

## IMPORTANT INFORMATION/INSTRUCTIONS TO THE BIDDERS

1. **Project Completion timeline is as per RFP, from the date of issuance of Purchase Order in order to adhere to legal compliance which cannot be further extended under any circumstances. Failure to comply with the prescribed timeline will attract strict action on bidder on the basis of recommendation of Home Department/OCAC.**
  
2. **Integration and interoperability of all the proposed products with the proposed platform is very crucial for this project. If the bidder, after selection fails in seamless integration of the products, necessary action as deemed proper based on the recommendation of Home Department/OCAC will be initiated which may lead to strict action against bidder.**

<b>Annexure-I</b>				
<b>Corrigendum</b>				
<b>RFP Enquire No: OCAC-SEGP-INFRA-0023-2025-26009</b>				
<b>Integrated City Surveillance System at Puri, Odisha for Home Department, Government of Odisha</b>				
<b>Last Date and Time for Submission of Bid document: 27/02/2026 by 03:00 PM</b>				
<b>Sl. No.</b>	<b>RFP Clause No</b>	<b>Page No</b>	<b>Original Clause</b>	<b>Revised Clause/Clarification</b>
1	3.6.3 Key Personnel Criteria	40	Minimum Educational Qualification: MBA (IT)/M. Tech or equivalent  Minimum Educational Qualification: BE / B.Tech	Minimum Educational Qualification: MBA (IT)/M. Tech/MCA or equivalent  Minimum Educational Qualification: BE / B.Tech/MCA or equivalent
2	2.4 Project Deliverables, Milestones and Timelines	22	Payment against “STQC Certification and system audit” (STQC certification to be provided cameras OEM and system VAPT audit to be done by Cert-in empanelled agency) shall be released only after completion of the respective Audits as decided by the authority.	Please read the clause as below: -  STQC certificates for cameras to be submitted as part of bid submission and system VAPT to be carried out prior to Go live.
3	6.5. Junction Boxes / Poles	76	The IA shall ensure that each junction box has clearly segregated compartments for surveillance, networking, power and battery components. Each compartment shall be provided with an independent locking mechanism.	Please read the clause as below: -  The IA shall ensure that each junction box has appropriate installation arrangement for surveillance, networking, power and battery components. Junction box with single door shall be provided with locking mechanism.
4	15.6 Next Generation Firewall (NGFW)	138	Appliance should have minimum 1.2 TB (SSD) Built in Storage from day 1.	Please read the clause as below: -  Appliance should have minimum 900GB (SSD) Built in Storage from day 1.

5	15.6 Next Generation Firewall (NGFW)	139	The Firewall shall support minimum of 745,000 SSL Inspection connections from day.	Please read the clause as below: -  The Firewall shall support minimum of 745,000 SSL/TLS Inspection connections from day.
6	15.6 Next Generation Firewall (NGFW)	143	OEM must have own SOC as a Service solution along with 24x7 threat monitoring, threat hunting and detection response. Customer may avail Network Detection Response solution for present Firewall as and when required in future as an addon service. Customer may purchase this solution along with required license in future.	Clause stands deleted
7	15.6 Next Generation Firewall (NGFW)	148	Support Warranty and License Requirements -  The NGFW should be proposed with subscription licenses for IPS, Anti-Virus, Anti Spyware, Anti Botnet, Zero-day Protection, URL Filtering and Management with reporting.  License for Management, Reporting, any other license required to meet the above features should be provided from day one for min. period 5 (five) years.	Please read the clause as below: - Support Warranty and License Requirements -  The NGFW should be proposed with subscription licenses for IPS, Anti-Virus, Anti Spyware, Anti Botnet, Zero-day Protection, URL Filtering and Management with reporting.  License for Management, Reporting, any other license required to meet the above features should be provided from day one for min. period 5 (five) years. All components of Firewall solution like Firewall, Security services, Transceivers and management platform, ZTNA solutions must be from same OEM.
8	15.6 Next Generation Firewall (NGFW)	148	The NGFW firewall should include cyber warranty that offers limited compensation for covered losses that lead to business interruption from Non-volumetric DDOS attack and Unauthorized remote access types of events. OEM must offer the cyber warranty along with firewall from day one.	Please read the clause as below: -  The NGFW firewall should include cyber warranty/ Cyber insurance that offers limited compensation for covered losses that lead to business interruption from Non-volumetric DDOS attack and Unauthorized remote access types of events. OEM must offer the cyber warranty along with firewall from day one.
9	15.6 Next Generation Firewall (NGFW)	149	Offered model should have also FCC, CE, VCCI certifications.	Please read the clause as below: -  Offered model should have also FCC/ CE / UL certifications.
10	15.11 LPU	162	Vibration - IEC68-2-64	Clause stands deleted

11	15.11 LPU	162	Certificate - CE, FCC Class A, RoHS, UKCA, BIS	Please read the clause as below: -  Certificate - CE, FCC, RoHS & BIS
12	15.11 LPU	162	Processor Intel® 9th Generation Core™ i7-9700 with Min 8 Cores/8 Threads or Higher as per the ITMS OEM Requirements.	Please read the clause as below: -  Intel® 9th Generation Core™ i7-10700 with Min 16 Cores/8 Threads or Higher as per the ITMS OEM Requirements. Bidder/OEM to Propose a GPU in addition to CPU if required as per their system design.
13	15.11 LPU	162	Environmental shock : Half sine wave 3G, 11ms, 3 shock per axis	Clause stands deleted
14	Volume 2 - 17.5. Enterprise Management System (EMS)	196	The solution should support Service Level Agreements & Lifecycle Management including Version control, Status Control, Effectively and audit Trail to ensure accountability for the project	Please read the clause as below: -  The solution should support Service Level Agreements & Lifecycle Management including Status Control, Effectively and audit Trail to ensure accountability for the project
15	Volume 2 - 17.5. Enterprise Management System (EMS)	196	The system must use advanced root-cause analysis techniques for comprehensive analysis of infrastructure faults, security threats/attacks detections, etc.	Please read the clause as below: -  The system must use advanced root-cause analysis techniques for comprehensive analysis of infrastructure faults, etc.
16	Volume 2, 12.1.3. Attribute-based Search Analytics for Video	107	12.1.3. Attribute-based Search Analytics for Video Summarization System ; The proposed solution shall work in two modes, one will be online mode where system services would be installed on minimum 100 cameras which will work with streaming camera feeds and does not required to be exported on to the Video Summarization System for processing the videos, whereas, in second mode, which is an offline mode where any 100 camera feeds can be uploaded on video summarization application for processing the Videos to conduct quick post incident video review	Please read the clause as below: -  12.1.3. Attribute-based Search Analytics for Video Summarization System ; The proposed solution shall work in online mode for 25 cameras.
17	Volume 2, 15.9 Dual mode Drone (Tethered and Untethered)	166	Weight (All up Weight) <= 8 Kg (Tethered mode, excluding Tether cable) <= 6 Kg (in Untethered Mode)	Please read the clause as below: -  Weight (All up Weight) <= 8 Kg (Tethered mode, excluding Tether cable) <= 8 Kg (in Untethered Mode)
18	15.6 Next Generation	138	Appliance must have one Console port, dedicated one management Port, two USB port and redundant power supply	Please read the clause as below: -

	Firewall (NGFW)			Appliance must have one Console port, dedicated one management Port, one USB port and redundant power supply.
19	15.6 Next Generation Firewall (NGFW)	138	The device should have 8 x 1G Copper ports, 4 x 10G (Cu), 6 x 10G /25G SFP+ ports from day one. The device should be upgradable to 8 x 1G Cu ports, 2 x 40G and 4 x 10G in the same chassis in future.	Please read the clause as: -  "The device should have 8 x 1G Copper ports,8 x 25G SFP+ ports,4x 10G SFP+ ports from day one. The device should be upgradable to 8 x 1G Cu ports, 2 x 40G in the same chassis in future. All SFP/SFP+ ports must be populated with respective MM transceivers"
20	15.6 Next Generation Firewall (NGFW)	138	Appliance should have minimum 1.2 TB (SSD) Built in Storage from day 1.	Please read the clause as "Appliance should have minimum 900GB (SSD) Built in Storage from day 1."
21	15.6 Next Generation Firewall (NGFW)	142	Firewall should scan for threats in both inbound and outbound and intra-zone for malware in files of unlimited length and size across all ports and TCP streams by GAV & Cloud AV.	Please read the clause as "Firewall should scan for threats in both inbound and outbound and intra-zone for malware in files of unlimited length and size across all ports and TCP streams by GAV & Cloud AV/Antimalware."
22	15.8 L2 switch	157	12. Switch should support RA guard, DHCPv6 protection, dynamic IPv6 lockdown, and ND snooping	Please read the as below: -  12. Switch should support RA guard, DHCPv6 protection, dynamic IPv6 lockdown or equivalent feature and ND snooping
23	15.8 L2 switch	158	25. The Switch should support Source-port filtering to allow only specified ports to communicate with each other	25. The Switch should support Source-port filtering to allow only specified ports to communicate with each other or Equivalent feature is acceptable.
24	15.8 L2 switch	158	28. The Switch should support Management Interface Wizard to help secure management interfaces such as SNMP, SSH,SSL, Web.	Please read the clause as below: -  The Switch should support secure management interfaces such as SNMP, SSH,SSL, Web.
25	15.8 L2 switch	158	29. EN 60950-1/IEC 60950-1 EN 60825/equivalent or higher CAN/CSA C22.2 No. 60950, 2nd Edition UL 60950-1, 2nd Edition	Please read the clause as below: -  29. EN 60950-1/IEC 60950-1 EN 60825/equivalent or higher CAN/CSA C22.2 No. 60950, 2nd Edition UL 60950-1, 2nd Edition or Equivalent feature is acceptable.
26	15.9 L3 Switch	158	1.6 The switch should be based on programmable ASICs purpose-built to allow for a tighter integration of switch	Clause stands deleted

			hardware and software to optimize performance and capacity	
27	15.9 L3 Switch	159	4.1 The switch should support Spanning Tree Protocol (STP/RSTP/MSTP) and Ethernet Ring Protection Switching (ERPS) for rapid protection and recovery	The switch should support Spanning Tree Protocol (STP/RSTP/MSTP) and Ethernet Ring Protection Switching (ERPS) for rapid protection and recovery or Equivalent feature is acceptable.
28	14.1.7. Edge Level Switch at Field Junctions	121	1. Architecture; Should have 4GB RAM and 16GB Flash; Should have minimum 8 MB packet buffer	Please read the clause as below: -  Should have 4GB RAM and 4GB Flash/Storage and 8MB packet buffer.
29	14.1.7. Edge Level Switch at Field Junctions	122	3. Resiliency and Availability; Should support Uni-directional Link Detection (UDLD) to monitor link connectivity and shut down ports at both ends if unidirectional traffic is detected, preventing loops in STP-based networks. Should support ERPS(Ethernet Ring Protection Switching (ERPS) support for rapid protection and recovery in a ring topology).	3. Resiliency and Availability; Should support Uni-directional Link Detection (UDLD) to monitor link connectivity and shut down ports at both ends if unidirectional traffic is detected, preventing loops in STP-based networks. Should support ERPS(Ethernet Ring Protection Switching (ERPS) support for rapid protection and recovery in a ring topology) or Equivalent feature is acceptable.
30	Part2_RFP_Puri_CCTV31012026, Section 4.2	36	Location Engine (Integration with GIS MAP) - If there is an existing ICCC, please clarify if GIS engine and GIS maps are existing or any new updated solution with maps to be provisioned.	Please read the clause as Existing GIS engine and maps to be integrated with proposed ICCC
31	Part1, 2.11 Bid Formats a) Pre-Qualification Bid Format, 21, 6.6 Bidder's Experience – Client Citations	70	7. Certificate(s) from statutory auditor towards average annual Turnover of the entity/entities over the last three (3) financial years (2021-22, 2022-23 and 2023-24).  8. Certificate(s) from the statutory auditor towards net worth for the last three (3) financial years 2021-22,2022-23, 2023-24.	Please read the clause as below: -  7.Certificate(s) from statutory auditor/chartered accountant towards average annual Turnover of the entity/entities over the last three (3) financial years (i.e. 2021-22, 2022-23 and 2023-24 or 2024-25)  8. Certificate(s) from the statutory auditor/chartered accountant towards net worth for the last three (3) financial years (i.e. 2021-22, 2022-23 and 2023-24 or 2024-25)  <b>Documentation proof shall be as per requirements mentioned in Clause 3.5 and 3.6</b>
32	3.6.3 Key Personnel Criteria	40	a) Minimum Educational Qualification: MBA (IT)/M. Tech or equivalent: 1 Mark	Please read the clause as below: -

