm), F1.2/F1.4	
7	IR	External IR with minimum 100 mtr Range,Power requirement & connectivity should be part of the solution. Illumination (Colour & b/w) should be sufficient to capture Objects/Faces at night time when there is not sufficient illumination at site.	
8	Minimum Illumination	Color: 0.1 lux, B/W: 0.01 lux (at 50 IRE), IR: 0 lux	
9	IR Cut Filter	Automatically Removable IR-cut filter	
10	Day/Night Mode	Color, Mono, Auto	
11	Multiple Streams	Individually configurable minimum 03 video streams (H.265), Unicast/ Multicast	
12	Auto adjustment + Remote Control of Image settings	Color, brightness, sharpness, contrast, white balance, exposure control, backlight compensation, Gain Control, Remote Focus, Remote Zoom (Digital Zoom)	
13	Wide Dynamic Range	True WDR >= 120 dB	
14	Audio	Audio Capture Capability (Optional)	
15	Local storage	Micro SD card up to 64 GB. (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 such that no manual intervention is recording required to transfer the SD card-based recordings to recording server (1 Nos. of 64 GB SD card to be provided with each camera)	
16	Network Interface	RJ45 10 Base-T/100 Base-TX, POE	
17	Alarm I/O	Minimum 1 Input & 1 Output contact for 3rd party interface	
18	Protocol	IPV4, IPV6, HTTP, HTTPS, FTP, RTSP, RTP, TCP, UDP, RTCP, DHCP, QoS, ONVIF profile S,G,M, & T	

#	Parameter	Minimum Specifications or better	Compliance (Yes/No)
19	Onboard Analytics	Motion Detection, tampering alert, Out of focus	
20	Security	• Password Protection, IP Address filtering, User Access Log, HTTPS encryption. • Encryption: TLS 1.0, SSL, DES, 3DES, AES-256 (edge encryption) • The cameras offered must be cyber security certified with STQC /NDAA/UL Cyber security certificate / CERT-In empaneled organization	
21	Power	POE /POE+ to follow IEEE 802.3 af /at	
22	Operating conditions	0 to 50°C (temperature), 50 to 90% (humidity)	
23	Casing	NEMA 4X/IP-66 and IK 10	
24	Certification	UL, EN/CE, FCC, BIS ER, STQC: OEM should have valid STQC certificate for the Cameras to be quoted. If valid STQC certificate for any particular camera is not available at the time of bidding, bidder and OEM can quote that camera with STQC application proof submitted in bid and will have to ensure that valid STQC certificate is obtained before start of supply of camera.	
25	Undertaking	The MAC ID's of the CCTV Cameras to be supplied against this tender shall be registered in the name of the OEM of the CCTV Cameras.	
26	Mounting Accessories	For pole/gantry/ surface mount with L/C Brackets with bird scare spikes to prevent birds from sitting on top of camera.	
27	Warranty	Comprehensive warranty with parts for entire contract duration	
Specify the proposed Make			
Specify the proposed Model			

11. Camera Type : PTZ

#	Parameters	Minimum Specifications or better	Compliance (Yes/No)
1	Video Compression	H.265 or better	
2	Video Resolution	Full HD (1920 X 1080)	
3	Frame rate	Up to 25/30 fps @ 1080p	
4	Image Sensor	1/3" or better" Progressive Scan CMOS	
5	Lens	Auto-focus, 4.3 – 129 mm (+/- 2 mm) (corresponding to 30 X or better)	

#	Parameters	Minimum Specifications or better	Compliance (Yes/No)
6	Multiple Streams	Individually configurable minimum 03 video streams (H.265), Unicast/ Multicast	
7	Minimum Illumination	Color: 0.2 lux, B/W: 0.01 lux (at 30 IRE, F 1.6) or better	
8	IR Illuminator	In built/external with min 150 meters. Illumination (Color & b/w) should be sufficient to capture Objects/Faces at night time when there is not sufficient illumination at site.	
9	Day/Night Mode	Color, Mono, Auto	
10	Wide Dynamic Range	WDR >= 120 dB	
11	PTZ	Pan: 360° endless/continuous, up to 100°/s (auto), up to 100°/s (Manual) Tilt: 90°, up to 100°/s (Auto), up to 40°/s (Manual) 30x optical zoom and 10x digital zoom Pre-set tour 100 preset positions, Guard tour	
12	Auto adjustment + Remote Control of Image settings	Color, brightness, sharpness, contrast, white balance, exposure control, backlight compensation, Gain Control, Electronic Image Stabilization	
13	Protocol	HTTP, HTTPS, RTSP, RTP, TCP, UDP, RTCP, DHCP, ONVIF Profile S,G,M, & T	
14	Security	• Password Protection, IP Address filtering, User Access Log, HTTPS encryption. • Encryption: TLS 1.0, SSL, DES, 3DES, AES-256 (edge encryption) • The cameras offered must be cyber security certified with STQC /NDAA/UL Cyber security certificate / CERT-In empaneled organization	
15	Local Storage	Micro SD card up to 64 GB. (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 recording server such that no manual intervention is required to transfer the SD card-based recordings to recording server. (1 Nos. of 64 GB SD card to be provided with each camera)	

#	Parameters	Minimum Specifications or better	Compliance (Yes/No)
16	Onboard Analytics	Motion Detection, Tampering alert, Out of focus	
17	Audio	Audio Capture Capability (Optional)	
18	Network Interface	RJ45 10 Base-T/100 Base-TX, POE	
19	Alarm I/O	Minimum 1 Input & 1 Output contact for 3rd party interface	
20	Operating conditions	0° to 50°C	
21	Casing	NEMA 4X/IP-66 and IK10	
22	Power	802.3at PoE+ (Class 4) or 24VDC/24AC	
23	Certification	UL, EN/CE, FCC, BIS ER , STQC: OEM should have valid STQC certificate for the Cameras to be quoted. If valid STQC certificate for any particular camera is not available at the time of bidding, bidder and OEM can quote that camera with STQC application proof submitted in bid and will have to ensure that valid STQC certificate is obtained before start of supply of camera.	
24	Undertaking	The MAC ID's of the CCTV Cameras to be supplied against this tender shall be registered in the name of the OEM of the CCTV Cameras.	
25	Mounting Accessories	For pole and surface mount with L/C Brackets	
26	Warranty	Comprehensive warranty with parts for entire contract duration.	
Specify the proposed Make			
Specify the proposed Model			

12. External IR Illuminator

S/N	Parameter	Specification	Compliance (Yes/No)
1.	Range	Min. 100 meters, with adjustable angle to cover the complete field of view at specified locations	
2.	Minimum illumination	Hight Sensitivity @0 Lux	
3.	Angle of Mounting	Adjustable	
4.	General	External Illuminator with visibility should be at least 50m. Illumination (Color & b/w) should be sufficient to capture Objects/Faces at night time when there is not sufficient illumination at site.	
5.	Power	DC (12V/ 24V) / AC (100-270V) , Auto on/off	

6.	Casing	IP 66 and IK10 Rated	
7.	Operational Temperature	0°C to 55 °C	
8.	Certification	CE/EN/FCC for equipment safety or Equivalent BIS certificate.	
Specify the proposed Make			
Specify the proposed Model			

13. Outdoor 8 Port Managed L2 Switch with Fiber Port

S/N	Minimum Specification	Compliance (Yes/No)
1	Managed Industrial Grade Outdoor switch	
2.	• Minimum 8 No's 10/100/1000 Base-Tx, PoE+ ports (Minimum 30 W per port) and minimum 2x 1G SFP Ports loaded with SFPs • Ethernet Ports (10/100/1000 Base-Tx, POE ports) can be used to connect one switch to another (Cascading Switches) by simply using an Ethernet cable (Bidder solution will incorporate required quantity of switch & SFP for smooth functioning of system & to meet technical & functional requirements of project.)	
3.	All ports should have features of auto- negotiate, flow control (802.3x), port-based network access control (802.1x), port security, MAC filtering etc.	
4.	Minimum Switching capacity of 8 Gbps or more	
5.	Should be IPv4 and IPv6 ready from day one	
6.	Should have IGMP snooping v1,2 & 3 supporting min 100 multicast groups	
7.	Features of DHCP Relay NTP or equivalent, SNMPv1, v2 & v3, TELNET/ SSH,	
8.	Should have console port for administration & management, CLI and web-based GUI for easy management	
9.	Support for IEEE 802.3ad Link Aggregation Control Protocol (LACP), Should support Ring protection, Should support Loop protection and Loop detection, STP,RSTP	
10.	Port Security to secure the access to a port based on the MAC address of a user's device. The aging feature to remove the MAC address from the switch after a specific time to allow another device to connect to the same port.	
11.	Multilevel security on console access to prevent unauthorized users from altering the switch configuration.	
12.	Port-based and 802.1Q tag-based VLANs	
13.	All necessary SFP's, interfaces, connectors, patch cords (if any) & licenses must be delivered along with the switch from day one	
14.	Web/SSL, Telnet server/SSH, ping, traceroute, Simple Network Time Protocol (SNTP)/NTP, Trivial File Transfer Protocol (TFTP),	

S/N	Minimum Specification	Compliance (Yes/No)
	SNMP, RADIUS, syslog, DNS client	
15.	Duplicate address detection (DAD)	
16.	Operating Temperature: 0°C to 70°C	
17.	10 % to 90 % RH, non-condensing	
18.	Form factor- DIN rail mount	
19.	PoE Power per port : Enough to operate the CCTV cameras/edge devices connected Kindly consider minimum 30W per port. Hence Minimum 240 W POE budget for 8 port Switch	
20.	IP 30 or equivalent	
21.	Compliance: UL/EN, CE, FCC or equivalent	
22.	Comprehensive Warranty from OEM for entire contract duration	
Specify the proposed Make		
Specify the proposed Model		

14. 42U Server Rack for DC

S/N	Parameter	Minimum Specifications	Compliance (Yes/No)
1.	Dimension	Rack Width: minimum 600mm or bidder may choose more wide for proper cable management. Rack Depth/Length: minimum 1000 mm or as per requirement.	
2.		Rack Height : 42U	
3.		Color: Black	
4.		Rack Equipment Mounting should be as per EIA-310 standard: 19" along with 'U' marking.	
5.		Rack should have minimum weight carrying Capacity of 500Kgs.	
6.	Doors	Front and Back doors should be perforated with at least 60% or higher perforations	
7.		The racks must have steel (solid / grill / mesh) front / rear doors and side panels. Racks should NOT have glass doors / panels.	