			<p>b) Work experience in the capacity of Project Director / Program Manager in ICT / Command and Control Centre Implementation Projects: 1 Mark</p> <ul style="list-style-type: none"> <li>• &gt;=10 years = 1 Mark</li> <li>• &gt;=8 and &lt;10 years = 0.5 Marks</li> <li>• Else 0</li> </ul> <p>c) Project / Program management Experience in Large ICT / Command and Control Centre Implementation Project of value &gt; 50 crores: 2 Marks</p> <ul style="list-style-type: none"> <li>• &gt;=3 Projects = 2 Marks</li> <li>• 2 Projects = 1 Mark</li> <li>• Else 0</li> </ul>	<p>a) Minimum Educational Qualification: MBA /M. Tech or equivalent: 1 Mark</p> <p>b) Work experience in the capacity of Project Director / Program Manager in ICT / Command and Control Centre Implementation Projects: 1 Mark</p> <ul style="list-style-type: none"> <li>• &gt;=10 years = 1 Mark</li> <li>• &gt;=8 and &lt;10 years = 0.5 Marks</li> <li>• Else 0</li> </ul> <p>c) Project / Program management Experience in Large ICT / Command and Control Centre Implementation Project of value &gt; 50 crores: 2 Marks</p> <ul style="list-style-type: none"> <li>• &gt;=3 Projects = 2 Marks</li> <li>• 2 Projects = 1 Mark</li> <li>• Else 0</li> </ul>
33	2.4 Project Deliverables, Milestones and Timelines, Part-2		We kindly request you to confirm what %age of the overall project can the bidder quote under CAPEX. In general CAPEX OPEX split is provided in such tenders.	Capex should not be more than 80% of overall contract value.
34	Vol-2 Sec-4.4 Annexure IV: Service Levels	59	<p>4.4.1.1. Camera Uptime Penalties for every 1% drop below the SLA uptime:</p> <ul style="list-style-type: none"> <li>• High-Criticality Cameras → ₹1,500 per camera per day</li> <li>• Medium-Critical Cameras → ₹800 per camera per day</li> <li>• Low-Critical Cameras → ₹500 per camera per day</li> </ul> <p>4.4.1.2. ANPR Camera Penalties</p> <ul style="list-style-type: none"> <li>• ₹2,000 per camera per day if uptime &lt; 98%</li> </ul> <p>4.4.1.3. Analytics Engine Penalties</p> <p>If analytics engine uptime &lt; 98% → ₹10,000 per day penalty</p> <p>If analytics fail to detect events in UAT benchmarking → recalibration</p>	<p>Please read the clause as below: -</p> <p>4.4.1.1. Camera Uptime Penalties for every 1% drop below the SLA uptime</p> <ul style="list-style-type: none"> <li>• High-Criticality Cameras → ₹1,000 per camera per day</li> <li>• Medium-Critical Cameras → ₹500 per camera per day</li> <li>• Low-Critical Cameras → ₹200 per camera per day</li> </ul>
35	Vol-2 Sec-4.4 Annexure IV: Service Levels	59	<p>4.4.1.4. Network &amp; ICCC Infrastructure Penalties</p> <p>Core Switch / Storage Unavailability ₹25,000 per hour</p> <p>VMS Application Downtime ₹10,000 per hour</p> <p>EMS/NMS Downtime ₹5,000 per hour</p>	<p>Please read the clause as below: -</p> <p>4.4.1.4. Network &amp; ICCC Infrastructure Penalties</p> <ul style="list-style-type: none"> <li>• Core Switch / Storage Unavailability ₹25,000 per day</li> <li>• VMS Application Downtime ₹10,000 per day</li> <li>• EMS/NMS Downtime ₹5,000 per Day</li> </ul>

36	Vol-2 Sec- 6.3.1.2.Operations & Maintenance	73	The IA shall ensure Preventive Maintenance is carried out once every month at each parking location, including camera cleaning, tightening, power checks, UPS health verification and network testing	Please read the clause as below: -  The IA shall ensure Preventive Maintenance is carried out half yearly at each parking location, including camera cleaning, tightening, power checks, UPS health verification and network testing.
37	Vol-4 Sec-1.14.6	17	IA shall ensure that the OEMs for hardware, software, applications and other related equipment's/accessories or IA's trained engineers conduct the preventive maintenance on a fortnightly basis	Please read the clause as below: -  IA shall ensure that the OEMs for hardware, software, applications and other related equipment's/accessories or IA's trained engineers conduct the preventive maintenance on half yearly basis.
38	VOL I clause no 2.16 read with notes of clause no 20.4	24	20.4 The Price Bid should clearly indicate the price quoted without any ambiguity whatsoever and should include all applicable taxes, duties, fees, levies, and other charges as may be applicable in relation to the activities proposed to be carried out	Kindly refer Annexure for price bid format.
39	Part-2_RFP, Section 5.4.1.3	58	The critical events/incidents video is required to be stored for 90 Days	Please read the clause as below: -  The critical events/incidents video including ITMS, VA system is required to be stored for 90 Days i.e. 5% of storage capacity at DC.
40	Part-2_RFP, Section 5.4.1.5	64	Integration with existing ICCC System As mentioned in section 4.3 in Volume – II of this RFP.	Please read the as Integration with proposed ICCC System in section 4.2 in volume-II of this RFP
41	Volume - II 17.4, 17.2	190 & 194	The envisaged storage solution shall store video feeds for 30 days. After 30 days, the video feeds would be overwritten unless it is flagged or marked by the Police / Stakeholder Department for investigation or any other purpose. The video feeds of all relevant cameras capturing the incident or flagged in question would be stored until the Police deem it good for deletion.  The system shall record the native frame rate and resolution supplied by the camera or as configured by the operator from the System Administration Server.  The system shall allow for the frame rate, bit rate and resolution of each camera to be configured independently for	Please read the clause as below: -  The solution should be designed for an Active-Passive DC/DR architecture. In case of Active-Passive architecture, then DR should be provisioned with 20% capacity of critical applications (ICCC and VMS) as provisioned in the DC. System Architecture to be designed to achieve 15 min RPO and 120 minutes RTO.  Please read the as Two DR drills per year. 3 days DR drill to be considered.  Please read the as DR cloud should be operational for 7 days during DC failure

			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 Storage data should be accessible 24 x 7. Storage system should be highly available to meet the demands of the stakeholders.	and store data for 7 days. Video resolution at 720p or better.
42	Part-2, 15.4 Storage	132	The Storage Array shall be offered with 2000 TB Usable Capacity using NLSAS drives and 100TB usable capacity using SSD drives. For effective power saving, Storage subsystem shall also support SFF drives with the addition of required disk enclosures. Storage shall be provided with suitable OEM bezel kit as well as bezel lock kit.	Please read the clause as below: -  Storage solution shall be offered with 2400 TB Usable Capacity using NLSAS drives and 100TB usable capacity using SSD drives. For effective power saving, Storage subsystems shall also support SFF drives with the addition of required disk enclosures. Storage shall be provided with suitable OEM bezel kit as well as bezel lock kit.
43	Part-2	35	Client/Server Architecture and Graphics; Multi-Platform Access: The UI/UX for the ICCC platform should support multi-monitor configurations and shall work on both OS based native applications as well as web-browser access.	Please read the clause as below: -  "Multi-Platform Access: The UI/UX for the ICCC platform should support multi-monitor configurations and shall work on OS based native applications or web-browser access."
44	Part-2	44	Technical Support Centre 24x7 Technical Assistance: The ICCC platform OEM (Original Equipment Manufacturer) should have a 24x7x365 technical assistance Support Centre in India. It must provide an online portal and contact number to register service requests, which can be raised by the partner (Implementation Agency/System Integrator) and the customer.	Please read the clause as below: -  "Technical Assistance: The ICCC platform OEM (Original Equipment Manufacturer) should have a technical assistance Support Centre in India. It must provide an online portal or contact number to register service requests, which can be raised by the partner (Implementation Agency/System Integrator) or the customer."
45	Part-2	109	12.1.3. Attribute-based Search Analytics for Video Summarization System 15. IA is expected to provide video summarization solution using AI & deep learning in such a way so that during the first week of operation the accuracy of provided alerts will be of at least 80% accuracy (true alerts/total alerts). In future, IA should train their AI & deep learning model in such a manner so that the accuracy can increased by at least 5%	Please read the clause as below: -  15. IA is expected to provide video summarization solution using AI & deep learning in such a way so that during the first week of operation the accuracy of provided alerts will be of at least 80% accuracy (true alerts/total alerts). In future, IA should train their AI & deep learning model in such a manner so that the accuracy can increased by at least 5%

			week on week until accuracy be achieved to 100% within first month of operation considering the significance of Shri Jagannath temple area & Grand Road area. IA shall provide all the new updates/patches of updates during the project life cycle.	week on week until accuracy be achieved to 90- 95% considering the significance of Shri Jagannath temple area & Grand Road area. IA shall provide all the new updates/patches of updates during the project life cycle.
46	Volume 2, 5.3.1.3. Operations and Maintenance Phase	49	Operational KPIs • System Uptime ≥ 99% uptime for all field devices, network components, ICCC systems	Operational KPIs • System Uptime ≥ 98% uptime for all field devices, network components, ICCC systems
47	Volume 2, 5.3.1.3. Operations and Maintenance Phase	49	<ul style="list-style-type: none"> <li>• Analytics Performance <ul style="list-style-type: none"> <li>o Real-time alerts for crowd density, face recognition, ANPR, abandoned objects</li> </ul> </li> <li>o KPI: ≥ 95% alert accuracy with &lt; 5% false positives</li> </ul>	<p>Please read the clause as below: -</p> <ul style="list-style-type: none"> <li>• Analytics Performance <ul style="list-style-type: none"> <li>o Real-time alerts for crowd density, face recognition, Parking analytics, Wall climbing/intrusion detection video analytics</li> </ul> </li> <li>o KPI: ≥ 95% alert accuracy with &lt; 5% false positives</li> </ul>
48	8. Automatic Number Plate Recognition System (ANPR)	86	<p>d. Operational Requirements-The ANPR system shall support the following minimum operational capabilities:</p> <p>Rule-based triggers for:</p> <ul style="list-style-type: none"> <li>o Hot listed vehicles</li> <li>o Suspicious movement patterns</li> <li>o Wrong-way driving</li> <li>o Vehicle overstaying or unauthorized parking</li> </ul>	<p>Please read the clause as below: -</p> <p>d. Operational Requirements-The ANPR system shall support the following minimum operational capabilities:</p> <p>Rule-based triggers for: -</p> <ul style="list-style-type: none"> <li>o Hot listed vehicles</li> <li>o Suspicious movement patterns</li> </ul>
49	Volume I, Clasue-3.6.3 Key Personnel Criteria	42	The proposed resources shall be interviewed during the Technical Presentation and PoC and the proposed resources are required to clear the interview. In case any resource does not qualify in the interview process, the technical score against such resource shall be awarded accordingly and not be considered in final evaluation. All the proposed positions shall be onsite throughout the entire project implementation phase as well as during Operation & Maintenance Phase as per specified Man months. Manpower plan for Implementation Phase to be provided as per format provided in Annexure A.6.8.	<p>Please read the clause as below: -</p> <p>The proposed resources shall be deployed as per minimum qualification. All the proposed positions shall be onsite/offsite during project implementation phase as well as during Operation &amp; Maintenance Phase as per specified Man months. Manpower plan for Implementation Phase to be provided as per format provided in Annexure A.6.8.</p>

50	Volume III, 3.4 General Principles of Service Level Agreements	46	3.4.2. SLA would be applicable in operations and maintenance phase of the project. The penalties shall be applicable on monthly payment for Operations & Maintenance period i.e. 10% of contract value for each of respective month.	Please read the clause as below: -  3.4.2. SLA would be applicable in operations and maintenance phase of the project. The penalties shall be applicable on quarterly payment for Operations & Maintenance period i.e. 10% of Quoted OPEX (value)for each of respective quarter.
51	Volume II , 20.4. Format for BoQ	228	20.4.1. Abstract for BOQ Note: -Quoted Rates shall be inclusive of all the Applicable Taxes Excluding GST. - GST shall be paid over and above	Kindly refer Annexure – A for Price bid.
52	Volume III, 3.6 Conditions for No Penalties	49	3.6.3. Theft cases by default / vandalism would not be considered as “beyond the control of IA”. Hence, the IA should be taking adequate anti-theft measures, spares strategy, Insurance as required to maintain the desired Required SLA	Please read the clause as below: -  3.6.3. The cases by vandalism would not be considered as “beyond the control of IA”. Hence, the IA should be taking adequate measures, spares strategy, Insurance as required to maintain the desired Required SLA.
53	Volume III: Master Service Agreement		2.2 Liquidated Damages 2.2.1 If IA fails to supply, install or maintain any or all of the Goods or fails to complete the Works or fails to provide the Services as per the Agreement, within the time period(s) specified in the RFP Vol II, the Authority without prejudice to its other rights and remedies under the Agreement, deduct from the Agreement value, as liquidated damage per week of 1% of the payment to be remitted on successful Go-Live of System i.e. 40% of order value per week till such time the default continues.	Please read the clause as below: -  2.2 Liquidated Damages 2.2.1 If IA fails to supply, install or maintain any or all of the Goods or fails to complete the Works or fails to provide the Services as per the Agreement, within the time period(s) specified in the RFP Vol II, the Authority without prejudice to its other rights and remedies under the Agreement, deduct from the Agreement value, as liquidated damage per week of 1% of the delayed scope of work of the payment to be remitted on successful Go-Live of System. Capped to maximum 10% of capex value.
54	PART-2, 17.5. Enterprise Management System (EMS);	195	Make in India & IPR: As per the DPIIT guidelines the preferences to Make in India products.	Please read the clause as below: -  Make in India & IPR : Proof of IPR/ Source Code Copyright Certificate in accordance with the DPIIT guidelines including Table-B for quoted software has to be mandatorily submitted, OEM must facilitate the validation Source Code Copyright Certificate at copyright.gov.in

55	Vol 2, Page 33, 4.2. Functional and Technical Specifications of ICCC Application, Platform Functionality		The System should provide a common data integration layer for Transactional Data (DB) and a common data integration layer for Time-Series Data.	Please read the clause as below: -  The system shall provide a common data integration layer based on a relational database, supporting transactional data and time-indexed operational data through appropriate schema design, indexing and optimization to ensure performance, scalability, and reliability.
56	Vol 2, Page 33, 4.2. Functional and Technical Specifications of ICCC Application, Platform Functionality		Data Storage: The System should provide a facility for centralized storage of operational data (time-series) with high granularity and data compression capability.	Please read the clause as below: -  The system shall provide a facility for centralized storage of operational data with high granularity, efficient data compression, and support for scalable data retention and retrieval to meet operational needs.
57	Vol 2, Page 35, 4.2. Functional and Technical Specifications of ICCC Application, GIS Map Support		Map Format Support: The System should also support PDF and various image formats of Maps, including: KML (Keyhole Markup Language) o GML (Geography Markup Language) o JPEG, PNG, GIF, etc.	Please read the clause as below: -  Map & Building Drawing's Support: The system shall support integration with standard web-based map services, including Web Map Service, Open Street Maps Layers, AutoCAD .shp File, .JPEG file format. The solution shall be capable of consuming and rendering map data from compliant GIS servers, enabling seamless visualization of base maps.
58	Vol 2, Page 37, 4.2. Functional and Technical Specifications of ICCC Application, Reporting Service		It should provide data-trend analysis and sophisticated numerical-data analysis using Microsoft Excel spreadsheet software.	Please read the clause as clause below: -  The system shall provide data-trend analysis and data analysis through web-based analytical tools, including interactive dashboards, charts, and reports accessible via a standard web browser. The system shall support export of data in common formats (e.g., CSV/XLSX/pdf) for offline analysis, if required.
59	Vol 2, Page 45, 4.2. Functional and Technical Specifications of ICCC Application, Traffic Violation Detection System/ ITMS		<ul style="list-style-type: none"> <li>• Ability to define various violations in the system with multiple parameters.</li> <li>• Violation detection for various types of violations such as speed, red light violation etc.</li> <li>• Ability to gather evidence, issuance of challan and maintain records of violation and penalty etc.</li> <li>• In an event when spot speed detection system captures over speeding vehicles at a particular location, the system</li> </ul>	Clause stand deleted

			<p>should be able to calculate the same also forms a part of the evidence for the violation</p> <ul style="list-style-type: none"> <li>• System shall be able to classify different category of vehicles such as TW, LMV, HVM etc.</li> <li>• System shall have provision for setting different speed thresholds for different classification of vehicles.</li> <li>• All vehicles passing through the control section at a Speed greater than a determined speed limit shall be detected as violation</li> <li>• The system shall be capable to integrate with NIC's e-Challan system to raise any traffic violation challan for the RLVD and SVD detection systems.</li> <li>• The system shall be able to tag any particular photo evidence, along with ANPR captured vehicle number (if available) or manually entered vehicle number and push it to NIC's</li> <li>• e-Challan system along with other details such as type of violation, location, date and time etc. and raise challan on NIC's e-Challan system.</li> </ul>	
60	Volume 2, 15.12 Cloud Technical Parameters	183	<p>CSP should offer the facility to support Active-Active architecture having multiple availability zones with built in fault tolerance to avoid any failure at the underlying hardware infrastructure.</p>	<p>Please read the clause as below: -</p> <p>CSP should offer the facility to support Active-Active/Active-Passive architecture (as per bidder design) having multiple availability zones with built in fault tolerance to avoid any failure at the underlying hardware infrastructure.</p> <p>CSP should have native tier of storage classified based on the frequency of data access. This storage should support an availability of <math>\geq 99.9\%</math>. The Overall durability of data in this storage class should be minimum 99.999%. Data retrieval from archival storage should be within milliseconds</p> <p>CSP should have option to create a VM instance with custom virtualized hardware settings to create a VM instance with a custom number of vCPUs and amount of memory instead of predefined vCPU &amp; memory machine shapes.</p>

				CSP should have Native Managed database services for MS-SQL EE and Std., PostgreSQL and My-SQL enterprise Editions. It should support storage auto scaling based on the workload demand and should allow per second billing for the actual computer used.
61	PART-2, 5.4.1.4. Other General Requirements	63	Remote Web Client: The web-based remote client shall offer live view of minimum 128 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.	Please read the clause as below: -  Remote Web Client/Remote Application Client: The web-based remote client / Remote Application Client shall offer live view of minimum 100 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.
62	PART-2, 6.14. Integration Requirements For Parking Surveillance System, 6.14.1. Integration with ICCC at JBPC: The IA shall ensure the following.	81	2. Real-Time Analytics Integration: All parking-related analytics (ANPR, congestion detection, wrong parking, abandoned vehicle, loitering detection, reverse movement, pedestrian conflict zones etc.) shall be integrated into the ICCC Analytics Platform.  The IA shall ensure that alerts from parking areas are displayed in real-time on ICCC operator dashboards, video walls, and GIS maps.	Please read the clause as below: -  "2. Real-Time Analytics Integration: All parking-related analytics (ANPR, congestion detection, wrong parking, abandoned vehicle, loitering detection, reverse movement, pedestrian conflict zones etc.) shall be integrated into the ICCC Platform.  The IA shall ensure that alerts from parking areas are displayed in real-time on ICCC operator dashboards, video walls, and GIS maps. "
63	PART-2, 15. Data Centre Equipment Specifications, 15.11 LPU	161	2. I/O Interface: Ethernet: 4x Gigabit Ethernet ports by Intel 2. I/O Interface: Serial Port :4 x RS-232/422/485 (DB-9) and 2x RS-232 ports.	Please read the clause as below: -  "2. I/O Interface – Ethernet:2 × Gigabit Ethernet ports (Intel-based) 2. I/O Interface – Serial Ports:1 × RS-232/422/485 (DB-9)
64	15.9 L3 Switch	158	The switch should have 24 ports of 1/10GbE/25GbE (SFP+/SFP28) and 4 ports of 10G SFP+. Cables/Transceivers shall be populated as per the design	Please read the clause as below: -  The switch should have 48 ports of 1/10GbE/25GbE (SFP+/SFP28). Cables/Transceivers shall be populated as per the design
65	Volume II. Section 15.7 Web Access firewall.	151	The solution should have 80% content Make-in-India and should be tested by Govt. of India agencies like STQC or CERT-In empanelled agency. The OEM of The solution should be ISO-9001, ISO-27001	Please read the clause as below: -  The solution should have minimum 50% content Make-in-India and should be tested by Govt. of India agencies like STQC

			certified and should have a R&D and Development Centre in India	or CERT-In empanelled agency. The OEM of The solution should be ISO-9001, ISO-27001 certified and should have a R&D and Development Centre in India
66	Volume 2, Section 2	20	Project Deliverables, Milestones and Timelines	Kindly refer annexure for revised payments
67	15.9 L3 Switch	158	The switch should have 4 ports of 40GbE/100GbE (QSFP+/QSFP28). Cables/Transceivers shall be populated as per the design	Please read the clause as below: - The switch should have 8 ports of 40GbE/100GbE (QSFP+/QSFP28). Cables/Transceivers shall be populated as per the design.
68	Volume 2, 19.2. Technical Specification for Videowall LED Display for ICC	202	Additional specifications for Video wall	1. Brightness Uniformity of Display should be > 98% (ANSI 9 points). Proof of same to be submitted 2.OEM Should be ISO 9000 , 14000 & ISO 27001 to be enclosed along with bid .
69	Volume 2, 17.5. Enterprise Management System (EMS)	196	Additional specifications for EMS;	The EMS solution must support deployment on docker/container based microservices architecture and support latest version of Windows or Linux Operating Systems or combination. The application shall be decomposed into multiple, independently deployable micro-services, each responsible for a narrowly scoped business capability. OCI-compliant container image from OEM needed and single monolithic codebase packaged in a container (lift- and- shift approach) shall not be allowed.
70	Part-2, 5.5. Video Management System (VMS)	67	Additional Point	The Proposed VMS OEM must have successfully supplied and implemented at least one (1) Video Management Software project with a minimum of 10,000 (Ten Thousand) camera licenses in a single purchase order / work order for any Government / PSU / Safe City / Smart City/ City wide /State wide Surveillance Project.  Bidder to submit reference PO Copy and Completion Certificate as evidence.
71	15.5 Backup Solution	136	27. b) Proposed backup software should be available on various OS platforms like Windows, Linux, IBM AIX, Solaris etc. The backup server should be compatible to run on both Windows and Linux OS platforms	Please read the clause as below: -  b) Proposed backup software should be available on various OS platforms like Windows, Linux. The backup server should

				be compatible to run on both Windows and Linux OS platforms
71	14.1.1. Fixed Cameras (Outdoor Box/Bullet) for Surveillance, 14.1.2. PTZ Cameras for City Surveillance, 14.1.4. ANPR Camera	113,15,117	Additional clause for camera.	The OEM of the proposed CCTV cameras must ensure that all offered camera models have a provision to support an SD/micro SD card slot with storage capacity up to 2 TB. The OEM must submit a self-declaration or technical datasheet confirming this capability. Cameras lacking such provision shall not be considered and will be treated as a Technical Rejection.
73	Volume 2, 15.9 Dual mode Drone (Tethered and Untethered)	166	Additional criteria for UAV - the UAV proposed under this tender shall possess a valid Type Certificate for operation in Untethered Mode, issued by the DGCA.	OEM of the UAVs should possess a valid Industrial License issued by DPIIT under the Industries (Development & Regulation) Act, 1951, in accordance with Para (iii) of Annexure 1 to DIPP Note 1 (2019 Series) dated 01 January 2019.
74	14. Technical Requirements	112	Additional point Pre-Qualification Criteria for Camera OEMs. Additional clause for camera OEM.	CCTV OEM must have direct presence and direct manufacturing in India for the last 10 years. Manufacturing through joint ventures, partnerships, or associations will not be accepted.
75	VOLUME - II 2. PART B – Special Conditions of Agreement 2.1 Performance Security	35	To guarantee its performance under the Agreement, the IA shall provide to Authority in its favour a Performance Bank Guarantee (PBG) which is unconditional, unequivocal and irrevocable for an amount equivalent to <b>10%</b> of the Total Project Cost at the commencement of Project in the format prescribed in RFP, issued by any of the nationalized banks only. The Performance Bank Guarantee shall be kept valid up to a period of 3 (Three) months after the project completion timelines.	To guarantee its performance under the Agreement, the IA shall provide to Authority in its favour a Performance Bank Guarantee (PBG) which is unconditional, unequivocal and irrevocable for an amount equivalent to <b>5%</b> of the Total Project Cost at the commencement of Project in the format prescribed in RFP, issued by any of the nationalized banks only. The Performance Bank Guarantee shall be kept valid up to a period of 3 (Three) months after the project completion timelines.
76	VOLUME - II 5.3.10. Network Connectivity	55	IA shall ensure that implementation of Network connectivity for bandwidth services are redundant in nature, high quality, seamless connectivity to all cameras at aggregation point i.e. DC/DR.  Connectivity to DC/DR and CCCs, Viewing Centres etc. shall be provided with scalable capacities to allow for	IA shall ensure that implementation of Network connectivity for bandwidth services are redundant in nature, high quality, seamless connectivity to all cameras at aggregation point i.e. DC/DR.  Connectivity to DC/DR and CCCs, Viewing Centres etc. shall be provided with scalable capacities to allow for expansion, if

			expansion, if required, during the Rath Yatra event may be needed. Redundant connectivity to be considered at DC and DR however the field locations to be covered with single connectivity however the IA is responsible to meet the SLAs for the same. Minimum Bandwidth to be considered at field location is minimum 5 Mbps per camera and minimum 5 GBPS bandwidth to be considered at DC at CCC. IA is required to undertake estimation of bandwidth & storage requirements considering the benchmark parameters shared below.	required, during the Rath Yatra event may be needed. Redundant connectivity to be considered at DC, however the field locations to be covered with single connectivity however the IA is responsible to meet the SLAs for the same. Minimum Bandwidth to be considered at field location is minimum 3 Mbps per camera and minimum 8 GBPS bandwidth to be considered at DC/ICCC. IA is required to undertake estimation of bandwidth & storage requirements considering the benchmark parameters shared below.
77	VOLUME II 4. Integrated Command and Control Center 4.1. Overview	28	The proposed Integrated Command & Control Centre (ICCC), Video Management System (VMS), Video Analytics (VA) and Intelligent Traffic Management System (ITMS) applications shall be from the same OEM to ensure seamless integration, unified architecture and consistent performance. The IA to ensure end-to-end accountability, simplified system integration, faster issue resolution and improved operational reliability throughout the project lifecycle by the OEM.	The proposed Video Management System (VMS), Video Analytics (VA) and Intelligent Traffic Management System (ITMS) applications shall be from the same OEM to ensure seamless integration, unified architecture and consistent performance. The IA to ensure end-to-end accountability, simplified system integration, faster issue resolution and improved operational reliability throughout the project lifecycle by the OEM.
78	VOLUME II 5.3.7. Power Requirements	54	IA shall provide electricity to the cameras through the aggregation point. Since this component has dependency on approval from local authorities, it is recommended that IA plans this requirement well in advance & submits the application to the concerned electricity. The applicable permissions and charges including one-time meter fees or recurring expenditure against the utilized electricity (if applicable) shall be facilitated by the Authority. DG's fuel during O&M period for ICCC/DC/DR shall be provisioned by End user.  IA shall carry out all the electrical work required for powering all the components of the system Electrical installation and wiring shall conform to the electrical codes of India.	IA shall provide electricity to the cameras through the aggregation point. Since this component has dependency on approval from local authorities, it is recommended that IA plans this requirement well in advance & submits the application to the concerned electricity. The applicable permissions and charges including one-time meter fees or recurring expenditure against the utilized electricity (if applicable) shall be facilitated by the Authority. DG's fuel during O&M period for ICCC/DC/DR shall be provisioned by End user.  IA shall carry out all the electrical work required for powering all the components of the system Electrical installation and wiring shall conform to the electrical codes of India. <b>Authority shall bear electricity charges for this project.</b>