S/N	Parameter	Minimum Specifications	Compliance (Yes/No)
		Front & Back door should be lockable utilizing a single key with the doors.	
8.		Rack should have single front door and it should be able moved to the opposite side or interchanged with rear doors. Doors should be able to be removed easily with simple lift-off design.	
9.		Rack should have Split rear doors to improve access and serviceability to rear of rack mounted equipment.	
10.	Side Panels	Side Panels should be of Half-height on each side for easy access.	
11.		Side panels should be lockable utilizing a single key with the doors.	
12.	Cable access	It should have cable access slots in the roof for overhead cable egress.	
13.		It should have unobstructed cable access from bottom of the Rack through a raised floor.	
14.	Wire managers	Two vertical wire/cable managers/panels should be provided in front and back of the rack for cable management.	
15.	Power Distribution Units	Rack must be supplied with 2 x PDUs per Rack - Vertically Mounted, 32AMPs with 25 Power Outputs. (20 Power outs of IEC 320 C13 Sockets & 5 Power outs of 5/15 Amp Sockets), Electronically controlled circuits for Surge & Spike protection 32AMPS MCB, 5 KV AC isolated input to Ground & Output to Ground.	
16.		All types of Power Cables (like C13 to C14 which is mandatory for servers, storage & network equipment, etc.) required to power up the various Network/Server devices should be supplied/provided with it from day one.	
17.	Hardware/Accessories provided	Rack must be supplied with minimum 2 (two) nos of standard hardware pack/bag (which includes mounting nut-bolts, cable ties e.t.c) for mounting IT equipment and tools for enclosure adjustment.	

S/N	Parameter	Minimum Specifications	Compliance (Yes/No)
18.		Pre-installed full-enclosure height Integrated and adjustable rear accessory channel to accommodate PDUs and vertical cable organizers.	
19.		Rear accessory channel should be able to move to other locations of the enclosure along the side brace to resituate cable management as per requirement.	
20.		Minimum 2 x 1U Mountable Cable Manager and maximum as per site requirement needs to be supplied from Day one.	
21.	Fans and Fan Tray	Fan 90CFM 230V AC, 4" diameter (4 Nos. per Rack) Fan Housing Unit 4 Fan Position (Top Mounted) (1 no. per Rack) - Monitored - Thermostat based - The Fans should switch on based on the Temperature within the rack. The temperature setting should be factory settable. This unit should also include - humidity & temperature sensor	
22.	Warranty	Comprehensive warranty with parts for entire contract duration	
23.	Specify the proposed Make		
24.	Specify the proposed Model No		

15. 42U Network Racks for DC

S/N	Parameter	Minimum Specifications	Compliance (Yes/No)
1.	Dimension	Rack Width: minimum 600mm or bidder may choose more wide for proper cable management. Rack Depth/Length: minimum 1000 mm or as per requirement.	
2.		Rack Height : 42U	
3.		Color: Black	

S/N	Parameter	Minimum Specifications	Compliance (Yes/No)
4.		Rack Equipment Mounting should be as per EIA-310 standard: 19" along with 'U' marking.	
5.		Rack should have minimum weight carrying Capacity of 500Kgs.	
6.	Doors	Front and Back doors should be perforated with at least 60% or higher perforations	
7.		The racks must have steel (solid / grill / mesh) front / rear doors and side panels. Racks should NOT have glass doors / panels . Front & Back door should be lockable utilizing a single key with the doors.	
8.		Rack should have single front door and it should be able moved to the opposite side or interchanged with rear doors. Doors should be able to be removed easily with simple lift-off design.	
9.		Rack should have Split rear doors to improve access and serviceability to rear of rack mounted equipment.	
10.	Side Panels	Side Panels should be of Half-height on each side for easy access.	
11.		Side panels should be lockable utilizing a single key with the doors.	
12.	Cable access	It should have cable access slots in the roof for overhead cable egress.	
13.		It should have unobstructed cable access from bottom of the Rack through a raised floor.	
14.	Wire managers	Two vertical wire/cable managers/panels should be provided in front and back of the rack for cable management.	
15.	Power Distribution Units	Rack must be supplied with 2 x PDUs per Rack - Vertically Mounted, 32AMPs with 25 Power Outputs. (20 Power outs of IEC 320 C13 Sockets & 5 Power outs of 5/15 Amp Sockets), Electronically controlled circuits for Surge & Spike protection 32AMPS MCB, 5 KV AC isolated input to Ground & Output to Ground.	
16.		All types of Power Cables (like C13 to C14, which is mandatory for servers, storage &	

S/N	Parameter	Minimum Specifications	Compliance (Yes/No)
		network equipment etc.) required to power up the various Network/Server devices should be supplied/provided with it from day one.	
17.	Hardware/Accessories provided	Rack must be supplied with minimum 2 (two) nos of standard hardware pack/bag (which includes mounting nut-bolts, cable ties e.t.c) for mounting IT equipment and tools for enclosure adjustment.	
18.		Pre-installed full-enclosure height Integrated and adjustable rear accessory channel to accommodate PDUs and vertical cable organizers.	
19.		Rear accessory channel should be able to move to other locations of the enclosure along the side brace to resituate cable management as per requirement.	
20.		Minimum 2 x 1U Mountable Cable Manager and maximum as per site requirement needs to be supplied from Day one.	
21.	Fans and Fan Tray	Fan 90CFM 230V AC, 4" diameter (4 Nos. per Rack) Fan Housing Unit 4 Fan Position (Top Mounted) (1 no. per Rack) - Monitored - Thermostat based - The Fans should switch on based on the Temperature within the rack. The temperature setting should be factory settable. This unit should also include - humidity & temperature sensor	
22.	Warranty	Comprehensive warranty with parts for entire contract duration	
23.	Specify the proposed Make		
24.	Specify the proposed Model No		

16. Storage (For Applications)

S/N	Parameter	Minimum Specification	Compliance (Y / N)
1	Storage	Solution should be IP Based/iSCSI/FC/FCOE/NFS/CIFS Storage Capacity :Minimum 5 TB (Usable, after RAID	

S/N	Parameter	Minimum Specification	Compliance (Y / N)
		Configuration) Bidders have to consider based on their solution requirements.	
		Disks should be minimum of 6 TB capacity	
		Active-Active Load Balancing Storage Controllers with 64GB Cache from day one and scalable up to 128GB Cache without replacing existing Controllers	
		Front End: Minimum 8 x 10Gbps FC/FCoE ports for host connectivity scalable to 16 ports	
		To store all types of data (Data, Voice, Images, Video, etc.)	
		Storage should support all industry standard RAID type	
		The proposed Storage should have 6 Gbps Drives (SSD, SAS & NL-SAS) or higher.	
		Modular design to support controllers and disk drives expansion	
		Should be Rack Mountable	
		The controllers / Storage nodes should be upgradable without any disruptions/ downtime	
		Licenses for the storage management software should include disc capacity/count of the complete solution and any additional disks to be plugged in in the future, up to max capacity of the existing controller/units.	
		A single command console for entire storage system	
		Should have the functionality of performance, utilization monitoring of storage, disk drives and management software	
		The storage array must have complete cache protection mechanism either by de-staging data to disk or providing complete cache data protection with battery backup for minimum 4 hours	
		Controllers shall be active-active so that a single logical unit can be shared across all offered controllers, while supporting all the major functionalities like Thin Provisioning, Data tiering	
		The storage should have no single point of failure on components like controllers, disks, cache memory, I/O Ports, Power supply, Fan, etc.	
2	SAN Switch	Equivalent no. of port SAN switch with 10G port Compatible with the Storage	
3.	Warranty	Comprehensive warranty with parts for entire contract duration	

17. Storage (for Video's)

S/N	Parameter	Minimum Specification	Compliance (Y / N)
1.	Solution /type	Storage Period: 30 days Storage Capacity: Minimum 5.5 PB which is usable capacity after RAID. Bidder shall provide the appropriate Storage Solution to meet the Project Requirements. Solution proposed should yield low cost per TB, while meeting the required performance parameters. Bidder is expected to carry out the video storage requirement estimation and supply as per the solution proposed. Minimum 5.5 PB storage requirement to be considered as benchmark requirement considering standard calculations for 1080p resolution, 25 FPS video footages for 30 days. Bidder is expected to do Installation, configuration, monitoring and management of the storage system inaccordance to the application requirement.	
2.	Hardware platform	Rack mounted form factor Modular design to support controllers and disk drivesexpansion	
3.	Controllers	At least 2 Controllers in active/active mode and upgrade up to 8 controller pairs either in same chassis or with federation of arrays to deliver higher scalabilityand performance. The controllers / Storage nodes should be upgradable seamlessly, without any disruptions / downtime to production workflow for performance, capacityenhancement and software / firmware upgrades. Storage to be either NAS and SAN storage separately or Unified Storage solution (combination of NAS and SAN storage) and supporting all required protocols (IP Based/iSCSI/FC/NFS/CIFS etc.) for the Video Footages.	