79	VOLUME II 13. Contact Centre/Help Desk	111	The required IT infrastructure including workstations / laptops / desktops along with microphone or IP phones shall be provided by the Implementation Agency for operationalisation of 30-seater Contact Center.	The required IT infrastructure including workstations / laptops / desktops along with microphone or IP phones shall be provided by the Implementation Agency for operationalisation of 15-seater Contact Center.																																																																																										
80	19.3. Technical Specification for Video Wall Controller	203	<table border="1"> <thead> <tr> <th data-bbox="480 347 539 439">Sr. No</th> <th data-bbox="539 347 675 439">Parameters</th> <th data-bbox="675 347 978 439">Minimum Specifications</th> </tr> </thead> <tbody> <tr> <td data-bbox="480 439 539 600">1</td> <td data-bbox="539 439 675 600">Display controller</td> <td data-bbox="675 439 978 600">Controller to control Video wall in a matrix (4x2 output) as per requirement along with software</td> </tr> <tr> <td data-bbox="480 600 539 696">2</td> <td data-bbox="539 600 675 696">Processor</td> <td data-bbox="675 600 978 696">Latest Generation 64-bit x86 Quad Core processor (3.4 Ghz) or Better</td> </tr> <tr> <td data-bbox="480 696 539 770">3</td> <td data-bbox="539 696 675 770">RAM</td> <td data-bbox="675 696 978 770">16 GB DDR3 ECC RAM</td> </tr> <tr> <td data-bbox="480 770 539 866">4</td> <td data-bbox="539 770 675 866">HDD</td> <td data-bbox="675 770 978 866">2x 480 GB/better or 7200 RPM HDD (Configured in RAID 0)</td> </tr> <tr> <td data-bbox="480 866 539 940">5</td> <td data-bbox="539 866 675 940">RAID</td> <td data-bbox="675 866 978 940">Should support RAID 0 and 1</td> </tr> <tr> <td data-bbox="480 940 539 1014">6</td> <td data-bbox="539 940 675 1014">Networking</td> <td data-bbox="675 940 978 1014">Dual-port Gigabit Ethernet Controller with RJ-45 ports</td> </tr> <tr> <td data-bbox="480 1014 539 1088">7</td> <td data-bbox="539 1014 675 1088">Accessories</td> <td data-bbox="675 1014 978 1088">104 key Keyboard and Optical USB mouse</td> </tr> <tr> <td data-bbox="480 1088 539 1162">8</td> <td data-bbox="539 1088 675 1162">OS</td> <td data-bbox="675 1088 978 1162">Supports 64-bit Operating Systems Windows 10</td> </tr> <tr> <td data-bbox="480 1162 539 1236">9</td> <td data-bbox="539 1162 675 1236">Chassis</td> <td data-bbox="675 1162 978 1236">19" Rack mount</td> </tr> <tr> <td data-bbox="480 1236 539 1310">10</td> <td data-bbox="539 1236 675 1310">Power Supply</td> <td data-bbox="675 1236 978 1310">(1+1) Redundant hot swappable</td> </tr> <tr> <td data-bbox="480 1310 539 1384">11</td> <td data-bbox="539 1310 675 1384">Redundancy Support</td> <td data-bbox="675 1310 978 1384">Power Supply, HDD, LAN port &amp; 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81	14.1.4. ANPR Camera	117	<b>Outdoor Fixed ANPR Camera with IR Illuminator - 2 MP</b>			<b>Outdoor Fixed ANPR Camera with IR Illuminator - 4 MP</b>			Compliance (Yes/No)
			<b>Sr. No</b>	<b>Parameter</b>	<b>Specifications</b>	<b>Sr. No</b>	<b>Parameter</b>	<b>Specifications</b>	
			1.	Image sensor	1/3" Progressive Scan CMOS Sensor 2.0 megapixel or better CMOS.	1.	Image sensor	1/3" Progressive Scan CMOS Sensor 2.0 megapixel or better CMOS.	
			2.	Max Image Resolution	1920 x 1080 (2MP)	2.	Max Image Resolution	1920 x 1080 ( <b>4MP</b> )	
			3.	Lens	C/CS with 5- 50 mm or better	3.	Lens	C/CS with 5- 50 mm or better	
			4.	True Day and Night	Yes	4.	True Day and Night	Yes	
			5.	Wide Dynamic Range	True WDR/DWDR of 120dB or better	5.	Wide Dynamic Range	True WDR/DWDR of 120dB or better	
			6.	Minimum Illumination / Light Sensitivity	Colour 0.08 Lux or better, B/W 0 Lux or better	6.	Minimum Illumination / Light Sensitivity	Colour 0.08 Lux or better, B/W 0 Lux or better	
			7.	IR Filter	Automatic Built in IR Cut filter	7.	IR Filter	Automatic Built in IR Cut filter	
			8.	IR Distance	IR distance- 80m Or better; with Inbuilt or External IR	8.	IR Distance	IR distance- 80m Or better; with Inbuilt or External IR	
			9.	Shutter Speed	Configurable electronic shutter, up to 1-1/10000s or faster for freezing number plates of moving vehicles.	9.	Shutter Speed	Configurable electronic shutter, up to 1-1/10000s or faster for freezing number plates of moving vehicles.	
			10.	Video Compression / Codec	H. 265 or better	10.	Video Compression / Codec	H. 265 or better	
			11.	Frame rates	50/60fps or better	11.	Frame rates	50/60fps or better	
			12.	Video Streams	Individually configurable minimum 03 H. 265 or better video streams	12.	Video Streams	Individually configurable minimum 03 H. 265 or better video streams	
			13.	Streaming Method	Unicast, Multicast along with multi stream support	13.	Streaming Method	Unicast, Multicast along with multi stream support	
14.	Local storage	SD Card Slot with 128 GB or better Support provided with 128 GB card	14.	Local storage	SD Card Slot with 128 GB or better Support provided with 128 GB card				
15.	Image Settings	Brightness, Sharpness, Contrast etc.							

			16. Supported Protocol	HTTP, HTTPS/SSL/TLS, TCP, ICMP/RTSP, RTP, RTSPS, UDP, IGMP, RTCP, SMTP, FTP, DHCP, UPnP/ARP/DNS/DynDNS, SMTP, Ipv4, Ipv6, EAP-TLS/EAP-MD5/SHA	15. Image Settings	Brightness, Sharpness, Contrast etc.	
			17. Ethernet Port	RJ-45 (10/100Base-T) Mbps or Better	16. Supported Protocol	HTTP, HTTPS/SSL/TLS, TCP, ICMP/RTSP, RTP, RTSPS, UDP, IGMP, RTCP, SMTP, FTP, DHCP, UPnP/ARP/DNS/DynDNS, SMTP, Ipv4, Ipv6, EAP-TLS/EAP-MD5/SHA	
			18. ONVIF	Profile S, G or Profile S, G, T	17. Ethernet Port	RJ-45 (10/100Base-T) Mbps or Better	
			19. Operating Temp	-10 °C ~ 55 °C, Up to Humidity 90%	18. ONVIF	Profile S, G or Profile S, G, T	
			20. HLC, BLC	Auto" (Both the attribute must be available and shall function in Auto mode in either of the case)	19. Operating Temp	-10 °C ~ 55 °C, Up to Humidity 90%	
			21. Alaram Input / Output	Min 1/1 or better	20. HLC, BLC	Auto" (Both the attribute must be available and shall function in Auto mode in either of the case)	
			22. Housing	Weather-proof IP66 or better, Vandal-proof IK10	21. Alaram Input / Output	Min 1/1 or better	
			23. Certifications	BIS-IS13252 And Cyber Security Certified by STQC as per IoTSCS and meet the essential requirement issued by MeitY	22. Housing	Weather-proof IP66 or better, Vandal-proof IK10	
			24. Power Requirement	DC12V/AC 24V/PoE power input/POE+	23. Certifications	BIS-IS13252 And Cyber Security Certified by STQC as per IoTSCS and meet the essential requirement issued by MeitY	
			25. Mounting Accessories	For pole and surface mount with L/C Brackets	24. Power Requirement	DC12V/AC 24V/PoE power input/POE+	
			26. Audio	1 Channel Audio IN/ 1 Channel Audio Out or Built In MIC/ 1 Channel Audio Output, Support two-way audio (Optional)	25. Mounting Accessories	For pole and surface mount with L/C Brackets	
			27. MTBF	Min 50000 Hours or better	26. Audio	1 Channel Audio IN/ 1 Channel Audio Out or Built In MIC/ 1 Channel Audio Output, Support two-way audio (Optional)	
			28. Defogger	Digital defogger/Defogger	27. MTBF	Min 50000 Hours or better	
					28. Defogger	Digital defogger/Defogger	

			<p>29. Misc. The Camera to be provided by the OEM/bidder should not be complying to GB28181, GB/T28181-2011 standards and there should be no option to activate or deactivate GB/T 28181 standards in the camera web page/settings.</p>	<p>29. Misc. The Camera to be provided by the OEM/bidder should not be complying to GB28181, GB/T28181-2011 standards and there should be no option to activate or deactivate GB/T 28181 standards in the camera web page/settings.</p>
			<p>30. Warranty &amp; support Camera Warranty Should include with 5-year comprehensive warranty with no additional cost for change, replacement of parts, labour, consumable, shipment, insurance etc. 24x7 support with 4 hours of response time &amp; 48-hour resolution time.</p>	<p>30. Warranty &amp; support Camera Warranty Should include with 5-year comprehensive warranty with no additional cost for change, replacement of parts, labour, consumable, shipment, insurance etc. 24x7 support with 4 hours of response time &amp; 48-hour resolution time.</p>
82	2.2 Overview	14	2.2.3 The bidder shall furnish the survey report along with their realistic assessment of AS-IS situation and assumptions (if any) for the desired output, as part of their technical bid.	Stands deleted
83	3.5 Pre-Qualification Criteria (iv.)	32	<p>The bidder must have successfully undertaken at least the following numbers of similar assignments of value specified herein: -</p> <p>One project of similar nature in system integration, not less than the amount ₹50,00,00,000/- (Fifty Crore Only)</p> <p>OR</p> <p>Two projects of similar nature in system integration) not less than the amount ₹40,00,00,000/- (Forty Crore Only)</p> <p>OR</p> <p>Three projects of similar nature in system integration, not less than the amount ₹30,00,00,000/- (Thirty Crore Only) The “Similar Nature” of the work shall mean project including procurement, supply, installation, implementation of Integrated Command &amp; Control Centre</p>	<p>The bidder must have successfully undertaken at least the following numbers of similar assignments of value specified herein: -</p> <p>One project of similar nature in system integration, not less than the amount ₹50,00,00,000/- (Fifty Crore Only)</p> <p>OR</p> <p>Two projects of similar nature in system integration) not less than the amount ₹40,00,00,000/- (Forty Crore Only)</p> <p>OR</p> <p>Three projects of similar nature in system integration, not less than the amount ₹30,00,00,000/- (Thirty Crore Only) The “Similar Nature” of the work shall mean project including procurement, supply, installation, implementation of</p>

			(ICCC)/Unified Command & Control System (UCCS) / Data Center/ Intelligent Traffic Management System (ITMS), with at least one project experience of 500 cameras in a single project, for any Central Government/State Government/PSUs/Defense/Urban Local Bodies in India, in last seven years. Purchase Order (PO) should be in the name of bidder only. Consortium Purchase orders will not be considered.	Integrated Command & Control Centre (ICCC)/Unified Command & Control System (UCCS) / Data Center/ Intelligent Traffic Management System (ITMS)/ <b>Surveillance System</b> , with at least one project experience of 500 cameras in a single project, for any Central Government/State Government/PSUs/Defence/Urban Local Bodies in India, in last seven years. Purchase order (POs) must be issued in the name of bidder or the prime bidder (in case of a consortium bid). Purchase orders issued in the name of any consortium partner other than the prime bidder shall not be considered.
84	VOLUME – I  3.5 Pre- Qualification Criteria (ii)	32	<p><b>ELIGIBILITY CRITERIA</b></p> <p>The Bidder shall have an overall average annual turnover of INR 150 Crores out of which INR 75 Cr from IT/ITES/System Integration in India in last three (3) financial years (i.e., 2021-22, 2022-23 and 2023-24).</p> <p><b>DOCUMENT PROOF</b></p> <p>a) Audited financial statements for stated 3 financial years (i.e. 2021-22, 2022-23 and 2023-24).</p> <p>b) Certificate from the Statutory Auditor /Chartered Accountant (CA) clearly specifying the average annual turnover.</p>	<p><b>ELIGIBILITY CRITERIA</b></p> <p>The Bidder shall have an overall average annual turnover of INR 150 Crores out of which INR 75 Cr from IT/ITES/System Integration in India in last three (3) financial years (i.e. FY 2021-22, 2022-23 and FY 2023-24 or 2024-25).</p> <p><b>DOCUMENT PROOF</b></p> <p>a) Audited financial statements for stated 3 financial years (i.e. FY 2021-22, 2022-23 and FY 2023-24 or 2024-25)</p> <p>b) Certificate from the Statutory Auditor / Chartered Accountant (CA) clearly specifying the average annual turnover.</p> <p><b>Same shall be reflected in Clause 5.3 : Particulars of the Bidders Table.</b></p>
85	VOLUME – I  3.5 Pre- Qualification Criteria (iii)	32	<p><b>EILIGIBILITY CRITERIA</b></p> <p>The Net Worth of the bidder should not be negative and should not have eroded by more than 30% in the last (3) financial years i.e., FY 2021-22, 2022-23 and FY 2023-24.</p>	<p><b>EILIGIBILITY CRITERIA</b></p> <p>The Net Worth of the bidder should not be negative and should not have eroded by more than 30% in the last (3) financial years i.e., (i.e. FY 2021-22, 2022-23 and FY 2023-24 or 2024-25)</p> <p>Same shall be reflected in Clause 5.3: Particulars of the Bidders Table.</p>
86	Part1, Section 3.5 Pre- Qualification	32	The “Similar Nature” of the work shall mean project including procurement, supply, installation, implementation of Integrated Command & Control Centre	The “Similar Nature” of the work shall mean project including procurement, supply, installation, implementation of Integrated Command & Control Centre

	Criteria, Point No-IV		(ICCC)/Unified Command & Control System (UCCS) / Data Centre/ Intelligent Traffic Management System (ITMS), with at least one project experience of 500 cameras in a single project, for any Central Government/State Government/PSUs/Defence/Urban Local Bodies in India, in last seven years. Purchase Order (PO) should be in the name of bidder only. Consortium Purchase orders will not be considered.	(ICCC)/Unified Command & Control System (UCCS)/Data Centre/Intelligent Traffic Management System (ITMS)/CCTV Surveillance, with at least one project experience of 500 cameras in a single project, for any Central Government/State Government/PSUs/Defence/Urban Local Bodies in India, in last seven years.  <i>Purchase Orders (POs) must be issued in the name of the bidder or the prime bidder (in case of a consortium bid). Purchase Orders issued in the name of any consortium partner other than the prime bidder shall not be considered.</i>
87	3.6.1, Technical Bid Evaluation Criteria, B3, Integration of ICT Applications with Command-and-Control Centre	36	The bidder should have successfully executed implementation of Command-and-Control Centre in the last seven 7 years as on Bid Submission Date:  2 or more Projects=20 1 Project =10	The bidder should have successfully executed implementation of Command-and-Control Centre/CCTV Surveillance in the last seven 7 years as on Bid Submission Date:  2 or more Projects=20 1 Project =10
88	Volume 1, Part 1	83	Form XX (Format for OEM Authorisation)	Stands Deleted