S/N	Parameter	Minimum Specification	Compliance (Y / N)
4.	RAID support	Latest RAID standards with protection against dual disk failure and multiple spare disks to cater to the Disk failure. Should support various RAID levels to meet the SLA requirements. Configuration of SAN shall include activities such as management of storage space, volume, RAID configuration, LUN, zone, security, business continuity volumes, performance, etc	
5.	Cache	Minimum 256 GB of useable System memory /cacheacross all controllers. If cache is provided in any additional hardware for the storage solution, then cache must be over and above 256GB.	
6.	Redundancyand High availability	The Storage System should be able to protect the data against single point of failure with respect to hard disks, connectivity interfaces, fans, and power supplies	
7.	Management software	All the necessary software (GUI Based) to configure and manage the storage space, RAID configuration, logical drives allocation, snapshots etc. are to be provided for the entire system proposed. Licenses for the storage management software should include disc capacity/count of the complete solution and any additional disks to be plugged in in the future, up to max capacity of the existing controller/units. A single command console for entire storage system. Should also include storage performance monitoring and management software Should provide the functionality of proactive monitoring of Disk drive and Storage system for all possible disk failures Should be able to take "snapshots" of the stored data to another logical drive for backup purposes.	

S/N	Parameter	Minimum Specification	Compliance (Y / N)
		Creation of required number of VLUNs to optimize the speed and storage of data. The VLUNs created would also ensure segregation of the data as per the application requirement. The VLUNs should be dynamically configurable for the space allocation. Management of storage environment to maintain performance at desired optimum levels. Development of storage management policy, configuration and management of disk array, SAN fabric / switches, virtual Storage, etc.	
8.	Data protection	The storage array must have complete 256 GB cache protection mechanism either by de-staging data to disk or providing complete cache data protection with battery backup for up to 4 hours	
9.	Licensing	There should not be any additional license requirements arising in future during capacity augmentation of the Storage solution. The proposed Storage should be scalable by merely adding the desired number of HDDs and Disk Enclosures in future along with necessary connecting back- end/front-end cables till the maximum scalability is reached within the proposed Appliance.	
10.	Data availability	Proposed storage solution should provide the data availability of 99.99%	
11.	Security	Storage must support file protection against accidental, premature malicious deletion and modification of data using file locking mechanism.	
12	Application data and video data	Application data (block data) should be on SSD/SAS and Video data (File data) should be an SAS/NL-SAS	
13	Warranty	Comprehensive warranty with parts for entire contract duration	
Specify the proposed Make			
Specify the proposed Model			

18. Blade Chassis and Server

S/N.	Minimum Specifications	Compliance (Y/N)
1.	Minimum 6U size or higher, rack-mountable, capable of accommodating minimum 8 or higher hot pluggable blades	
2.	Dual network connectivity of 10 G speed or higher for each blade server for redundancy shall be provided	
3.	Backplane shall be completely passive device. If it is active, dual backplane shall be provided for redundancy.	
4.	Have the capability for installing industry standard flavours of Microsoft Windows, and Enterprise RedHat Linux OS	
5.	Shall support Industry standard virtualization hypervisor like Hyper-V, VMWARE, Oracle VM etc. OEM of the blade chassis and servers offered should in "Validated Configuration" list and certified by OEM to run virtualization.	
6.	DVD ROM shall be available in chassis, can be internal or external, which can be shared by all the blades allowing remote installation of software	
7.	Minimum 1 USB port	
8.	Two hot-plug/hot-swap, redundant 10 Gbps Ethernet or FCoE module with minimum 16 ports (cumulative), having Layer 2/3 functionality. If bidder is offering FCoE based solution, corresponding ports must be present in server as well as storage controller.	
9.	Two hot-plugs/hot-swap redundant minimum 16 Gbps Fibre Channel module for connectivity to the external Fibre channel Switch and ultimately to the storage device	
10.	Power supplies shall have N+N (Hot Swap/Hot Plug). All power supplies modules shall be populated in the chassis. Required number of PDUs and power cables, to connect all blades, Chassis to Data Centre power outlet.	
11.	Hot pluggable/hot-swappable redundant cooling unit	
12.	Provision of systems management and deployment tools to aid in blade server configuration and OS deployment	
13.	Blade enclosure shall have provision to connect to display console/central console for local management such as troubleshooting, configuration, system status/health display.	
14.	Single console for all blades in the enclosure, built-in KVM switch or Virtual KVM features over IP	
15.	Dedicated management network port shall have separate path for remote management.	
16.	5 Years of Comprehensive Warranty from OEM	
Specify the proposed Make		
Specify the proposed Model		

Blade Server

Sr. No.	Parameter	Specifications	Compliance (Y/N)
1.	Processor	Latest series/ generation x86 processor(s) with ten or highercores Processor speed should be minimum 2.6 GHz Minimum 2 processors per each physical server	
2.	Blade Chassis	Compatible to support the network and applicationinfrastructure	
3.	RAM	Minimum 256 GB Memory per physical server	
4.	Internal Storage	2 x 900 GB SAS (10k rpm) hot swap disk	
5.	Network interface	2 X 10Gbps ports for providing Ethernet connectivity 2 X Dual-port 10Gbps FC/FCoE/HBA for providing FCconnectivity	
6.	Power supply	Dual Redundant Power Supply	
7.	RAID support	As per requirement/solution	
8.	Operating System	Licensed latest version of Linux/ /Microsoft® Windowsbased Operating system	
9.	Form Factor	Blade server	
10.	Virtualization	Shall support Industry standard virtualization hypervisorlike Hyper-V, VMWARE, and Citrix etc.	
11.	Warranty	5 Years of Comprehensive Warranty from OEM	
Specify the proposed Make			
Specify the proposed Model			

19. DC Core Router

S/N	Minimum Specification	Compliance (Y/N)
1	Router must support redundant controller cards and with stateful switch over and high availability features.	
2	*Router should ensure minimal traffic disruption during route processor failure*	
3	Router should support capacity of minimum 120 Gbps.	
4	Router should support 4000 MAC addresses or more, 10K or more multicast routes	
5	Router should support Redundant Power Supply from day one.	
6	Router must support TCP/IP, PPP	
7	Router should support IPv4 and IPv6 from day one	
8	Router should support all standard routing protocols like BGP, MBGP, OSPF v2/v3, IS-IS, RIP/RIPv2, static routes, MPLS (L2 & L3), PIM (v1, v2), IGMP (v1, v2, v3), Ipv6 tunneling, NAT, NTP, etc.	
9	Router should support High Availability (VRRP, or equivalent protocol, etc.)	
10	Router should support QoS (DSCP, CoS), marking, classification and Policing	
11	*Router should support Traffic Engineering & MPLS-TE with fast reroute (FRR) or equivalent*	
12	Router should have a dedicated OOB Management port using CLI(SSH)/ WebUI (SSL) or equivalent function in EMS, SNMP (v1, v2, v3), TFTP, etc.	
13	Router should support AAA features using TACACS+/Radius/LDAP, etc.	
14	*Router should be supplied with at least 18x10G ports and scalable to additional 6x10G ports.* ***or equivalent.***	
15	All necessary SFP's, interfaces, connectors, patch cords (if any) must be delivered along with the router from day one.	
16	The Router should be supplied with Indian Standard power cables.	
18	The Router should be supplied with all applicable Licenses from day one.	
19	*Must integrate with standard SDDC and SDN frameworks*	
20	Comprehensive warranty with parts for entire contract duration	
21	Specify Make of proposed DC Core Router	
22	Specify Model of proposed DC Core Router	

20. DC Core L3 switch at ICCC

S/N	Parameter	Minimum Specifications	Compliance Yes/No
1	Ports	• 36*10G , 12*1G and extra 4 Nos of 10G Base SX/LX/LR ports as per network solution offered. • TX/FX Split as per field/site requirement • All ports can auto-negotiate between 10Mbps/ 100Mbps/ 1000Mbps/10Gbps, half-duplex or full duplex and flow control for half-duplex ports. • All necessary SFP's, interfaces, connectors, patch cords (if any) & licenses must be delivered along with the switch from day one.	
2	Switch type	Layer 3	
3	MAC	16K or more	
4	Backplane	Min 480 Gbps, properly sized Switching fabric capacity (as per network configuration to meet performance requirements of wire speed switching for the connected devices)	
5	Port Features	Must support Port Mirroring, Port Trunking and 802.3ad LACP Link Aggregation port trunks	
6	Flow Control	Support IEEE 802.3x flow control for full-duplex mode ports.	
7	Protocols	• IPV4, IPv6 • Support 802.1D, 802.1S, 802.1w, Rate limiting • Support 802.1Q VLAN encapsulation, IGMP v1, v2 and v3 snooping • 802.1p Priority Queues, port mirroring, DiffServ • DHCP support • Support up to 1024 VLANs • Support IGMP Snooping and IGMP Querying • Support Multicasting • Should support Loop protection and Loop detection,	
8	Access Control	• Support port security • Support for MAC filtering. • *Should support AAA authentication using TACACS+/RADIUS*	
9	VLAN	Support 802.1Q Tagged VLAN and port based VLANs	
10	Protocol and Traffic	• Network Time Protocol or equivalent Simple Network Time Protocol support • Switch should support traffic segmentation	

S/N	Parameter	Minimum Specifications	Compliance Yes/No
		• Traffic classification should be based on user-definable application types: TOS, DSCP, Port based, TCP/UDP port number	
11	Management	• Switch needs to have console port for management via PC • Must have support SNMP v1, v2 and v3 • Should support RMON • Should have accessibility using SSH, Console access, easier software upgrade through network using TFTP etc. • Configuration management through CLI, GUI based software utility interface	
12	General	• Should integrate with standard SDN frameworks	
13	Warranty	Comprehensive warranty with parts for entire contract duration	
14	Specify Make of proposed L3 Network switch		
15	Specify Model of proposed L3 Network switch		

21. 48 port Layer 2 Switch (Access/Aggregation/TOR/Server Farm Switch)

S/N	Parameter	Minimum Specifications	Compliance (Yes/No)
1.	Ports	• Layer 2 Switch with minimum 24x10G port and 24x1G ports • All ports can auto-negotiate between 10Mbps/ 100Mbps/ 1000Mbps/10Gbps, half-duplex or full duplex and flow control for half-duplex ports. • All necessary SFP's, interfaces, connectors, patch cords (if any) & licenses must be delivered along with the switch from day one.	
2.	Switch type	Layer 2	
3.	MAC	8 K or more	
4.	Backplane	100 Gbps capacity (as per network configuration to meet performance requirements of wire speed switching for the connected devices)	
5.	Forwarding Rate	Packet Forwarding Rate should be 70.0 Mbps or better	
6.	Port Features	Must support Port Mirroring, Port Trunking and 802.3ad LACP Link Aggregation port trunks	

S/N	Parameter	Minimum Specifications	Compliance (Yes/No)
7.	Flow Control	Support IEEE 802.3x flow control for full-duplex mode ports.	
8.	Protocols	• IPV4, IPv6 • Support 802.1D, 802.1S, 802.1w, Rate limiting • Support 802.1Q VLAN encapsulation, IGMP v1, v2 and v3 snooping • 802.1p Priority Queues, port mirroring, DiffServ • DHCP support	
9.	Access Control	• Support port security • Support 802.1x (Port based network access control). • Support for MAC filtering. • Should support TACACS+/RADIUS authentication	
10.	VLAN	• Support 802.1Q Tagged VLAN and port based VLANs	
11.	Protocol and Traffic	• Network Time Protocol or equivalent Simple Network Time Protocol support • Switch should support traffic segmentation • Traffic classification should be based on user-definable application types: TOS, DSCP, Port based, TCP/UDP port number	
12.	Management	• Switch needs to have console port for management via PC • Must have support SNMP v1, v2 and v3 • Should support RMON(Optional) • Should have accessibility using SSH, Console access, easier software upgrade through network using TFTP etc. Configuration management through CLI, GUI based software utility interface	
13.	General	• Should integrate *with standard* SDN solution	
14.	Operating Temperature	• Minimum 5 to 45 degree Celsius or better	
15.	Power Supply	• Should have redundant power supply	
16.	Warranty	Comprehensive warranty with parts for entire contract duration	
17.	Specify Make of proposed L2 Network switch		
18.	Specify Model of proposed L2 Network switch		

22. *48 Port Managed L2 switch for OOB connectivity*

S/N	Specification	Compliance (Y / N)
1.	**Layer 2 Switch with 48 port 10/100/1000BaseT ports and 4*10G Optical Tx Uplink port(Duplex: Full, Half)**	
2.	Should have minimum switching capacity of 48 Gbps. All ports on the switch should work on line rate.	
3.	Should be IPv4 and IPv6 ready from day one	
4.	Should support minimum 4000 MAC address entries	
5.	Should support protocols like MSTP, STP, RSTP, dot1q VLAN-tagging, LACP, NTP/SNTP, RFC 5171 or equivalent standards, sflow/netflow/jflow	
6.	Should have features like port-security, auto-negotiate, flow control, MAC filtering	
7.	Should have a dedicated OOB Management port using CLI(SSH), WebUI (SSL), SNMP (V1, V2/V2c, V3), TFTP, etc.	
8.	The device should support the aggregation of the interfaces to form one single logical interface for data transfer.	
9.	Switch should support AAA features using TACACS+, Radius, LDAP, etc.	
10	All necessary SFP's, interfaces, connectors, patch cords (if any) & licenses must be delivered along with the switch from day one.	
11.	Should have redundant power supply	
12.	The Switch should be Rack mountable	
13.	Comprehensive warranty with parts for entire contract duration	
14	Specify Make of proposed network switch	
15.	Specify Model of proposed network switch	

23. *Unified Threat Management (UTM)*

S/N	Minimum Requirements	Compliance (Y / N)
1	*Device must support Firewall, IPS, IP Reputation, Content Filtering, and Web Filtering from day one with required licenses and 24×7 support for 5 years.*	
2	*Minimum firewall throughput: ≥80 Gbps; IPS + Firewall throughput: ≥20 Gbps*	
3	The device should support at least 4x10 Gigabit ports (4x10G) from day one and should be scalable to additional 4x10 Gigabit ports	
4	Should support at least 15 million concurrent sessions	

S/N	Minimum Requirements	Compliance (Y / N)
5	Firewall should support at least 2,50,000 new connections per second	
6	The device should have at least one dedicated management interfaces to manage the firewall. Data ports should not be used for management purpose.	
7	The device should be manageable using standard protocols like HTTP, SSL, SSH, SNMP etc.	
8	The device should be able to send the event logs, alarms, etc. to the third-party tool	
9	Device should support IPv4 & IPv6 dual stack functionality	
10	Firewall should support static NAT, PAT, dynamic NAT, PAT	
11	Firewall should support Nat66 (IPv6-to-IPv6) and Nat46 (IPv4-to-IPv6) functionality	
12	Firewall should support static, dynamic and multicast routing protocol	
13	The device should support redundant power supplies	
14	Should support stateful failover of sessions in Active/Standby & Active/Active or clustering mode.	
15	Firewall should support creating access polices on the basis of IPv4, IPv6 objects, protocols, ports, etc.	
16	Firewall should support user/admin authentication	
17	Solution should support troubleshooting tools like Ping, Traceroute, Packet Tracer/capture, etc.	
18	The device should be supplied with Indian Standard power cables.	
19	**Web Filtering**: Keyword, *cookies, ActiveX, Block malware, phishing, pharming URL, malicious URLs (including those in emails), Block SQL injection and cross-site scripting* scripting	
20	**Intrusion Prevention System (IPS):** should be able to mitigate attacks like FTP Attack, HTTP Attack, DNS Attack, ICMP Attack, TCP/IP Attack, TelNet Attack, DOS and DDOS Attack Signatures, IPS Policies, Automatic real-time updates, Protocol Anomaly Detection.	
21	Proposed device must be NDPP/ ICSA certified at the time of bidding	
22	Comprehensive warranty with parts for entire contract duration	
23	Specify Make of proposed UTM	
24.	Specify Model of proposed UTM	

24. CAT 6 cable

S/N	Parameter	Minimum Specification	Compliance (Y / N)
1.	Cable type	CAT 6 cable	
2.	Data transfer speed	Minimum 1 Gbps	
3.	Material type	100% copper, twisted shielded cable	
4.	Conductor	Solid Bare Grade Copper, < 9.38OHMS/100< @ 20 degree C	
5.	Conductor diameter	23 AWG, UTP, outdoor double jacket, Anti Termite, Flame retardant Cable, ETA/TIA 568-C, IEC/ISO 11801	
6.	Temperature range	-10°C to 70°C	

25. PVC conduit

S/N	Parameter	Minimum Specification	Compliance (Y / N)
1.	Construction	ISI marked heavy duty PVC conduit with bends, joints, clamps, and otheraccessories	
2.	Size	As per the site requirement	

26. Armoured 6 core optical fiber cable

Sr. No.	Parameter	Minimum Specification	Compliance (Y / N)
1.	No. of cores	6 cores	
2.	Cable type	Single mode	
3.	Armoured construction	Required, Inner Sheath HDPE, UV Stabilized, Anti-termite/Anti-rodent Outer sheath HDPE, UV Stabilized	
4.	Installation	Bidder should install FMS, joint enclosure, patch cord and any other alliedaccessories to complete the installation process and making of the link live.	
6.	Standard length of drum	Minimum 1 KM (+/-5%)	
7.	Temperature range	0°C to 60°C	

Sr. No.	Parameter	Minimum Specification	Compliance (Y / N)
Specify Make of Proposed Cable			

27. *Online UPS for ICCC*

#	Parameter	Minimum Specifications	Compliance (Yes/No)
1.	Capacity	Adequate capacity to cover all IT Components at Command Control Centre at Full Load (Back Up of Minimum 4 hours in full load)	
2.	Output Wave Form	Pure Sine wave	
3.	Input Power Factor at Full Load	>0.90	
4.	Input	Three Phase 4 Wire	
5.	Input Voltage Range	440v +/- 10 to 15% VAC at Full Load	
6.	Input Frequency	50Hz +/- 3 Hz	
7.	Output Voltage	440V +/- 10 to 15% VAC, Three Phase	
8.	Output Frequency	50Hz+/- 0.5%	
9.	Inverter efficiency	>90%	
10.	Overall AC-AC Efficiency	>85%	
11.	UPS shutdown	UPS should shutdown with an alarm and indication on following conditions 1) Output over voltage 2) Output under voltage 3) Battery low 4) Inverter overload 5) Over temperature 6) Output short 7) Any other malfunction.	
12.	Battery Backup	Minimum 4 hours in full load	
13.	Battery	SMF (Sealed Maintenance Free) Battery/Lithium Ion Battery	
14.	Indicators & Metering	Indicators for AC Mains, Load on Battery, Fault, Load Level, Battery Low Warning, Inverter On, UPS on Bypass, Overload, etc. Metering for Input Voltage, Output Voltage and frequency, battery voltage, output current etc.	

#	Parameter	Minimum Specifications	Compliance (Yes/No)
15.	Audio Alarm	Battery low, Mains Failure, Over temperature, Inverter overload, Fault etc.	
16.	Cabinet	Rack / Tower type	
17.	Operating Temp	0 to 50 degrees centigrade	
18.	Management Protocol	SNMP Support through TCP/IP & SNMP card to be provided along with UPS	
19.	warranty	Comprehensive warranty with parts for entire contract duration	
20	**Specify the proposed Make**		
21.	**Specify the proposed Model**		

28. Precision Air-Condition(PAC) for ICCC (Data Centre Server farm area)

#	Minimum Specifications	Compliance (Yes/No)
1.	Capacity: 15Tr (Bidder to design capacity as per requirements)	
2.	Temperature Requirements: 20 +- 2 Degree Centigrade	
3.	Relative Humidity (RH) requirements: Ambient RH levels shall need to be maintained at 50% +- 5 non-condensing.	
4.	Temperature & Relative Humidity Recorders: Records of events for about past 7 days shall be recorded and presentable whenever required by SCADL	
5	Comprehensive warranty with parts for entire contract duration	
6	**Specify the proposed Make**	
7	**Specify the proposed Model**	

29. Network Management System (NMS)

S/N	Minimum Specification	Compliance (Y / N)
A	**Basic requirements:**	
1	Solution should be inclusive with software, OS and patches, etc.	
2	Solution should provide for future scalability of the whole system without major architectural changes.	
3	Should be SNMP v1, v2, v3 and MIB-II compliant.	
4	Filtering of events should be made, with advance sort option based on components, type of message, time etc.	
5	Should support Web / Administration Interface.	