**ANNEXURE – A (REVISED BOQ)**

20.4. Format for BoQ			
Price bid for RFP for Selection of Implementation Agency for Integrated City Surveillance System at Puri, Odisha for Home Department, Government of Odisha			
Name of the Bidder			
Financial Bid Sheet			
S.No.	Sub-Head	Section/Discipline	Amount in Rs.
CAPEX Cost			
1	Schedule A	Surveillance System	₹ 0.00
2	Schedule B	Parking Surveillance System	₹ 0.00
3	Schedule C	Automatic Number Plate Recognition System (ANPR)	₹ 0.00
4	Schedule D	Red Light Violation Detection (RLVD)	₹ 0.00
5	Schedule E	Speed Violation Detection (SVD) System	₹ 0.00
6	Schedule F	Integrated Command and Control Center (ICCC)	₹ 0.00
7	Schedule G	Variable Message Display (VMD)	₹ 0.00
8	Schedule H	Data Center	₹ 0.00
<b>Sub Total CAPEX</b>			<b>₹ 0.00</b>
OPEX Cost			
9	Schedule I	Network Connectivity	₹ 0.00
10	Schedule J	Manpower Costing	₹ 0.00
11	Schedule K	Capacity Building	₹ 0.00
12	Schedule L	Disaster recovery (Cloud Based Hosting)	₹ 0.00
13	Schedule M	Operations & Maintenance of IT/Non-IT Infrastructure for 5 years	₹ 0.00
<b>Sub Total OPEX</b>			<b>₹ 0.00</b>
<b>Total for CAPEX and OPEX in figures</b>			<b>₹ 0.00</b>
<b>Total for CAPEX and OPEX in words</b>			
<b>Note:</b>			
<ul style="list-style-type: none"> <li>- Quoted Rates shall be inclusive of all the Applicable Taxes Excluding GST.</li> <li>- GST shall be paid over and above</li> <li>- Nil Value Quote against any of the line items shall lead to disqualification of the bidder.</li> </ul>			

Schedule A - Surveillance System					
S.No.	Particular	Unit of Measurement	Qty	Rate per unit (INR)	Amount (INR)
1	SITC of IP Fixed Bullet Camera (4MP) Camera with in-built IR illuminator and associated accessories & systems including SD card 128 GB and surge protector device	Number	886		-
2	SITC of IP PTZ (4 MP) Camera along with associated accessories & systems including SD card 128 GB and surge protector device	Number	65		-

3	SITC of IP Fixed Box ANPR (4MP) Camera along with associated accessories & ANPR license including SD card 128 GB and surge protector device	Number	4		-
4	SITC of External IR Illuminators	Number	4		-
5	SITC of Local Processing Unit	Number	2		
6	SITC of Outdoor Utility Cabinet (Pole Mounted Junction Boxes) with associated mounting arrangement, etc.	Number	240		-
7	SITC of 6 m high galvanised octagonal pole including lightning arrester, earthing, stickers on poles with complete civil foundation works.	Number	162		-
8	SITC of 6 m high galvanised octagonal pole with vertical GI cantilever arm of length 1.5 Meter including lightning arrester, earthing, stickers on poles with complete civil foundation works	Number	400		-
9	SITC of Edge Switch as per solution requirement	Number	270		-
10	SITC of 1KVA capacity online UPS along with battery (Minimum 1 hr back up time)	Number	240		-
11	SITC of Public Address System (Speaker)	Number	126		-
12	SITC of Public Address System (Amplifier)	Number	62		-
13	SITC of Dual mode Drone (Tethered and Untethered)	Number	5		-
<b>Total Quote for Schedule A - Surveillance System in Figures</b>					-
<b>Total Quote for Schedule A - Surveillance System in Words</b>					

<b>Schedule B - Parking Surveillance System</b>					
<b>S.No.</b>	<b>Particular</b>	<b>Unit of Measurement</b>	<b>Qty</b>	<b>Rate per unit (INR)</b>	<b>Amount (INR)</b>
1	SITC of IP Fixed Bullet Camera (4MP) Camera with in-built IR illuminator and associated accessories & systems including SD card 128 GB and surge protector device	Number	26		-
2	SITC of IP PTZ (4 MP) Camera along with associated accessories & systems including SD card 128 GB and surge protector device	Number	2		-
3	SITC of IP Fixed Box ANPR (4MP) Camera along with associated accessories & ANPR license including SD card 128 GB and surge protector device	Number	42		-
4	SITC of External IR Illuminators	Number	42		-
5	SITC of Local Processing Unit	Number	20		
6	SITC of Outdoor Utility Cabinet (Pole Mounted Junction Boxes) with associated mounting arrangement, etc.	Number	40		-
7	SITC of 6 m high galvanised octagonal pole with vertical GI cantilever arm of length 1.5 Meter including lightning arrester, earthing, stickers on poles with complete civil foundation works	Number	40		-
8	SITC of Edge Switch as per solution requirement	Number	40		-

9	SITC of 1KVA capacity online UPS along with battery (Minimum 1 hr back up time)	Number	20		-
10	Dismantling & Re-installing of temporary setup for parking area	Locations	11		
<b>Total Quote for Schedule B - Parking Surveillance System in Figures</b>					-
<b>Total Quote for Schedule B - Parking Surveillance System in Words</b>					

<b>Schedule C - Automatic Number Plate Recognition System (ANPR)</b>					
<b>Sl.No.</b>	<b>Particular</b>	<b>Unit of Measurement</b>	<b>Qty</b>	<b>Rate per unit (INR)</b>	<b>Amount (INR)</b>
1	SITC of IP PTZ (4 MP) Camera along with associated accessories & systems including SD card 128 GB and surge protector device	Number	5		-
2	SITC of IP Fixed Box ANPR (4MP) Camera along with associated accessories & ANPR license including SD card 128 GB and surge protector device	Number	133		-
3	SITC of External IR Illuminators	Number	133		-
4	SITC of IP Fixed Bullet Camera (4MP) Camera with in-built IR illuminator and associated accessories & systems including SD card 128 GB and surge protector device	Number	90		-
5	SITC of Outdoor Utility Cabinet (Pole/floor Mounted Junction Boxes) with associated mounting arrangement, etc.	Number	33		-
6	SITC of 7 m high galvanised octagonal pole along with Cantilever, circular type 7m length including lightning arrester, earthing, stickers on poles with complete civil foundation works	Number	80		-
7	SITC of Edge Switch as per solution requirement	Number	40		-
8	SITC of Local Processing Unit	Number	40		-
9	SITC of 2KVA capacity online UPS along with battery (Minimum 1 hr back up time)	Number	33		-
<b>Total Quote for Schedule - C ANPR System in Figures</b>					-
<b>Total Quote for Schedule - C ANPR System in Words</b>					

<b>Schedule D- Red Light Violation Detection (RLVD) System</b>					
<b>S.No.</b>	<b>Particular</b>	<b>Unit of Measurement</b>	<b>Qty</b>	<b>Rate per unit (INR)</b>	<b>Amount (INR)</b>
1	SITC of RLVD with Speed Violation detection (SVD) software & License per lane with No helmet, triple riding and wrong way.	ITMS Locations	5		-
2	SITC of IP Fixed Box ANPR (4MP) Camera along with associated accessories & ANPR license including SD card 128 GB and surge protector device	Number	32		
3	SITC of External IR Illuminators	Number	32		

4	SITC of Fixed Cameras (Outdoor Box/Bullet) for Evidence/Overview with associated accessories & systems including SD card 128 GB and surge protector device	Number	20		
5	SITC of Local Processing Unit	Number	20		
6	SITC of 7 m high galvanised octagonal pole along with Cantilever, circular type 7m length including lightning arrester, earthing, stickers on poles with complete civil foundation works	Number	20		
7	SITC of Traffic Light Aspects-RED (300 mm dia) with all accessories, mounting, etc	Number	60		-
8	SITC of Traffic Light Aspects-GREEN (300 mm dia) with all accessories, mounting, etc	Number	180		-
9	SITC of Traffic Light Aspects-AMBER (300 mm dia) with all accessories, mounting, etc	Number	60		-
10	SITC of Countdown Timer Dual Colour (2.5" Digit) with all accessories, mounting, etc	Number	20		-
11	SITC of Pedestrian lamp heads (300 mm dia) -Stop Man with all accessories, mounting, etc	Number	20		-
12	SITC of Pedestrian lamp heads (300 mm dia) -Walk Man with all accessories, mounting, etc	Number	20		-
13	SITC of vehicle detector camera (Bullet camera 2.8 -12 mm) with all accessories, mounting, etc	Number	20		
14	SITC of ATCS Controller	Number	5		
15	SITC of Galvanized Cantilever poles (6 meter vertical & 6 Meter Horizontal arm) including lightning arrester, earthing, stickers on poles with complete civil foundation works	Number	20		
16	SITC of Galvanized standard poles (6 meter vertical) including lightning arrester, earthing, stickers on poles with complete civil foundation works	Number	10		
17	SITC of Outdoor Utility Cabinet (Pole/floor Mounted Junction Boxes) with associated mounting arrangement, etc.	Number	20		
18	SITC of 2KVA capacity online UPS along with battery (Minimum 1 hr back up time) for ATCS system	Number	20		
19	SITC of Outdoor Utility Cabinet (Pole/floor Mounted Junction Boxes) with associated mounting arrangement, etc.	Number	10		-
20	SITC of Public Address System (Speaker)	Number	20		-
21	SITC of Public Address System (Amplifier)	Number	5		-
22	SITC of Edge Switch as per solution requirement	Number	10		-
23	Junction Level Painting - Poles, Crossing, Stop Line etc.	Number	5		-
24	SITC of 2KVA capacity online UPS along with battery (Minimum 1 hr back up time)	Number	5		-
<b>Total Quote for Schedule D- RLVD System in Figures</b>					-
<b>Total Quote for Schedule D- RLVD System in Words</b>					

**Schedule - E Speed Violation Detection (SVD) System**

S.No.	Particular	Unit of Measurement	Qty	Rate per unit (INR)	Amount (INR)
1	SITC of IP Fixed Box ANPR (4MP) Camera along with associated accessories & ANPR license including SD card 128 GB and surge protector device	Number	16		-
2	SITC of External IR Illuminators	Number	16		-
3	SITC of IP Fixed Bullet Camera (4MP) Camera with in-built IR illuminator and associated accessories & systems including SD card 128 GB and surge protector device	Number	8		-
4	SITC of Outdoor Utility Cabinet (Pole/floor Mounted Junction Boxes) with associated mounting arrangement, etc.	Number	4		-
5	SITC of 7 m high galvanised octagonal pole along with Cantilever, circular type 7m length including lightning arrester, earthing, stickers on poles with complete civil foundation works	Number	8		-
6	SITC of Edge Switch as per solution requirement	Number	4		-
7	SITC of Local Processing Unit	Number	8		-
8	SITC of 2KVA capacity online UPS along with battery (Minimum 1 hr back up time)	Number	4		-
9	SITC of 220/240 VAC Power Surge Protector (Applicable for All schedule )	Number	378		
10	SITC of 2c x 10 Sqmm Power Armoured Au. Cable (Applicable for all schedule )	Meter	30300		
11	SITC of 3c x 2.5 Sqmm Power Armoured copper Cable (Applicable for all schedule )	Meter	21460		
12	SITC of 2c x 1.5 Sqmm Power Armoured copper Cable (Applicable for All schedule )	Meter	12480		
13	SITC of Fibre Optics Armoured Cable 12 core for last mile connectivity Applicable for All schedule )	Meter	10500		
14	SITC of UTP Cat -6 Armoured Cable (Applicable for All schedule )	Meter	98870		
15	SITC of 2c x 2.5 sqmm Power armoured cable for Traffic Lights (ATCS)	Meters	1000		
16	SITC of 7c x 1.5 sqmm armoured cable for Traffic Lights (ATCS)	Meters	2000		
17	SITC of 4c x 0.75 sqmm unarmoured cable for Traffic Lights (ATCS)	Meters	1500		
18	SITC of HDPE duct 50 mm (Applicable for All schedule )	Meter	50800		
19	Trenching & RI. (Applicable for All schedule )	Meter	50800		
20	SITC of Networking Passive Components like Patch Panel, LIU, Patch Cords, PVC/GI flexible, Installation & Labour Charges, etc. (Applicable for All schedule )	Lumpsum	1		
21	Electric meter connections for Field locations (Applicable for All schedule )	Number	310		

Total Quote for Schedule E - SVD System in Figures			-
Total Quote for Schedule E - SVD System in Words			

**Schedule F- Integrated Command and Control Center (ICCC)**

S.No.	Particular	Unit of Measurement	Qty	Rate per unit (INR)	Amount (INR)
1	SITC of Video wall, 55-inch, 4x3 matrix, 24x7 rated with mounting structures, wall controller/processor, signal transport, all cabling/terminations, calibration, integration, testing & commissioning including Video wall controller with wall management software	Set	1		-
2	SITC of Operator Workstations (City Management Room) with 3 Monitors	Number	15		-
3	SITC of IP Phones	Number	15		-
4	SITC of Multi-Function Laser Printer (City Operations Room)	Number	1		-
5	SITC of 65"/70" LED display to present critical information Display	Number	1		-
6	SITC of BMS, Access control, fire and smoke detection, Minimum 120 W Amplifier with 10 speaker components.	Set	1		-
7	SITC of Video conferencing system	Number	1		
8	SITC of Air Conditioner 2 Ton Split Type (5 Star Rating)	Number	14		-
9	SITC of Air Conditioner 1.5 Ton Split Type	Number	4		-
10	SITC of PAS Console with mic along with associated accessories & systems including all cables/wires required for end- to-end installation	Number	1		-
11	SITC of Fixed Dome Cameras	Number	12		-
12	SITC of Operator Table for workstations for ICCC	Number	15		-
13	SITC of Operator Table for workstations for Call Center	Number	8		-
14	SITC of Operator Table for workstations for Helpdesk	Number	6		-
15	SITC of Ergonomic Chairs (for operators, meeting rooms, office staff etc.)	Number	55		-
16	SITC of Revolving Chair	Number	5		-
17	SITC of Sofa Set 5-Seater with Glass Table	Number	1		-
18	SITC of Meeting Table for Situation Room	Number	1		-
19	SITC of Executive Table for Officer Room	Number	2		-
20	SITC of Furniture for Reception & Waiting Area	Number	1		-
21	SITC of IP PBX System	Number	1		-
22	SITC of ISDN PRI Licenses	Number	2		-

23	SITC of Contact Center Agent License	Number	3		-
24	SITC of Contact Center Supervisor License	Number	1		-
25	SITC of Headsets	Number	8		-
26	SITC of Civil Work (Raised Floor, False Ceiling, Ducting, Access Doors, Painting, Partitioning etc.) total 4200 Sq. Feet as per the proposed layout	Lumpsum	1		-
<b>Total Quote for Schedule F: ICCC in Figures</b>					-
<b>Total Quote for Schedule F: ICCC in Words</b>					