S/N	Minimum Specification	Compliance (Y / N)
6	Should provide accessibility to internal built-in database via the application GUI.	
7	Solution should be distributed, scalable and open to third party integration.	
8	Should provide fault and performance management for multivendor TCP/IP networks.	
9	System should provide automated triggering of alerts, reports & dashboards as per user defined schedule or business rules for sharing information through SMS, email, EMS application client or any other available communication mediums.	
10	The NMS & SLA Management Tool must have sufficient perpetual licenses to manage & monitor all IP devices covered as part of this Project scope.	
B	**SLA and Contract Management System**	
1	The SLA & Contract Management solution should enable the Department to capture all the System based SLAs defined in this RFP and then calculate quarterly (or for any duration) penalty automatically. Measuring service performance requires incorporation of a wide variety of data sources of the projects. The SLA solution should support the collection data from various sources in order to calculate Uptime / Performance / Security SLAs.	
2	The solution must support the bifurcation of total downtime for any device into different categories for various stakeholders.(Like SI, TSP,SCADL)	
3	It must be a centralized monitoring solution for all IT assets (including servers, storage, network equipment, VM etc.)	
4	The solution must have integrated dashboard providing view of non- performing components / issues with related to service on any active components	
5	The solution must follow governance, compliance and content validations to improve standardization of service level contracts	
6	Application should be pre-configured so as to allow the users to generate timely reports on the SLAs on various parameters.	
7	The solution must support Service Level Agreements & Lifecycle Management including Version Control, Status Control, Effectively and audit Trail to ensure accountability for the project.	
8	The solution must have the ability to define and calculate key performance indicators from an End-to-End Business Service delivery perspective related to Surveillance Project under discussion.	
9	The solution should be capable of configuring and monitoring the latency and jitter of each individual links and generating monthly/quarterly reports on how many links have failed to meet the desired SLA.	

S/N	Minimum Specification	Compliance (Y / N)
10	The System should be capable to configure network link uptime and downtime as per mentioned as per below formula and generate monthly/Quarterly availability report Network Up time (%)= (Total Uptime / (Total Time - Schedule Downtime))×100 Network Down time (%)= (Total Downtime / (Total Time - Schedule Downtime))×100	
C	**Reporting and Dashboards**	
1	Ability to generate reports on penalty and credit due, to check on non-compliance of SLAs for the project	
2	Monetary penalties to be levied for non-compliance of SLA, thus the system must provide Service Level Performance Report over time, contract, service and more.	
3	The solution should provide historical and concurrent service level reports for the projects to ensure accountability of the service provider's performance	
4	Automatic Report creation, execution and Scheduling, must support variety of export formats including Microsoft Word, Adobe PDF, Excel etc.	
5	Resource utilization exceeding or below customer-defined limits	
6	Resource utilization exceeding or below predefined threshold limits	
7	SLA compliance reports must capture all information's on automated basis with every instance of exception recorded with a detailed justification for audit purposes.	
8	The minimum set of reports required are as given below. SCADL may request such reports at any time irrespective of a predefined scheduled with customization. Moreover, any new report may be requested by SCADL during the tenure of the contract. Bidder may decide the format of these report with prior approval from SCADL. The reports should be stored on the monitoring system till One Year (1) period or as per SCADL requirement, however any back reports Bidder may store separately. This report can be extracted directly from the system. **Daily Reports:** • Summary of issues / complaints logged at the Help Desk • Summary of resolved /unresolved and escalated issues / complaints. • Summary of resolved, unresolved and escalated issues / complaints to vendors (OEM/3rd party AMC vendor, TSP, if any)	

S/N	Minimum Specification	Compliance (Y / N)
	Weekly Reports: • Summary of systems - Uptime • Summary of issues / complaints logged with the OEMs • Summary of changes undertaken for the project IT Infrastructures including major changes like configuration changes, patch upgrades, database reorganization, storage reorganization, etc. and minor changes like log truncation, volume expansion, user creation, user password reset, etc. **Monthly Reports:** • Component wise IT infrastructure availability and resource Utilization • Consolidated SLA / (non)-conformance report • Summary of component wise uptime statistics • Log of preventive / scheduled maintenance undertaken • Log of break-fix maintenance undertaken • Network Device Status • Network Uptime Statistics & Threshold violation • Bandwidth utilization as measured at aggregation point as well as on individual links. **Quarterly Reports:** • Uptime, Downtime and performance report • SLA compliance Report for the Quarter • Bifurcating total downtime of any device into different buckets of various stakeholders **Incident Reports:** • Summary of all recorded Incidents by type & status • Detection of security vulnerability with the available solutions /work arounds for Fixing	
D	**Network Monitoring System**	
1	Solution should provide fault & performance management of the server- side infrastructure and should monitor IP/SNMP enabled devices like (Routers, Switches, Servers, Storage, CCTV etc.). Proposed Network Management shall also help monitor key KPI metrics like availability, in order to measure SLA's. Following are key functionalities that are required which will assist administrators to monitor network faults & performance degradations in order to reduce downtimes, increase availability and take proactive actions to remediate & restore network services.	

S/N	Minimum Specification	Compliance (Y / N)
2	The proposed solution must automatically discover manageable elements connected to the infrastructure and map the connectivity between them. Solution should provide centralized monitoring console displaying network topology map.	
3	The proposed solution must automatically create and resolve tickets for alarms generated in the NMS.	
4	Proposed solution should provide customizable reporting interface to create custom reports for collected data.	
5	System shall be able to provide network bandwidth utilization and availability report for required period.	
6	The system must use advanced root-cause analysis techniques and policy-based condition correlation technology for comprehensive analysis of infrastructure faults.	
E	**Server and Storage Management**	
1	i. The proposed tool should integrate with network performance management system and support operating system monitoring for various platforms supplied as part of this Project. ii. The proposed tool must provide information about availability and performance for target server and storage nodes. iii. The proposed tool should be able to monitor various operating system parameters such as processors, memory, files, processes, file systems, etc. where applicable. The proposed system shall through alerts in case of RAM over utilization, Over CPU utilization for physical as well as virtual serves/VMs installed.	
F	**Centralized Helpdesk and Ticketing System**	
1	i. Proposed solution should be certified and based on latest ITIL- v3 framework. ii. Helpdesk system should provide incident management, problem management templates along with helpdesk SLA system for tracking SLA's pertaining to incident resolution time for priority / nonpriority incidents. iii. SLA compliance reports must capture all information's on automated basis with every instance of exception recorded with a detailed justification for audit purposes. iv. System should also automatically create tickets based on alarm type	

S/N	Minimum Specification	Compliance (Y / N)
	v. System shall provision for creating manual tickets. vi. The proposed helpdesk solution must provide flexibility of logging, viewing, updating and closing incident via web interface for issues related to the project.	

30. Video Management Software (VMS)

Sr. No.	Minimum Specification	Compliance(Y / N)
1.	VMS shall be an enterprise level software solution	
2.	VMS shall be used for centralized management of all field camera devices, video servers and client users.	
3.	VMS shall be based on the open software platform and industry standards	
4.	VMS shall include all modules and perpetual licenses required to provide a complete and fully functional system with camera licenses equal to the number of cameras and unlimited storage licenses and recording server licenses.	
5.	VMS server shall be deployed in a clustered server environment or support inbuilt mechanism for high availability and failover. For management / database / recording servers.	
6.	VMS shall support a flexible rule-based system driven by schedules and events.	
7.	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.	
8.	The VMS shall have a flexible, open configuration architecture that facilitates Firewalls Traversing for the Review application, Web Review, Mobile application and Client Software Development Kit (SDK) connections.	
9.	The VMS shall have a flexible, open video over IP architecture built on accepted industry standards that facilitate integration with IT infrastructure.	
10.	VMS shall support recording and management of video and audio sources through the use of industry standard drivers. These drivers shall include ONVIF compliant and published APIs. It should support video & audio sources from other camera manufacturers including ONVIF compliant internet protocol (IP) cameras.	
11.	VMS system should have provision of Role Based Access Control	
12.	The Bidder shall clearly list in their proposal the make and models of the camera that can be integrated with the VMS, additionally all the offered VMS and cameras must have Open Network Video Interface Forum (ONVIF) compliance for profile	

Sr. No.	Minimum Specification	Compliance(Y / N)
	S, G, T & M. VMS shall be enabled for any standard storage technologies and video wall system integration.	
13.	VMS System shall support H.264 and H.265 or better compression technology	
14.	VMS shall be enabled for integration with any external Video Analytics Systems (Online or Offline) server based.	
15.	VMS shall be capable of being deployed in a virtualized server environment without loss of any functionality.	
17.	VMS shall have an administrator interface to set system parameters, manage codecs, manage permissions and manage storage.	
18.	VMS day to day control of cameras and monitoring on client workstations shall be controlled through the administrator interface.	
19.	The solution design for the VMS shall provide flexible video signal compression, display, storage and retrieval.	
20	All streams coming from camera 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.	
21.	The software shall have the facility to export the desired portion of clipping of video from a desired date/time to another desired date/time on DVD/ on any client/ network storage device.	
22.	The VMS shall support for the firmware upgradation of the CCTV Camera (Offered Make) from CCC. VMS shall capable to upgrade the firmware of cameras either individually or in groups in tamper proof format, as well as in .mp4, .wmv, .avi, etc.	
23.	The VMS shall support the following operations (not limited to): • Add, update and remove an IP device/channel • Updating basic device parameters like brightness, saturation, contrast, bitrate, frame rate, etc. • Adding/removing channels • Adding/removing output signals • Enabling/disabling an IP device/channel • Refreshing an IP device (in case of firmware upgrade) • Multicast at multiple aggregation points	

Sr. No.	Minimum Specification	Compliance(Y / N)
24.	VMS shall support storage and processing of video and audio: • Audio and video must be recorded natively from the camera with no transcoding • Audio and video must be synchronized regardless of frame-rate, resolution or bitrate	
25.	The VMS shall support bookmarking the videos. Thus, allowing the users to mark incidents on live and/or playback video streams.	
26.	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.	
27.	The VMS shall be able to support native video motion detection. This operation can be executed by the edge device, the IP Camera or the server. Enabling motion detection shall be performed either: • On a continuous basis • As scheduled for particular times, dates, days, months, etc. • For defined areas of interest, defined using an easy-to-use user interface and simple editing tools • At a defined sensitivity level	
28.	VMS shall support manual failover for maintenance purpose.	
29.	The VMS shall have ability to connect and integrate other technologies and third-party software systems (e.g. ANPR, RLVD, etc.). VMS shall integrate with proposed video analytic application, facial recognition application, video summarization application. So that the user of (video analytic application, facial recognition application & video summarization application) can access live/recorded video feed seamlessly. VMS shall be able to accept alerts from video analytics built into the cameras, other third-party systems such as facial recognition system & video Summarization system etc.	
30.	The VMS shall have ability to easily install, configure, modify, search and remove surveillance devices with automatic discovery of IP devices. The VMS shall have ability to Third-Party API Integration or SDK or any other integration methodology.	
31.	System should have a facility to create DVD / CDs or other storage media for submission to Judiciary, which can be treated	

Sr. No.	Minimum Specification	Compliance(Y / N)
	evidence for legal matters. Such storage media creation should be tamper proof and SI to provide appropriate technology so that integrity and quality of evidence is maintained as per requirements of the judiciary.	
32.	The VMS shall have an easy process for upgrading versions where it is capable of • Being upgraded from one version to another without having to uninstall the previous version. • Being upgraded from one edition to another without having to uninstall the application. • Automatically detected if video or audio source firmware is out of date with respect to the current installed software and upgrade it. • Automatically detected if client application software is out of date with respect to the current installed server software and upgrade it.	
33.	VMS System shall capable of • Digitizing and compressing video • Writing video and maintaining an accurate index of the stored video file • Deleting older video files as needed, to free up space to record newer video files • Selectively transferring recorded video to external storage or storage media	
Recorder:		
34.	The VMS Recorders shall be able to record in a Virtualization environment	
35.	The Recorder shall offer a fail-over solution, either to another recorder or group of recorders, dynamically, and without any user intervention.	
36.	VMS should also support dual recording or mirroring if required.	
37.	VMS Should allow each stream to be viewed independently by client viewer.	
38.	Recording from connected cameras Should be stored in individual databases.	
39.	Should support multiple storage formats	
40.	Should support recording in all resolution at desired FPS	
41.	Should support video cum audio recording	
Client System The Client system shall provide remote users with rich functionality and features as described below:		

Sr. No.	Minimum Specification	Compliance(Y / N)
42.	VMS shall support live or recorded video monitoring of minimum1 to 64 video streams simultaneously on a single/dual monitor with the following standard layouts such as Full Screen; 2 x 2 to 8 x 8; 1+5; 1+7; 1+12; 2+8 etc.	
43.	Browsing recordings from storage systems.	
44.	Creating and switching between multiple of views and ability to create sequencing	
45.	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. It shall support popular video and image codecs like AVI, M-JPEG, MPEG-4, MP4, etc.	
46.	Viewing video from selected cameras in greater magnification and/or higher quality in a designated hotspot.	
47.	VMS shall support digital zooming within the specified Area of Total field of view during both live and playback mode	
48.	VMS shall have the ability to • Physical and digital zooming and panning on live and recorded video streams. • Take a snapshot of a live or recorded image and export it from the system with ability tag the same with date & time, location detail, etc. • export recorded video in AVI format and image in JPEG/PNG • export log reports in PDF and excel • Merge multi-camera clips for unified export	
49.	• Quickly searching selected areas of video recording formotion (also known as Smart Search). • Video Search on the basis of date, time, event, camera ,location & alarm • Sorting / search by camera name & IP Address	
50.	Logical camera grouping. Auto as well as manual switching of groups.	
51.	Viewing of Minimum 9 cameras on Single screen at 4 MP resolution	
52.	User wise selection and grouping of cameras as favorite.	
53.	Camera selection by double-click or drag and drop from logical group or favorites group	

Sr. No.	Minimum Specification	Compliance(Y / N)
54.	Extended camera viewing on multiple monitors VMS system shall have PTZ control tab on GUI to control the movement of PTZ camera.	
Remote web client		
55.	The web-based remote client shall offer live view of up to 9 cameras, including PTZ control (if applicable) and event / output activation. The Playback function shall give the user concurrent playback of multiple recorded videos with date, alert sequence or time searching.	
56.	Web client shall be supported by major browsers (IE, Chrome,Firefox, Mozilla) on Windows and Linux based desktops	
57.	User Authentication – The Remote Client shall support logon using the user name and password credentials	
Matrix Monitor		
58.	Matrix Monitor – The Matrix Monitor feature shall allow distributed viewing of multiple cameras on the system on any monitor.	
59.	The Matrix Monitor feature shall access the H.265 / H.264 / MJPEG / MPEG4 stream from the connected camera directly and not sourced through the recording server.	
Management / Integration Functionality		
60.	The Surveillance System shall offer centralized management of all devices, servers and users.	
61.	The Surveillance System should not have any limit on the number of cameras to be connected for Surveillance, Monitoring and Recording. Any increase in the no. of cameras should be possible by augmentation of Hardware components.	
62.	The Surveillance System shall support distributed viewing of any camera in the system using Video walls or big screen displays.	
63.	The Surveillance System shall support alarm management. The alarm management shall allow for the continuous monitoring of the operational status and event-triggered alarms from system servers, cameras and other external devices.	
64.	It should be possible to integrate the Surveillance System with 3rd-party software, to enable the users to develop customized applications for enhancing the use of video surveillance solution. For e.g., integrating alarm management to initiate SMS, E-Mail, VoIP call, etc.	
65.	The Management system shall store the overall network elements configuration in central database, either on the management server computer or on a separate DB Server on the network.	

Sr. No.	Minimum Specification	Compliance(Y / N)
66.	System should be able to be integrated with Event Management / Incident Management System.	
Mobile Client		
67.	The bidder shall be required to provide a standardised Mobile Application to integrate smart phones and tablets for 2-way communication with the Video Management System in a secure manner. It will be responsibility of SI to configure such tablets / Smartphone with the Surveillance System and ensure that all the necessary access is given to these mobile users.	
68.	Communication with mobile client and server shall be encrypted with Digital Certificate/VPN	
Reports		
69.	The system should provide interactive reporting interface with standard and user-defined custom reports and filtering options to: • Review currently logged in users and functions being performed. • Retrieve audit trails - user activities, errors and system logs. • View list of hardware units and selected configuration options. • List down configured users and corresponding roles & permissions. • View details of bookmarks, event/alarm history and exported evidences.	

15.2 Annexure II -List of Locations

Junction locations: The SCADL/AMC may provide the list of junctions to the successful bidder at the time of issuing the Corrigendum or Letter of Intent (LOI) or work order.

Indicative list of Entry and Exit Road of Ahmedabad city for SITC of Cameras.

અનુ. નં.	પોલીસ સ્ટેશનનું નામ	વ્યુહાત્મક પોઈન્ટ પર સી.સી.ટી.વી. લગાવવા જરૂરી	અક્ષાંશ-રેખાંશ
૧	સોલા હાઇકોર્ટ	ભાડજ સર્કલ	23.084226 72.493041
૨	સોલા હાઇકોર્ટ	ઓગણજ સર્કલ	23.120838 72.508215
૩	સોલા હાઇકોર્ટ	બેબીલોન ક્લબ કટ	23.090986 72.495540