<b>Schedule G - Variable Message Display (VMD)</b>					
S.No.	Particular	Unit of Measurement	Qty	Rate per unit (INR)	Amount (INR)
1	SITC of VMD board including VMD controller and Mounting structure for VMD as per site requirements.	Number	7		-
2	SITC of 5KVA capacity online UPS along with battery (Minimum 1hr back up time)	Number	7		
3	SITC of the Floor mount Outdoor Utility Cabinet / Junction Box with chemical earthing	Number	7		
4	SITC of Edge Switch as per solution requirement	Number	7		
<b>Total Quote for Schedule G - VMD in Figures</b>					-
<b>Total Quote for Schedule G - VMD in Words</b>					

<b>Schedule H - Data Center</b>					
S.No.	Particular	Unit of Measurement	Qty	Rate per unit (INR)	Amount (INR)
<b>Servers with required Operating System (OS), Databases (DB) &amp; Virtualization Software Licenses as per the proposed Solution</b>					
1	SITC of Server for ICCC Application, Public Address System, VMS, ANPR, Speed Violation Detection, Redlight Violations Detection, EMS, Variable Message Display application, IBMS software and Contact centre. HA applicable for critical applications (VMS & ICCC)	Number	13		
2	SITC of Video analytics server.	Number	10		
<b>Sub Total</b>					-
<b>Software Components for Data Centre</b>					
1	SITC of ICCC Application in N+1 (HA) with 5 user client licenses and 5 mobile application user licenses	Number	1		-
2	SITC of Public Address System (PAS) Application	Number	1		-

3	SITC of Video Management System (VMS) (Software +Licenses) in N+1 (HA) with 10 client user licenses	Number	2000		-
4	SITC of Enterprise Management System for SLA Management	Number	1		-
5	SITC of Anti-virus Software	Set	1		-
6	SITC of ANPR Management Software Licence	Number	1		-
7	SITC of RLVD (Software + License)	Number	1		-
8	SITC of Speed Violation Detection License	Number	1		-
9	SITC of BMS, Access control, fire and smoke detection software	Number	1		-
10	SITC of Variable Message Display Software	Number	7		-
11	SITC of Video analytics for Yatra Route and City - parking violation unusual behaviour as per specification- (50) and parking management (full/empty data)- (40), Crowd density & People count- (300), Fire Detection - (25), Wall / Barrier Climbing Detection- (25).	License per use case	440		-
12	SITC of Video analytics for Temple area - Entry/exit, Queue management (20), Crowd density & People count- (50), Wall / Barrier Climbing Detection- (5), Fire Detection (10), Abandoned object detection (10), entry/exit - Face recognition (20).	License per use case	115		-
13	Integrated Crowd Management System Application Platform	Number	1		-
14	SITC of Video Summarization Software for 25 camera licenses	Number	1		-
15	Social Media Monitoring System Subscription based license	Number	1		-
16	SITC of Contact Center Application	Number	4		-
17	Operating System (OS), Databases (DB), Virtualization Software Licenses as per bidder design	Set	1		-
<b>Sub Total</b>					
					-
<b>Integration with ICC</b>					
1	Integration of PAS	Number	1		-
2	Integration of Surveillance	Number	1		-
3	Integration of ANPR, RLVD, SVD	Number	1		-
4	Integration with Variable Message Display	Number	1		-
5	Integration of existing Body Worn Camera	Number	1		-
6	Integration with Drone	Number	1		-
7	Integration of existing GIS engine/maps	Number	1		-
<b>Sub Total</b>					
					-

Storage					
1	Storage solution (2400 TB Usable)	Set	1		-
2	Backup Solution with Software	Set	1		-
<b>Sub Total</b>					
					-
Network & Security					
1	L3 Core Switch	Number	2		-
2	L2 Switch	Number	4		-
3	SAN Switch (optional)	Set	1		-
<b>Sub Total</b>					
					-
Non-IT					
1	Racks 42U	Number	5		-
2	Precision AC for data centre	Number	3		-
3	DG Set (IT Load Only) with 100 capacity KVA	Number	2		-
4	100KVA with modular UPS with 30 mins backup with failover	Set	1		-
5	DC Build as per specification including Interior, IT/Non-IT Passive works, Fire Detection and Suppression System, Access Control System components etc.	Lumpsum	1		-
<b>Sub Total</b>					
					-
Sl.No.	Particular	Unit of Measurement	Qty	Rate per unit (INR)	Amount (INR)
Network Connectivity					
1	One time cost for Point to Point last mile Network connectivity from Surveillance & Parking Fixed Cameras, PTZ, VMD & PAS to Data Center, min 25 Mbps per location	Locations	267		
2	One time cost for Point to Point last mile Network connectivity from ANPR System to Data Center, min 35 Mbps per location	Locations	33		
3	One time cost for Point to Point last mile Network connectivity from RLVD System to Data Center, min 35 Mbps per location	Locations	5		
4	One time cost for Point to Point last mile Network connectivity from Speed Violation Detection system to Data Center, min 25 Mbps per location	Locations	4		
5	One time cost for min. 8 Gbps dual link connectivity for Aggregation Bandwidth at Data Center/ICCC.	Locations	1		
6	One time cost for Min. 1 Gbps bandwidth for DR Connectivity.	Locations	1		
7	One time cost for Min 50 Mbps Bandwidth for DC- DR replication.	Number	1		

8	One time cost for Min 100 Mbps internet Bandwidth Connectivity at DC.	Locations	1		
S.No.	Particular	Unit of Measurement	Qty	Rate per unit (INR)	Amount (INR)
<b>Cyber Security Components</b>					
1	Firewall in HA	Set	1		-
2	Web Access Firewall in HA	Set	1		-
<b>Sub Total</b>					
					-
<b>Total Quote for Schedule H - Data Center in Figures</b>					-
					-
<b>Total Quote for Schedule H - Data Center in Words</b>					

<b>Schedule I - Network Connectivity</b>					
S.No.	Particular	Unit of Measurement	Qty	Rate per unit (INR)	Amount (INR)
1	Recurring expenses for 5 years for Point to Point Network connectivity from Surveillance & Parking Fixed Cameras, PTZ, VMD & PAS to Data Center, min 25 Mbps per location	Locations	267		
2	Recurring expenses for 5 years for Point to Point Network connectivity from ANPR System to Data Center, min 35 Mbps per location	Locations	33		
3	Recurring expenses for 5 years for Point to Point Network connectivity from RLVD System to Data Center, min 35 Mbps per location	Locations	5		
4	Recurring expenses for 5 years for Point to Point Network connectivity from Speed Violation Detection system to Data Center, min 25 Mbps per location	Locations	4		
5	Recurring expenses for 5 years for Min. 8 Gbps dual link connectivity for Aggregation Bandwidth at Data Center/ICCC.	Locations	1		
6	Recurring expenses for 5 years for Min. 1 Gbps bandwidth for DR Connectivity.	Locations	1		
7	Recurring expenses for 5 years for Min 50 Mbps Bandwidth for DC- DR replication.	Number	1		
8	Recurring expenses for 5 years for Min 100 Mbps internet Bandwidth Connectivity at DC.	Locations	1		
<b>Total Quote for Schedule I - Network Connectivity in Figures</b>					
<b>Total Quote for Schedule I - Network Connectivity in Words</b>					

<b>Schedule J - Manpower Costing</b>						
S.No.	Particular	Qty	Unit of Measurement	Total Required Man month	Rate per Month per Resource (INR)	Total Cost for manpower for entire project duration (INR)

1	Project Manager	1	Manmonth	60		-
2	Solution Architect	1	Manmonth	12		-
3	Cyber security Infrastructure Specialist	1	Manmonth	12		-
4	CCTV Surveillance Expert	1	Manmonth	60		-
5	Business Analyst / Use-case/SoP expert	1	Manmonth	12		-
6	Network Architect	1	Manmonth	12		-
7	Server Storage/Database Expert	1	Manmonth	12		-
8	Operators	15	Manmonth	60		-
9	Security Guard	6	Manmonth	60		-
<b>Total Quote for Schedule K - Manpower Costing in Figures</b>						
<b>Total Quote for Schedule K - Manpower Costing in Words</b>						

Schedule K - Capacity Building					
S.No.	Particular	Unit of Measurement	Qty	Rate per unit (INR)	Amount (INR)
1	Functional Training	Number	4		
2	Administrative Training	Number	2		
<b>Total Quote for Schedule L - Capacity Building in Figures</b>					
<b>Total Quote for Schedule L - Capacity Building in Words</b>					

Schedule L - Disaster Recovery (Cloud Based Hosting)									
S.No.	Particular	Unit of Measurement	Qty	Cost for Year	Cost for Year	Cost for Year	Cost for Year	Cost for Year	Total Cost
				1	2	3	4	5	
1	DR (Cloud Based Hosting)	Yearly	5						-
<b>Total Quote for Schedule M - Disaster Recovery in Figures</b>									-
<b>Total Quote for Schedule M - Disaster Recovery in Words</b>									

Schedule M - Operations & Maintenance of IT / Non-IT Infrastructure									
Sl. No.	Particular	Unit of Measurement	Qty	Cost for Year	Cost for Year	Cost for Year	Cost for Year	Cost for Year	Total Cost
				1	2	3	4	5	
1	Comprehensive Operations & Maintenance of IT / Non-IT Infrastructure for 5 years	Yearly	5						

<b>Total Quote for Schedule N - O&amp;M of IT / Non-IT Infra in Figures</b>							
<b>Total Quote for Schedule N - O&amp;M of IT / Non-IT Infra in Words</b>							

\*The quantity mentioned above are only indicative and the bidder may propose additional item to meet the solution requirements.

\* The qty. of Server mentioned as 23 nos. is minimum, however the bidder may provision actual numbers considering the virtualisation and other requirement.

**ANNEXURE – B (REVISED PAYMENT TERMS)**  
**Clause No 2.4 Project Deliverables, Milestones and Timelines**

<b>2.4 Project Deliverables, Milestones and Timelines</b>				
<b>T = Issuance of Work Order.</b>				
<b>Milestone No.</b>	<b>Milestone Name</b>	<b>Description / Scope of Work</b>	<b>Timeline</b>	<b>Payment Terms</b>
	<b>/ Phase</b>			
<b>M0</b>		T= Issuance of Work Order		
M1	Site Survey & Document submission (Phase 1 and Phase 2)	<ul style="list-style-type: none"> <li>• Completion of site survey and Submission of SRS and FRS document</li> </ul>	<b>T+15 Days</b>	<b>50% of CAPEX supplied</b>
M2	Supply of materials (Phase 1 and Phase 2)	<ul style="list-style-type: none"> <li>• Delivery and certification from Department for the equipment supplied on pro-rata basis.</li> </ul>	<b>T+4 months</b>	
M2	Deployment of Critical Surveillance Infrastructure (Phase 1)	<ul style="list-style-type: none"> <li>• Construction &amp; commissioning of ICCC at JBPC (civil + electrical + IT + non- IT)</li> <li>• Setup of video wall, consoles, servers, storage, VMS, analytics</li> <li>• Deployment along Grand Road corridor (Temple → Gundicha)</li> <li>• Deployment on all entry–exit corridors (Bhubaneswar–Puri, Konark, Chilika/Brahmagiri, Sakhigopal/Chandanpur)</li> <li>• Deployment at all parking sites &amp; Puri Railway Station</li> <li>• Enabling drone-feed readiness</li> </ul>	<b>T+3 months</b>	<b>30% of CAPEX installed and commissioned</b>
M2	Integration with Existing Infrastructure (Phase 1)	<ul style="list-style-type: none"> <li>• Integration with existing SJTA ICCC &amp; Police systems</li> <li>• Integration of Viewing Centre at Singhdwar</li> <li>• Integration of internal &amp; external periphery cameras of Shree Jagannath Temple</li> <li>• Unified alerting, dashboards, SOP alignment among agencies</li> </ul>		
M3	UAT, Testing, Commissioning & Phase-1 Go-Live (Before Rath Yatra 2026)	<ul style="list-style-type: none"> <li>• End-to-end testing, analytics validation, network testing, SOP validation, DR cloud, multi- agency readiness, Go-Live certification.</li> </ul>	<b>T+ 4 Months</b>	<b>10% of CAPEX for go-live of Installed Infrastructure mentioned in M2 and M3.</b>

M4	<b>Phase-2 Deployment &amp; Integration (Citywide Expansion)</b>	<ul style="list-style-type: none"> <li>• Remaining junctions across Puri on pro-rata basis</li> <li>• Marine Drive / Beach Road surveillance</li> <li>• Peripheral town approaches (Pipili, Sipasurubili, Baliapanda, Batagaon, etc.)</li> <li>• Additional parking sites</li> <li>• PAS &amp; VMD deployment citywide</li> <li>• Final OFC ring &amp; redundancy establishment</li> <li>• Drone ingestion capability activation</li> <li>• Integration with Phase-1 ICCC</li> </ul>	<b>T + 10 Months (post Phase-1 Go-Live)</b>	<b>10% of CAPEX</b>
O&M Q1–Q20	Quarterly O&M Services (5 Years – 20 Quarters)	<ul style="list-style-type: none"> <li>• Preventive &amp; corrective maintenance, uptime management, analytics accuracy, emergency response support, dashboard availability, field repairs, replacement of damaged components, reporting.</li> </ul>	<b>Quarterly – 20 Quarters</b>	<b>Quarterly O&amp;M Payment as per Bidder's Quoted O&amp;M Price</b>
<ul style="list-style-type: none"> <li>• All payments to IA shall be made upon submission of invoices along with necessary approval certificates from the Authorities concerned.</li> <li>• The request for payment shall be made to Authority in writing, accompanied by invoices describing the services performed, and by the required documents submitted pursuant to general conditions of the contract and upon fulfilment of all the obligations stipulated in the agreement.</li> <li>• Due payments shall be made promptly by Authority generally within thirty (30) days after submission of an invoice for payment by IA. The Taxes, as applicable, shall be deducted / paid, as per prevalent rules.</li> <li>• The currency or currencies in which payments shall be made to the IA shall be Indian Rupees (INR) only. All remittance charges shall be borne by the IA.</li> <li>• In case of disputed items, the disputed amount shall be withheld and shall be paid only after settlement of the dispute.</li> <li>• Any penalties/liquidated damages, as applicable, for delay and non-performance, as mentioned in this RFP document, shall be deducted from the due payments of the respective milestones.</li> <li>• STQC certificates for cameras to be submitted as part of bid submission and system VAPT to be carried out prior to Go live.</li> </ul> <p>Invoices for infrastructure deployed shall only be considered based on Quoted Financial Rates on pro-rata basis (plus applicable taxes)</p>				