અનુ. નં.	પોલીસ સ્ટેશનનું નામ	વ્યુહાત્મક પોઈન્ટ પર સી.સી.ટી.વી. લગાવવા જરૂરી	અક્ષાંશ-રેખાંશ
૪	સોલા હાઇકોર્ટ	ન્યુ સાયન્સ સીટી રોડ	23.107418 72.501570
		સ્કોડ-૦૨	
૫	અડાલજ	એપોલો ભાટ સર્કલ ઈન્દીરાબ્રીજ એરપોર્ટ જવાનો મેઈન રોડ	૨૩.૧૧૬૮૫૦ ૭૨.૬૩૧૨૯૯
૬	યાંદખેડા	એસ.પી. રીંગ રોડથી સધી માતાના મંદીર તરફ જવાનો કટ મોટેરા	૨૩.૧૧૭૯૦૦ ૭૨.૬૧૭૧૪૦
૭	યાંદખેડા	તપોવન સર્કલ	૨૩.૧૧૮૭૩૪ ૭૨.૬૧૪૧૨૪
૮	યાંદખેડા	એસ.પી.રીંગ રોડ થી TP 44 એન.વાય સિનેમા તરફ જતો કટ મોટેરા	૨૩.૧૨૦૯૯૬ ૭૨.૬૦૯૬૯૫
૯	યાંદખેડા	TP 44 કટ બાલાજી બંગ્લોઝ તરફથી અંદર જતો રોડ	૨૩.૧૨૩૨૫૨ ૭૨.૬૦૪૩૫૧
૧૦	યાંદખેડા	એસ.પી.રીંગ રોડથી TP 44 એચ.બી.કાપડીયા સ્કુલ તરફ જતો મેઇન રોડ કત	૨૩.૧૨૫૮૪૯ ૭૨.૬૯૮૨૫૩
૧૧	યાંદખેડા	ઝુંડાલ સર્કલ ગાંધીનગરથી યાંદખેડા બસ સ્ટેન્ડ જવાનો મુખ્ય રોડ	૨૩.૧૩૦૪૫૨ ૭૨.૫૮૪૯૭૦
૧૨	યાંદખેડા	એસ.પી.રીંગ રોડ સર્વોતમ હોટલ પાસે ઝુંડાલ મુક્તિ ધામથી યાંદખેડા તરફ જતો રોડ	૨૩.૧૩૦૬૯૭ ૭૨.૫૮૩૦૪૮
૧૩	યાંદખેડા	એસ.પી.રીંગ રોડથી ન્યુ યાંદખેડા તરફ જતો ગરનાળા પાસેનો કટ	૨૩.૧૩૧૭૩૯ ૭૨.૫૭૫૦૭૮
૧૪	યાંદખેડા	એસ.પી.રીંગ રોડથી મેપલ પરમેશ્વર સ્કીમ સ્નેહ પ્લાઝા તરફ જતો રોડ	૨૩.૧૩૨૩૧૩ ૭૨.૫૭૧૨૭૩
૧૫	યાંદખેડા	એસ.પી.રીંગ રોડથી ધ હિલલોક હોટલથી ત્રાગડ જતો રોડ	૨૩.૧૩૨૭૬૫ ૭૨.૫૬૭૩૯૩
૧૬	સાબરમતી	એસ.પી.રીંગ રોડથી મેકડોનાલ્સ હોટલ થી ત્રાગડ જતો રોડ	૨૩.૧૩૩૪૭૯ ૭૨.૫૬૩૦૨૫
૧૭	સાબરમતી	એસ.પી.રીંગ રોડથી ત્રાગડ ગામ જવાનો મુખ્ય રોડ, રન્બો રેસ્ટોરેન્ટ કટ	૨૩.૧૩૫૧૦૯ ૭૨.૫૫૦૩૫૧
૧૮	સાબરમતી	એસ.પી.રીંગ રોડથી ગાલા હેવન્સ સ્કીમ કટ, નિરમા યુનિવર્સીટીની પાછળ જતો રોડ	૨૩.૧૩૫૫૭૩ ૭૨.૫૪૬૭૯૨

અનુ. નં.	પોલીસ સ્ટેશનનું નામ	વ્યુહાત્મક પોઈન્ટ પર સી.સી.ટી.વી. લગાવવા જરૂરી	અક્ષાંશ-રેખાંશ
૧૯	સાબરમતી	ઝાયડસ કોર્પોરેટ ઓફીસ કટ ત્રાગડ ગામ તરફ જતો રોડ	૨૩.૧૩૨૮૧૭ ૭૨.૫૪૧૯૨૧
૨૦	સાબરમતી	એસ.જી.હાઇવેથી જગતપુર ગામ તરફ જતો મુખ્ય રોડ કટ	૨૩.૧૧૫૦૧૮ ૭૨.૫૩૬૯૫૪
૨૧	સાબરમતી	એસ.જી.હાઈવેથી સ્લીપ બિઝનેશ બિલ્ડીંગની બાજુમાં માલાબાર કાઉન્ટરી સ્કીમ ત્રાગડ તરફ જતો રોડ	૨૩.૧૨૬૨૫૯ ૭૨.૫૪૦૦૨૬
૨૨	સાબરમતી	એસ.જી.હાઇવેથી છારોડી ગામ તરફ જતો રોડ	૨૩.૧૨૪૨૮૬ ૭૨.૫૪૯૪૮૮
		સ્કોડ-૦૪	
૨૩	સરદારનગર	ઇન્દીરા સર્કલ અમદાવાદ થી બહાર નીકળતા કેમેરા લગાવવાની	૨૩.૦૮૫૮ ૭૨.૬૨૯૬૭૩
૨૪	સરદારનગર	એરપોર્ટ રોડથી ચિલોડા તરફ જતા કેમેરા લગાવવાની જરૂર	૨૩.૦૯૦૨૯૨ ૭૨.૬૫૧૮૩૮
૨૫	નરોડા	ટોયોટા શોરૂમ નાના ચિલોડા, નરોડા	૨૩.૦૯૮૯૩૯ ૭૨.૬૬૬૯૬૨
૨૬	નરોડા	હિમતનગર થી અમદાવાદ મા પ્રવેશતા તેમજ બહાર જતા| બ્રિજના ઉતરતા ભાગે નાના ચિલોડા નરોડા	૨૩.૧૦૫૯૮૯ ૭૨.૬૭૦૫૮૨
૨૭	નરોડા	ચિલોડા સર્કલ રીંગરોડ નાના ચિલોડા બ્રિજ નીચે નરોડા (હિમતનગર થી અમદાવાદમાં પ્રવેશતા તેમજ બહાર જતા)	૨૩.૧૧૧૨૯૪ ૭૨.૬૭૨૯૮૮
૨૮	નરોડા	નરોડા દહેગામ રોડ બ્રિજ નીચે બીજા કેમેરા લગાવવાની જરુર છે	૨૩.૦૮૯૧૩૨ ૭૨.૬૮૭૦૪૬
૨૯	નરોડા	દાસ્તાન સર્કલ બીજા કેમેરા લગાવવાની જરુર	૨૩.૦૬૬૩૩૯ ૭૨.૬૮૮૯૭૭
૩૦	નરોડા	સ્વનીલ હાઇટ્સ વસંત વિહાર-૨ નવા નરોડા કેમેરા લગાવવાની જરુર છે	૨૩.૦૭૦૨૩૮ ૭૨.૬૮૭૭૨
૩૧	નરોડા	હંસપુરા ગામ રોડ વસંત વિહાર-૨ નવા નરોડા કેમેરા લગાવવાની જરુર છે	૨૩.૦૭૬૭૮૭ ૭૨.૬૮૭૭૪૧
૩૨	નરોડા	ગાંધીનગર ભાટ સર્કલથી અમદાવાદ પ્રવેશના બ્રિજના નાકે કેમેરા લગાવવાની જરુર છે	૨૩.૨૪૫૨૭૭ ૭૨.૬૮૫૪૭૪
૩૩	નરોડા	અમદાવાદ કરાઇ તરફથી બહાર જતા કેમેરા લગાવવાની જરુર છે	૨૩.૧૧૫૬૩૮ ૭૨.૬૫૮૪૪૨
		સ્કોડ-૦૫	
૩૪	રામોલ	અદાણી સર્કલ	૨૨.૯૭૭૭૩ ૭૨.૬૬૨૦૩
૩૫	રામોલ	વસ્ત્રાલ રીંગ રોડ ચાર રસ્તા	૨૨.૯૯૭૪૮

અનુ. નં.	પોલીસ સ્ટેશનનું નામ	વ્યુહાત્મક પોઈન્ટ પર સી.સી.ટી.વી. લગાવવા જરૂરી	અક્ષાંશ-રેખાંશ
			૭૨.૬૬૨૦૩
૩૬	રામોલ	પાંજરાપોળ ચાર રસ્તા	૨૩.૦૦૮૬૮ ૭૨.૬૬૫૦૩
૩૭	રામોલ	ઓઢવ રીંગ રોડ સર્કલ	૨૩.૦૨૫૨૩ ૭૨.૬૭૨૯૮
૩૮	ઓઢવ	ઓઢવબ્રિજ પર	૨૩.૦૨૫૨૩ ૭૨.૬૭૨૯૮
૩૯	ઓઢવ	ઓઢવબ્રિજ પર	૨૩.૦૩૧૦૨ ૭૨.૬૭૪૩૩
૪૦	ઓઢવ	કઠવાડા ચાર રસ્તા	૨૩.૦૩૮૪૬ ૭૨.૬૭૭૨૬
૪૧	નિકોલ	ગંગોત્રી સર્કલ તરફ જવાનો રસ્તો	૨૩.૦૩૮૪૬ ૭૨.૬૭૭૨૬
૪૨	નિકોલ	ગેલેક્ષી ઇન્ટરસીટી ચાર રસ્તા	૨૩.૦૫૨૦૩ ૭૨.૬૮૫૦૧
		સ્કોડ-૦૬	
૪૩	નારોલ	વટવા કેનાલ નાયરા પેટ્રોલપંપની સામે	૨૨.૯૩૧૪૭૫ ૭૨.૬૦૮૯૬૭
૪૪	નારોલ	લાંભા કટ ઓમકાર ફર્નીચરની સામે	૨૨.૯૨૬૧૨૭ ૭૨.૫૭૪૦૯૨
૪૫	વટવા	રોપડા બ્રીજ નીચે	૨૨.૯૩૮૫૪૬ ૭૨.૬૩૫૫૫૨
૪૬	વટવા	ગામડી ગરનાળુ	૨૨.૯૩૪૩૨૮ ૭૨.૬૨૧૩૪૧
૪૭	વટવા	બચુભાઈના કુવા તરફ જવાનો ટી કટ	૨૨.૯૩૫૯૨૬ ૭૨.૬૨૫૨૯૯
૪૮	વટવા	પાર્થ ઇન્ડીયન પેટ્રોલપંપ	૨૨.૯૩૫૫૮૯ ૭૨.૬૨૪૧૭૧
૪૯	વટવા	દેવ વોશીંગની બાજુમાં વટવા ગામ તરફ જવાનો ટી કટ	૨૨.૯૩૩૧૦૮ ૭૨.૬૧૮૫૮૨
૫૦	વટવા	પારીજાત બીઝનેશ સેન્ટર આગળ	૨૨.૯૩૪૨૩૧ ૭૨.૬૧૮૫૮૨
૫૧	જી.આઇ.ડી.સી વટવા	હાથીજણ સર્કલ	૨૨.૯૫૭૬૨૭ ૭૨.૬૫૬૫૧૮