<b>Dome Camera - 4MP</b>		
<b>Sr. No</b>	<b>Specifications</b>	<b>Compliance (Yes/No)</b>
1	Image sensor	1/3" Progressive Scan CMOS or better
2	Max Image Resolution	2560x1440 or better
3	Lens	2.8 to 12 mm lens, Auto/DC/P-Iris, motorized varifocal or better
4	True Day and Night	Yes
5	Wide Dynamic Range	True WDR/DWDR of 120dB or better
6	Minimum Illumination / Light Sensitivity	Colour 0.08 Lux or better, B/W 0 Lux or better
7	IR Distance	IR distance-30m Or better
8	Shutter Speed	Auto/Manual, 1/1~1/10000s
9	Video Compression	H. 265 or better
10	Resolutions and frame rates (H. 265)	Minimum 4MP with 25/30fps or better
11	Video Streams	Individually configurable minimum 03 H. 265 or better video streams
12	Streaming Method	Unicast, Multicast along with multi stream support

13	Local storage	SD Card Slot with 128 GB or better Support with provided 128 GB card
14	Image Settings	Brightness, Sharpness, Contrast etc.
15	Supported Protocol	HTTP, HTTPS/SSL/TLS, TCP, ICMP/RTSP, RTP, UDP, IGMP, RTCP, SMTP, FTP, DHCP, UPnP/ARP/DNS, SMTP, Ipv4, Ipv6, 802.1x(EAP), RTSPS
16	Ethernet Port	RJ-45 (10/100Base-T) Mbps or Better
17	ONVIF	Profile S, G or Profile S, G, T
18	Operating Temp	-10 °C ~ 55 °C, Up to Humidity 90%
19.	HLC, BLC	Auto (Both the attributes must be available and shall function in auto mode in either of the case)
20	IR - Internal	IR 30 meters to be considered Internal
21	Housing	IP 66 or better Rated IK 10 rated for outdoor use
22	Certifications	BIS-IS13252 and Cyber Security Certified by STQC as per IoTSCS and meet the essential requirement issued by MeitY.
23	Power Requirement	POE/POE+
24	Audio	1 Channel Audio IN/ 1 Channel Audio Out or Built In MIC/ 1 Channel Audio Output, Support two-way audio (Optional)
25	MTBF	Min 50000 Hours or better
26	Misc.	The Camera to be provided by the OEM/bidder should not be complying to GB28181, GB/T28181-2011 standards and there should be no option to activate or deactivate GB/T 28181 standards in the camera web page/settings.
27	Warranty & support	Camera Warranty Should include with 5-year comprehensive warranty with no additional cost for change, replacement of parts, labour, consumable, shipment, insurance etc. 24x7 support with 4 hours of response time & 48-hour resolution time.

<b>UPS -1 KVA Online UPS System</b>	
<b>Characteristic</b>	<b>Specification</b>
Capacity	1 KVA, 800 Watt (1Øinput/ 1Ø output)
Topology	True Online Double Conversion UPS
Technology	IGBT Based
<b>INPUT</b>	
Input Facility	1Ø, 2-wire & Ground, (Phase & Neutral + Ground)
Input Voltage Range	1Ph,L-N+PE (175 to 270 Vac on full load) (110 to 300 Vac on 50% load)
Input Frequency Range	45 ~55Hz
Input Power Factor	≥0.99
<b>OUTPUT</b>	
Power Factor	0.8
Nominal Output Voltage	220/230/240Vac shall be available with +/-1% regulation in battery mode
Voltage regulation	± 1% static, ± 5% for Dynamic Load
Nominal Frequency	50Hz±2% (Synchronized to Mains)
Waveform	Sine wave

Crest factor	3:1
Total harmonic distortion (THDv)	< 3% (linear load); <5% (nonlinear load)
Output Short Circuit Protection	Electronic, trip
Transfer time	Mains mode to battery mode: 0 ms; Inverter mode to bypass mode: < 4ms
Maintenance Bypass	Automatic & Manual
Output Connection	Terminal at bottom or Indian Socket
DC Ripple factor	≤1%
Efficiency	Overall (AC to AC) : ≥92%
Overload Protection	>100% ~ 110%: for 5 mins; >110% ~ 125%: for 1 min;
<b>BATTERY &amp; BATTERY BANK CHARGER</b>	
DC BUS voltage	36VDC or Higher
<b>Battery Configuration</b>	<b>Minimum 1512 VAH on 800W load for 60 mins of Backup</b>
Batteries Type	SMF BATTERY
Battery Make	Exide/Quanta/HBL
Battery re-charge time (After complete discharge) to 90% capacity	8-10 Hours , UPS Charger should be 10% of the Battery Ah Capacity
Battery Housing	Should be compact and space saving MS Steel Open Racks complete with interconnectors
<b>Interfaces</b>	Should support DOS/UNIX/WINDOWS OS, RS 232 Connector should be available. SNMP should be provided for remote Monitoring of UPS Health
<b>Cold Start</b>	should be provided
<b>Self-Diagnosis</b>	UPS should be capable to carry out self-test of Rectifier/Charger & Inverter Module during start up
<b>Environmental</b>	
Operating Temperature	0-40 deg C with full load
Type of Cooling	Forced Air
Noise Level	<55 dBA at 1 meter distance
Auto Start, Cold Start & EPO	Shall be available
Humidity	0%-95% non-condensing
<b>INGRESS PROTECTION</b>	IP 20
<b>MEASUREMENTS (ON LCD)</b>	Input & Output Voltage, Input & Output Frequency, Bypass: Voltage & Frequency, Battery Level Indicator, Load Level indicator, Fault codes, , Overload, Short circuit, Low Battery.
<b>CERTIFICATIONS</b>	
BIS	BIS Certificate to be submitted for the quoted Model

CERTIFICATIONS	QMS: As per ISO 9001: 2015 EMS: As per ISO 14001: 2015 ISO 45001: 2018 ISO 27001:2022
Test Certificates	Test Report of UPS should be enclosed conducted from reputed NABL accredited Laboratory for the quoted model complying all technical parameters conducted within last 5 years from the date of opening of Bid.
<b>SUPPORT</b>	
Web/Window base Support	It is mandatory to provide online centralized call tracking system Like OVSD (Open view Service Desk) for monitoring of logged calls viewing through web / windows based access for at least 2 officials.

<b>UPS -2 KVA Online UPS System</b>	
<b>Characteristic</b>	<b>Specification</b>
Capacity	2 KVA, 1600 Watt (1Øinput/ 1Ø output)
Topology	True Online Double Conversion UPS
Technology	IGBT Based
<b>INPUT</b>	
Input Facility	1Ø, 2-wire & Ground, (Phase & Neutral + Ground)
Input Voltage Range	1Ph,L-N+PE (175 to 270 Vac on full load) (110 to 300 Vac on 50% load)
Input Frequency Range	45 ~55Hz
Input Power Factor	≥0.99
<b>OUTPUT</b>	
Power Factor	0.8
Nominal Output Voltage	220/230/240Vac shall be available with +/-1% regulation in battery mode
Voltage regulation	± 1% static, ± 5% for Dynamic Load
Nominal Frequency	50Hz±2% (Synchronized to Mains)
Waveform	Sine wave
Crest factor	3:1
Total harmonic distortion (THDv)	< 3% (linear load); <5% (nonlinear load)
Output Short Circuit Protection	Electronic, trip
Transfer time	Mains mode to battery mode: 0 ms; Inverter mode to bypass mode: < 4ms
Maintenance Bypass	Automatic & Manual
Output Connection	Terminal at bottom or Indian Socket
DC Ripple factor	≤1%
Efficiency	Overall (AC to AC) : ≥92%
Overload Protection	>100% ~ 110%: for 5 mins;
	>110% ~ 125%: for 1 min;
<b>BATTERY &amp; BATTERY BANK CHARGER</b>	
DC BUS voltage	48VDC or Higher

<b>Battery Configuration</b>	<b>Minimum 3024 VAH on 1600 W load for 60 mins of Backup</b>
Batteries Type	SMF BATTERY
Battery Make	Exide/Quanta/HBL
Battery re-charge time (After complete discharge) to 90% capacity	8-10 Hours , UPS Charger should be 10% of the Battery Ah Capacity
Battery Housing	Should be compact and space saving MS Steel Open Racks complete with interconnectors
<b>Interfaces</b>	Should support DOS/UNIX/WINDOWS OS, RS 232 Connector should be available. SNMP should be provided for remote Monitoring of UPS Health
<b>Cold Start</b>	should be provided
<b>Self-Diagnosis</b>	UPS should be capable to carry out self-test of Rectifier/Charger & Inverter Module during start up
<b>Environmental</b>	
Operating Temperature	0-40 deg C with full load
Type of Cooling	Forced Air
Noise Level	<55 dBA at 1 meter distance
Auto Start, Cold Start & EPO	Shall be available
Humidity	0%-95% non-condensing
<b>INGRESS PROTECTION</b>	IP 20
<b>MEASUREMENTS (ON LCD)</b>	Input & Output Voltage, Input & Output Frequency, Bypass: Voltage & Frequency, Battery Level Indicator, Load Level indicator, Fault codes, , Overload, Short circuit, Low Battery.
<b>CERTIFICATIONS</b>	
BIS	BIS Certificate to be submitted for the quoted Model
CERTIFICATIONS	QMS: As per ISO 9001: 2015 EMS: As per ISO 14001: 2015 ISO 45001: 2018 ISO 27001:2022
Test Certificates	Test Report of UPS should be enclosed conducted from reputed NABL accredited Laboratory for the quoted model complying all technical parameters conducted within last 5 years from the date of opening of Bid.
<b>SUPPORT</b>	
Web/Window base Support	It is mandatory to provide online centralized call tracking system Like OVSD (Open view Service Desk) for monitoring of logged calls viewing through web / windows based access for at least 2 officials.

<b>UPS -5 KVA Online UPS System</b>	
<b>Characteristic</b>	<b>Specification</b>
Capacity	5 KVA, 4000 Watt (1Øinput/ 1Ø output)
Topology	True Online Double Conversion UPS
Technology	IGBT Based
<b>INPUT</b>	

Input Facility	1Ø, 2-wire & Ground, (Phase & Neutral + Ground)
Input Voltage Range	1Ph,L-N+PE (175 to 270 Vac on full load) (110 to 300 Vac on 50% load)
Input Frequency Range	45 ~55Hz
Input Power Factor	≥0.99
<b>OUTPUT</b>	
Power Factor	0.8
Nominal Output Voltage	220/230/240Vac shall be available with +/-1% regulation in battery mode
Voltage regulation	± 1% static, ± 5% for Dynamic Load
Nominal Frequency	50Hz±2% (Synchronized to Mains)
Waveform	Sine wave
Crest factor	3:1
Total harmonic distortion (THDv)	< 3% (linear load); <5% (nonlinear load)
Output Short Circuit Protection	Electronic, trip
Transfer time	Mains mode to battery mode: 0 ms; Inverter mode to bypass mode: < 4ms
Maintenance Bypass	Automatic & Manual
Output Connection	Terminal at bottom or Indian Socket
DC Ripple factor	≤1%
Efficiency	Overall (AC to AC) : ≥92%
Overload Protection	>100% ~ 110%: for 5 mins;
	>110% ~ 125%: for 1 min;
<b>BATTERY &amp; BATTERY BANK CHARGER</b>	
DC BUS voltage	120-240 V Configurable
<b>Battery Configuration</b>	<b>Minimum 9072 VAH on 4000 W load for 60 mins of Backup</b>
Batteries Type	SMF BATTERY
Battery Make	Exide/Quanta/HBL
Battery re-charge time (After complete discharge) to 90% capacity	8-10 Hours , UPS Charger should be 10% of the Battery Ah Capacity
Battery Housing	Should be compact and space saving MS Steel Open Racks complete with interconnectors
<b>Interfaces</b>	Should support DOS/UNIX/WINDOWS OS, RS 232 Connector should be available
	SNMP should be provided for remote Monitoring of UPS Health
<b>Cold Start</b>	should be provided
<b>Self-Diagnosis</b>	UPS should be capable to carry out self-test of Rectifier/Charger & Inverter Module during start up
<b>Environmental</b>	
Operating Temperature	0-40 deg C with full load
Type of Cooling	Forced Air

Noise Level	<55 dBA at 1 meter distance
Auto Start, Cold Start & EPO	Shall be available
Humidity	0%-95% non-condensing
<b>INGRESS PROTECTION</b>	IP 20
<b>MEASUREMENTS (ON LCD)</b>	Input & Output Voltage, Input & Output Frequency, Bypass: Voltage & Frequency, Battery Level Indicator, Load Level indicator, Fault codes, , Overload, Short circuit, Low Battery.
<b>CERTIFICATIONS</b>	
BIS	BIS Certificate to be submitted for the quoted Model
CERTIFICATIONS	QMS: As per ISO 9001: 2015 EMS: As per ISO 14001: 2015 ISO 45001: 2018 ISO 27001:2022
Test Certificates	Test Report of UPS should be enclosed conducted from reputed NABL accredited Laboratory for the quoted model complying all technical parameters conducted within last 5 years from the date of opening of Bid.
<b>SUPPORT</b>	
Web/Window base Support	It is mandatory to provide online centralized call tracking system Like OVSD (Open view Service Desk) for monitoring of logged calls viewing through web / windows based access for at least 2 officials.

<b>100 KVA ONLINE MODULAR UPS</b>	
Supply, installation and commissioning of 100KVA/100KW True On-Line Double Conversion Modular type Online UPS. UPS shall be N+1(5*20KVA+1) configuration in Module level.	
Each UPS shall also have an a) Inverter fully rated, continuous duty static bypass switch for high-speed transfers along with RS232 port, USB port, SNMP Slot, Dry contact ports b) Switch Unit comprising of Main Breaker, Maintenance Bypass and Output Breaker	
The control panel comprising of a graphical LCD, touch screen based, with LED status indicators for monitoring of all measured parameters, UPS and battery status and alarms.	
<b>DETAILED SPECIFICATION SHEET</b>	
MODEL RATING (1.0 p.f.)	100 KVA/100KW On-Line UPS
<b>ELECTRICAL CHARACTERISTICS INPUT</b>	
Rated input voltage	380 V; 400 V; 415 V, 3 Phase
Voltage tolerance	310~ 478 VAC without power downgrading; 145-300 Vac with linear downgrading @30%)
Rated input frequency	50 or 60 Hz, user configurable
Frequency tolerance	45 to 55 Hz
Input power factor, double conversion @100% load	≥0.99
Input current distortion at rated input current	≤ 5%
<b>ELECTRICAL CHARACTERISTICS OUTPUT</b>	
Crest factor	3:1
Rated output voltage	380 V; 400 V; 415 V, configurable

Output voltage variation, steady state	± 1% (balanced load); ± 2% (unbalanced load)
Total voltage harmonic distortion	
100% linear load	≤ 3%
100% non-linear load	≤ 5%
Rated output frequency	50 or 60 Hz, configurable
Output frequency variation	± 0.1 Hz
Overload capability	110%-125%; transfer to bypass in 10 mins, 125%-150%; transfer to bypass in 1 min, >150% transfer to bypass in 200 ms
Efficiency in double-conversion, rated linear load	>92%
<b>BYPASS</b>	
Type of bypass	Static
Bypass rating	100 KW
Bypass voltage range	380 V; 400 V; 415 V
<b>BATTERY CHARACTERISTICS</b>	
Battery technology	SMF BATTERY
Nominal VAH for 30 Min Backup	96000 VAH on 80000 watt load
<b>COMMUNICATION CIRCUITS</b>	
Standard connectivity ports	USB, RS-232, Web and SNMP card
System Display	Colour touch based graphical LCD display
<b>ENVIRONMENTAL</b>	
Acoustic noise at 1 m, in 25 °C ambient temperature	< 65 dBA
Ambient service temperature range	0°C to + 40°C without output power derating
<b>SNMP</b>	SNMP CARD
<b>INGRESS PROTECTION</b>	IP 20
<b>COMPLIANCE WITH STANDARDS</b>	
ISO Certification	QMS: As per ISO 9001: 2015 EMS: As per ISO 14001: 2015 ISO 45001: 2018 ISO 27001:2022
<b>SUPPORT</b>	
<b>Web/Window base Support</b>	It is mandatory to provide online centralized call tracking system Like OVSD (Open view Service Desk) for monitoring of logged calls viewing through web / windows based access for at least 2 officials.

## 16. Variable Message Display

The functional requirements and technical specifications provided in the below sections and at other sections in this RFP are indicative and carry guiding rule. The IA is free to offer products and solutions which meet requirements of the RFP focusing on the outcome, future scalability, security, reliability and adherence to specified SLA under this RFP, in line with applicable standards & best practices adopted in the industry. The IA is encouraged to design an optimized solution which is technically

superior, innovative, proven, better in terms of functionality and is cost effective. Any specified parameters mentioned in the scope/technical requirement in the RFP may be considered if it is required for meeting current & future requirements during the contract period. The IA is fully responsible for the specified outcome to be achieved.

### **16.1. Functional Requirements**

- a) The system should be capable to display warnings, traffic advice, route guidance, situational awareness information and emergency messages to motorists from the CCCs/ICCC in real time by using local PC/Laptops.
- b) The VMD should display text and graphic messages using Light Emitting Diode (LED) arrays.
- c) The System should support Display characters in true type fonts and adjustable based on the operating system requirement.
- d) The VMD workstation at the CCCs/ICCC should communicate with the VMD controller through the network. It should send out command data to the variable message display controller and to confirm normal operation of the signboard. In return, the VMD workstation should receive status data from the VMD controller.
- e) VMD controllers should continuously monitor the operation of the VMD via the provided communication network.
- f) Operating status of the variable message display should be checked periodically from the CCCs/ICCC
- g) It shall be capable of setting an individual VMD or group of VMD's to display either one of the pre-set messages or symbols entered into the computer via the control computer keyboard or by another means.
- h) It shall be capable of being programmed to display an individual message to a VMD or a group of VMD's at a pre-set date and time.
- i) A sequence of a minimum of 10 messages/pictures/pre-decided sign or group of signs shall be possible to assign for individual VMD or group of VMD's.
- j) It shall also store information about the time log of message displayed on each VMD. The information stored shall contain the identification number of the VMD, content of the message, date and time at which displayed message/picture starts and ends.
- k) The central control computer shall perform regular tests (pre-set basis) for each individual VMD. Data communication shall be provided with sufficient security check to avoid unauthorized access.
- l) It shall have the capability to display live streaming/program/event, etc.

### **1 Variable Message Displays (VMD) Application**

Central Control Software allows controlling multiple VMD from one console.

- a) Capable of programming to display all types of Message/ advertisement having alphanumeric character in English, Hindi and combination of text with pictograms signs. The system should have feature to manage video / still content for VMD. The system should have capability to divide VMD screen into multi-parts to display diverse form of information like video, text, still images, advertisements, weather info, city info etc. The system should also provide airtime management and billing system for paid content management.
- b) Capable of controlling and displaying messages on VMD boards as individual/group.
- c) Capable of controlling and displaying multiple font types with flexible size and picture sizes

suitable as per the size of the VMD.

- d) Capable of controlling brightness & contrast through software.
- e) Capable to continuously monitor the operation of the Variable Message Display board, implemented control commands and communicate information to the CCCs/ICCC via communication network.
- f) Real-time log facility – log file documenting the actual sequence of display to be available at central control system.
- g) Multilevel event log with time & date stamp.
- h) Access to system only after the authentication and acceptance of authentication based on hardware dongle with its log.
- i) Location of each VMD shall be plotted on GIS Map with their functioning status which can be automatically updated.
- j) Report generation facility for individual/group/all VMDs with date and time which includes summary of messages, dynamic changes, fault/repair report and system accessed logs, link breakage logs, down time reports or any other customized report.
- k) Configurable scheduler on date/day of week basis for transmitting pre-programmed message to any VMD unit.
  
- l) Various users should access the system using single sign on and should be role based. Different roles which could be defined could be Administrator, Supervisor, Officer, Operator, etc.
- m) Apart from role-based access, the system should also be able to define access based on location.
- n) Rights to different modules / Sub-Modules / Functionalities should be role based and proper log report should be maintained by the system for such access.
- o) Components of the architecture should provide redundancy and ensure that there are no single points of failure in the key project components. To take care of remote failure, the systems need to be configured to mask and recover with minimum outage.
- p) The architecture should adopt an end-to-end security model that protects data and the infrastructure from malicious attacks, theft, natural disasters etc. provisions for security of field equipment as well as protection of the software system from hackers and other threats shall be a part of the proposed system.
- q) Ease of configuration, ongoing health monitoring, and failure detection are vital to the goals of scalability, availability, and security and should be able to match the growth of the environment.
- r) System shall use open standards and protocols to the extent possible.
- s) Facility to export reports to excel and PDF formats.

## **2 Remote Monitoring**

- a) All VMD shall be connected/configured to ICCC for remote monitoring through network for two-way communication between VMD and control Room to check system failure, power failure & link breakage.
- b) Remote Diagnostics to allow identifying failure up to the level of failed individual LED.

## 16.2. Technical Specifications of VMDs

- a. **Size:** Minimum 3.0m (W) × 2.0m (H) active display area (±5%). Cabinet Size: Modular cabinet approx. 960mm × 960mm × ≤100mm depth.
- b. **Colour LED:** Full Colour, class designation C2 as per IRC/EN 12966 standard
- c. **Luminance Class/Ratio:** L3 as per IRC/EN 12966 standards.
- d. **Luminance Control & auto Dimming:**
  - Should be automatically provide different luminance levels but shall also be controllable from the traffic center using software.
  - Should have auto dimming capability to adjust to ambient light level (sensor based automatic control)
  - Photoelectric sensor shall be positioned at the Display front and Display rear to measure ambient light. Capable of being continually exposed to direct sunlight without impairment of performance.
- e. **Contrast Ratio:** R3 as per IRC/EN 12966 standard
- f. **Beam Width:** B6+ as per IRC/EN12966 standards.
- g. **VMD Parameter:** The VMD shall have a pixel pitch of 4.44 mm or better, utilizing SMD technology (SMD1921 or equivalent), with a pixel matrix configuration of 216 × 216 per panel and a minimum pixel density of 50,625 pixels per square meter. The display shall provide a minimum contrast ratio of 5000:1 for enhanced visibility and clarity.
- h. **Cabinet:** Die cast Aluminum
- i. **Picture Display:**
  - At least 300mm as per IRC /EN 12966 standards
  - Full Matrix: Number of lines & characters adjustable, active area: 3.88m X 2.8m at least
  - Synchronized Dot to Dot display.
  - Capable of displaying real time message generated by CCCs/ICCC.
  - Special frontal design to avoid reflection.
  - Display shall be UV resistant.
  - Certification: BIS, ISO 9001, ROHS, FCC, CE, MAC
- j. **Viewing Angle:** Minimum 140° (Horizontal) and ±60° (Vertical) & as per EN12966 B6+ class compliance standard - Viewing angle shall ensure message readability for motorists in all lanes of the approach road
- k. **Viewing Distance:** Suitable for readability from 150 Mtr. or more at the character size of 240mm, from moving vehicles.
- l. **VMD Controller:** The VMD Controller shall support a maximum pixel loading capacity of not less than 6.2 million pixels, with a maximum width of at least 10,240 pixels and a maximum height of at least 8,192 pixels. It shall support input resolutions up to 4K × 2K at 60Hz. The controller shall provide video input interfaces including HDMI 1.4 or higher, 3G-SDI, and 10G Optical. It shall have output interfaces comprising a minimum of 10 × Gigabit Ethernet ports and 2 × 10G Optical ports. The controller shall support a minimum of four (4) independent layers and shall operate with zero-frame latency in bypass mode. It shall support at least 128 preset configurations for quick scene switching. The controller shall operate on AC 100–240V power supply and function reliably within an operating temperature range of 0°C to 55°C.
- m. **Alarms**
  - Door Open sensor to Inform Control room during unauthorized access.

- LED Pixel failure detection alarm
- n. Flicker:** Refresh Frequency should not be less than 7680 Hz. No visible flicker to naked eye.
- o. Multiple Data Communication interface/Port:** RJ45 Ethernet, USB
- p. Communication (connectivity):** Wired & 4G/5G.
- q. Ambient Operating Temperature:** The system should be capable of working in ambient temperature as per Puri weather conditions.
- r. Humidity (RH):** As Per local environment conditions
- s. Protection against Pollution/dust/water:** Complete VMD should be of IP 66 protection level from front and IP65 from side and rear. As per EN60529 or equivalent Standard.
- t. Power:**
- Preferably 170-250V AC (more than 90% power factor) or DC as per equipment requirement.
  - Protection for overvoltage/ fluctuation/drop of the nominal voltage (50%) shall be incorporated.
  - The enclosure shall contain at least two 15 Amp VAC (industrial grade) outlet socket for maintenance purpose.
- u. Power Back-up & its enclosure:** Should have UPS provisioning as per SLA requirements. The enclosure of UPS and battery should be pole mountable with IP 65 protected housing and lockable.
- v. Material for VMD frame:** Preferably at least 2mm aluminum or non-corrosive, water resistant or better. Frame of the VMD should be black & Powder coated.
- w. Mounting, Installation and finishes:**
- Mounting structure shall use minimum 6Mtrs. High Cylindrical GI Pole (Class B) or suitable structure with 5.5 mtrs. Minimum vertical clearance under the VMD from the Road surface.
  - The mounting shall be capable of withstanding roadside vibrations at site of installation
  - It shall be provided with suitable walkway for maintenance access.
  - The sides interior and rear of enclosures shall be provided in maintenance free natural aluminum finish. All enclosure
  - Rugged locking mechanism should be provided for the onsite enclosures and cabinets.
  - For Structural safety, the successful bidder has to provide structural safety certificate from qualified structural engineers approved/ certified by Govt. Agency.
  - The cabinet shall be of high-strength die-cast aluminum construction with an aluminum module shell, having a maximum depth of 91 mm and a single cabinet weight not exceeding 26 kg.
- x. Wind Load:** WL9 as per EN12966 to withstand high wind speeds and its own load.
- y. Cabling, connections and Labelling:**
- All cable conductors shall be of ISI marked for quality and safety. It shall be of copper insulated, securely fastened, grouped, wherever possible, using tie warps approximately every 10-20 Cms or cable trays.
  - All connections shall be vibration-proof quick release connections except for power cables terminating in terminal blocks, which shall be screwed down.
  - All terminal blocks shall be made from self-extinguishing materials. Terminations shall be logically grouped by function and terminals carrying power shall be segregated from control signal terminals.

- Lightning arrester shall be installed for safety on each VMD.
- z. **Local Storage in VMD:** Embedded VMD controller should be capable to store at least 100 messages and symbols/pictograms to allow display to run in isolated mode on a predefined structure/timing, in case of connectivity failure.

### 3 Physical/Civil requirement

The IA shall be responsible for carrying out all the civil work required for setting VMD infrastructure including, but not limited to:

- Survey, location finalization in coordination/ approval from Authority
- The IA shall consider for lateral clearance as well as a vertical clearance height as per Public Works Departments/ road repair division following NHAI (National Highway Authority of India) guidelines.
- Preparation of concrete foundation for VMD Gantry/Pole.
- Hard/soft soil deep digging and backfilling after cabling.
- Erect Gantry/Pole of required size and specifications) with spans, at various locations single lane road, double lane road) for installing VMDs.
- Chambers with metal cover at every junction box, gantry/pole and at road crossings.
- Coordination with relevant authorities for permission to erect gantry/poles and other infrastructure. No commercial/legal fees (except the RoW charges) shall be applicable to Authority for obtaining the necessary permissions.
- To ensure all the components installed in the outdoor locations are vandal proof.
- In case the equipment/sensors get damaged for reasons whatsoever, it shall repair/replace the same in the specified time as per SLAs at no extra cost to the Authority.

### 4 Electrical requirements

- IA shall provision for electricity connection to the VMDs through an aggregation point. Since this component has dependency on approval from local authorities, it is recommended that IA plans this requirement well in advance & submits the application to the concerned electricity distribution agency with requisite fees, as applicable.
- IA shall carry out the electrical work required for powering all the components of VMD system.
- Earthing details to be added.

#### Note:

- **Bid document is to be submitted through ONLINE mode only. Physical Bid documents will not be accepted.**
- **All other terms and conditions of the RFP remain unchanged.**

**SD/GM (Admn.)  
OCAC**