અનુ. નં.	પોલીસ સ્ટેશનનું નામ	વ્યુહાત્મક પોઈન્ટ પર સી.સી.ટી.વી. લગાવવા જરૂરી	અક્ષાંશ-રેખાંશ
૫૨	જી.આઇ.ડી.સી વટવા	સરસ્વતી સ્કુલ ચાર રસ્તા વિઝંલ ગામ પાસે	૨૨.૯૪૪૨૫૪ ૭૨.૬૪૫૪૧૮
૫૩	જી.આઇ.ડી.સી વટવા	રોપડા બ્રીજ પેરેડાઈઝ પાર્ક પાસે એસ.પી.રીંગ રોડ	૨૨.૯૪૩૧૬૮ ૭૨.૬૪૩૮૬૭
		સ્કોડ-૦૭	
૫૪	બોડકદેવ	સાયન્સ સીટી ચાર રસ્તા	૨૩.૦૮૪૨૬૧ ૭૨.૪૯૨૭૨૯
૫૫	બોડકદેવ	હેબતપુર ગામ કટ	૨૩.૦૦૭૪૧૫૮ ૭૨.૪૮૯૧૭૮
૫૬	બોડકદેવ	ભાડજ ગામ કટ ટી.પી.રોડ	૨૩.૦૮૦૧૦૬૨ ૭૨.૪૯૦૬૮૪
૫૭	બોડકદેવ	નાંદોલી શીલજ કટ ટીપી રોડ	૨૩.૦૭૪૫૬૫૦ ૭૨.૪૮૮૪૩૮
૫૮	બોડકદેવ	હરીઓમ પરાઠા કટ શીલજ પછીના ચાર રસ્તા	૨૩.૦૬૫૩૬૩૫ ૭૨.૪૮૫૧૬૫
૫૯	સરખેજ	સુમુખવિલા રોડ	૨૩.૦૩૯૯૧૫ ૭૨.૪૭૯૮૮૪
૬૦	સરખેજ	રાજપથ ક્લબ કટ	૨૩.૦૩૬૧૮૩ ૭૨.૪૭૮૯૭૬
૬૧	સરખેજ	આંબલી અરૂમ હાઇટ્સ	૨૩.૦૩૨૩૭૯ ૭૨.૪૭૮૭૨૩
૬૨	સરખેજ	આંબલી કટ	૨૩.૦૨૮૬૫૯ ૭૨.૪૭૭૧૮૯
૬૩	સરખેજ	આંબલી રોડ	૨૩.૦૨૫૬૭૪ ૭૨.૪૭૬૭૮૩
૬૪	સરખેજ	મુમતમપુરા રોડ	૨૩.૦૧૮૭૫૯ ૭૨.૪૮૦૧૩૬
૬૫	સરખેજ	કર્ણાવતી ક્લબ રોડ	૨૩.૦૦૯૬૨૨ ૭૨.૪૭૭૫૯૫
૬૬	સરખેજ	બાકરોલ સર્કલ	૨૨.૯૩૭૦૮૯ ૭૨.૪૯૭૮૧૯
૬૭	સરખેજ	બાકરોલ કેનાલ રોડ	૨૨.૯૩૮૯૯૪ ૭૨.૪૯૩૩૩૧
૬૮	સરખેજ	બાકરોલ સર્કલ કિરણ મોટર્સ પાસે	૨૨.૯૫૩૬૨૦

અનુ. નં.	પોલીસ સ્ટેશનનું નામ	વ્યુહાત્મક પોઈન્ટ પર સી.સી.ટી.વી. લગાવવા જરૂરી	અક્ષાંશ-રેખાંશ
			૭૨.૪૮૦૮૪૩
૬૯	સરખેજ	સનાથલ સર્કલ	૨૨.૯૬૧૯૯૯ ૭૨.૪૭૫૭૩૦
૭૦	સરખેજ	મોહનનગર પાસે સનાથલ	૨૨.૯૭૦૪૪૭ ૭૨.૪૭૪૮૯૦
૭૧	સરખેજ	મોહનનગર સનાથલ	૨૨.૯૭૩૯૪૨ ૭૨.૪૭૩૪૫૧
૭૨	સરખેજ	ગીર ગૌશાળા રોડ સનાથલ	૨૨.૯૮૧૪૧૦ ૭૨.૪૭૧૨૬૬
૭૩	સરખેજ	સેટલસ્કાય રોડ શાંતિપુરા	૨૨.૯૮૩૪૬૩ ૭૨.૪૭૧૩૯૬
૭૪	સરખેજ	શાંતિપુરા સર્કલ સર્વિસ રોડ સામે	૨૨.૯૮૭૫૭૧ ૭૨.૪૭૧૫૭૫
૭૫	સરખેજ	એલ.જે.કોલેજ રોડ શાંતિપુરા	૨૨.૯૯૧૯૫૮ ૭૨.૪૭૨૩૨૮
૭૬	સરખેજ	એપલવુડ શેલા રોડ પાંયા તળાવ ગામ શાંતિપુરા	૨૨.૯૯૪૮૮૦ ૭૨.૪૭૨૭૬૯
૭૭	સરખેજ	એપલવુડ પાસે સુર્યા પ્રોજેક્ટ	૨૨.૯૯૯૩૮૪ ૭૨.૪૭૪૦૭૦
૭૮	સરખેજ	કલમ ૦૭ રોડ શેલા કટ	૨૩.૦૦૩૩૨૯ ૭૨.૪૭૫૫૨૭
૭૯	સરખેજ	સોબો સેન્ટર રોડ બોપલ	૨૩.૦૧૩૯૨૦ ૭૨.૪૭૯૪૭૦
૮૦	સરખેજ	સનાથલથી શાંતિપુરા બ્રીજ	૨૨.૯૮૩૨૫૮ ૭૨.૪૭૧૦૫૪
૮૧	સરખેજ	શાંતિપુરા સર્કલ	૨૨.૯૮૭૫૩૨ ૭૨.૪૭૧૫૬૮
૮૨	સરખેજ	શાંતિપુરા બ્રિજ ઉતરતા બોપલ તરફ જતા	૨૨.૯૯૫૭૮૬ ૭૨.૪૭૨૫૩૩
૮૩	સરખેજ	શેલા ગામ જવાનો બોપલ કટ બ્રીજ	૨૨.૯૯૫૭૮૮ ૭૨.૪૭૨૪૯૬

અનુ. નં.	પોલીસ સ્ટેશનનું નામ	વ્યુહાત્મક પોઈન્ટ પર સી.સી.ટી.વી. લગાવવા જરૂરી	અક્ષાંશ-રેખાંશ
૮૪	સરખેજ	કાકાના ઘાબા ચાર રસ્તા	૨૩.૦૦૯૬૨૧ ૭૨.૪૭૭૪૯૩
૮૫	સરખેજ	બોપલ સનસીટી કટ વકીલ સાહેબ ઓવરબ્રીજ	૨૩.૦૧૯૬૭૪ ૭૨.૪૭૯૪૪૬
૮૬	સરખેજ	સત્યમેવ ઇલાઈટ બ્રીજ નીચે	૨૩.૦૨૫૬૭૪ ૭૨.૪૭૬૩૭૪
૮૭	સરખેજ	વકીલ સાહેબ બ્રીજ નીચે	૨૩.૦૨૮૬૮૩ ૭૨.૪૭૬૮૪૭
૮૮	સરખેજ	સ્કાયલાઇટ બીલ્ડીંગ સામે	૨૩.૦૩૩૩૪૮ ૭૨.૪૭૮૧૧૭

Indicative list of Bridge location Cameras

અનુ. નં.	બ્રિજનું નામ
1	વિઝોલ વટાવા માઈનોર પુલ (યશોદ - રીંગરોડ - ન. ખારીકટ કેનાલ)
2	ઈસનપુર ગેબનશાહ દરગાહ (ન. ખારીકટ કેનાલ)
3	ઓઢવ ફાયર સ્ટેશન - કેનાલ બોક્સ કલ્વર્ટ પાસે
4	હાટકેશ્વર ક્રોસ રોડ ફ્લાયઓવર બ્રિજ (ચાર લેન - ચિ. શિવાજી મહારાજ)
5	ગરીબ આવાસ ઇન્દ્રપુરી વોર્ડ (કલ્વર્ટ)
6	જશોદા - અમદાવાદ રોડ - નિરમાની બાજુમાં
7	વટાવા લાંભા સદાણી ડાબી ખારીકટ કેનાલ પાસે (કલવર્ટ)
8	લેવલ ક્રોસિંગ - ૧ IOC ક્રોસિંગ રેલ્વે અંડરબ્રિજ (RVNL)
9	ખોખરા રેલ્વે ઓવરબ્રિજ (અનુપમ બાજુ)
10	વિનોભા ભાવે નગર થી વિવેકાનંદ નગર
11	લેવલ ક્રોસિંગ -૨૬ મકરબા ક્રોસિંગ
12	લેવલ ક્રોસિંગ - ૨૪૧ ઉમાભવની ચનાખેડા પાર રેલ્વે અંડરબ્રિજ
13	લેવલ ક્રોસિંગ - ૧૭ પાલડી જમાલપુર રેલ્વે અંડરપાસ
14	ઘોડાસર ફ્લાય ઓવરબ્રિજ
15	લેવલ ક્રોસિંગ - ૨૪૨ IOC ચાંદખેડા રેલ્વે અંડરબ્રિજ
16	લેવલ ક્રોસિંગ - ૨૪૩ ડી કેબિન સાબરમતી રેલ્વે અંડરબ્રિજ
17	લેવલ ક્રોસિંગ - ૨ ચેનપુર રેલ્વે અંડરબ્રિજ