



**Tender for**  
**GIS Survey & Application**  
**for**  
**Aurangabad Municipal Corporation**  
**Under the Aurangabad Smart City project executed by**  
**Aurangabad Smart City Development Corporation Limited**  
**Volume 1**

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## ABBREVIATIONS & DEFINITIONS

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Abbreviations	Meaning / Definition
A/C	Account
ACDB	AC Distribution Board
AES	Advanced Encryption Standard
AMC	Aurangabad Municipal Corporation
API	Application Programming Interface
ASCDCL	Aurangabad Smart City Development Corporation Limited
AVL	Automatic Vehicle Locator
BOQ	Bill of Quantities
BPR	Business Process Reengineering
CCAMC	Comprehensive Annual Maintenance Contract
CE	Conformité Européenne
CFCs	Citizen Facilitation Center
CMM	Capability Maturity Model
COA	Chart of Accounts
CoO	Country of Origin
COTS	Commercially off the Shelf
CPBG	Composite Performance Bank Guarantee
CRS	Civil Registration System
DMS	Document Management System
DOB	Date of Birth
DOD	Date of Death
DPI	Dots per inch
DR	Disaster Recovery
EMD	Earnest Money Deposit
EMI	Electromagnetic Interference
ERP	Enterprise Resource Planning
FCC	Federal Communications Commission
FDS	Functional Design Specification
FY	Financial Year
GB	Gigabyte
GIS	Geographic Information System
GoI	Government of India
GoM	Government of Maharashtra
GUI	Graphical User Interface
HLD	High Level Design
HO	Head Office
HQ	Head Quarter

HR	Human Resources
HVAC	Heating Ventilation and Air Conditioning
I/O	Information Outlet
ID	Identification
IEEE	Institute of Electrical & Electronics Engineers
IGBT	Insulated-gate bipolar transistors
IOT	Internet of Things
IP	Internet Protocol
IP Rating	Ingress Protection Rating
IPV6	Internet Protocol Version 6
ISO	International Standards Organisation
ISP	Internet Service Provider
IT	Information Technology
JV	Joint Venture
LAN	Local Area Network
LLD	Low Level Design
LOI	Letter of Intent
MAF	Manufacturer's Authorization Form
MB	Megabyte
MCSE / MCSA	Microsoft Certified Solutions Expert / Associate
MEITY	Ministry of Electronics and Information Technology, Gol
MIS	Management Information System
MOU	Memorandum of Understanding
MPLS	Multiprotocol Label Switching
MS	Microsoft
MSDG	Mobile eGovernance Service Delivery Gateway
NAS	Network Attached Storage
NMAM	National Municipal Accounting Manual
OEM	Original Equipment Manufacturer
OF/OFC	Optical Fiber Cable
OGC	Open Geospatial Consortium
OS	Operating System
P&L	Profit & Loss
P2P	Peer-to-Peer
PBG	Performance Bank Guarantee
PC	Personal Computer
PKI	Public Key Infrastructure
PO	Purchase Order
PQC	Pre-Qualification Criteria
PVC	Polyvinyl Chloride
RAM	Random access memory
RDBMS	Relational Database Management System

RDP	Remote Desktop Protocol
RFI	Request for Information
RFP	Request For Proposal
RoHS	Restriction of Hazardous Substances
RTC	Real Time Clock
SAN	Storage Area Network
SDWAN	Software Defined Wide Area Network
SSR	State Scheduled Rates
STQC	Standardisation Testing and Quality Certification
SWM	Solid Waste Management
TSP	Telecom Service Provider
TTF	Time to first fix
UAT	User Acceptance Testing
UID	Unique Identification
ULBs	Urban Local Bodies
UPS	Uninterrupted Power Supply
USB	Universal Serial Bus
UTM	Unified Threat Management
VHF	Very High Frequency
VTS	Vehicle Tracking System
WAN	Wide Area Network

The word bidder may be variously described as agency / SI (System Integrator) in the document

## **1 TENDER NOTICE**

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Aurangabad Smart City Development Corporation Limited invites online tenders for “GIS Survey & Application” for Aurangabad Municipal Corporation.

### **1.1 Schedule**

As per the Notice Inviting Tender (NIT).

### **1.2 Downloading Tender Documents**

Tender documents will be available on the website upto the date and time as shown above. Tenderers who wish to participate in this tender shall have to register on web site [www.mahatenders.gov.in](http://www.mahatenders.gov.in)

### **1.3 Online Submission of Tender**

1. Payment of tender fee, tender document downloading, EMD, preparation of bids & submission of bids can be done online on [www.mahatenders.gov.in](http://www.mahatenders.gov.in)
2. No written or online request in this regard shall be entertained. Tenderers shall submit their tender in electronic format only on above mentioned website and prior to the date and time mentioned above. Tender documents in any other form including in physical form shall not be accepted and the same shall be accepted in the electronic format.
3. A scan copy of all details as required shall be uploaded in electronic format only. During the opening of online technical bid if it is found that above details as mentioned are not submitted in electronic format, tenders of such tenderer shall not be considered.
4. The tender document comprises of two tenders i.e. (i) Technical bid and (ii) Commercial bid.

### **1.4 Submission of Tender Fees & EMD**

Tender Fees (Non-refundable) shall be paid online on the eTendering website. The EMD shall be paid online on the eTendering website as per the norms.

### **1.5 Pre-bid meeting**

Pre-tender meeting will be held at the Smart City office, Aurangabad or online through video conference, as per the published schedule for any clarifications/queries.



## 1.6 Tender Opening

1. Technical tenders shall be first opened online on as per the published schedule at Office of the CEO, ASCDCL, Aurangabad.
2. Technical bid shall be evaluated as per procedures mentioned in the tender documents. The decision of the committee on evaluation of the bids shall be final and binding to every tenderer.
3. Commercial bid of only qualified tenderers whose technical bids are qualified shall be opened.
4. The tender documents fees for online tender document shall not be refunded under any circumstances.
5. Tenders without tender fees, EMD and which do not fulfill all or any of the conditions of tender document shall be rejected outright. Tender with incomplete details in any aspect shall also be rejected.
6. Conditional tender shall not be accepted.
7. This tender notice shall form a part of the tender document.
8. The tenderers are advised to read carefully all the Instructions and conditions stipulated in the tender documents.
9. ASCDCL reserves the rights to reject any or all tenders without assigning any reason thereof.
10. Tenderers are bound by the latest Government rules, regulations, standards & guidelines being issued from time to time.
11. Any kinds of amendments/corrigenda shall be published only on-line and shall be final and binding to all tenderers.

## **2 INTRODUCTION**

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### **2.1 About Aurangabad**

Aurangabad is a city in the Indian state of Maharashtra. It is the administrative headquarters of Aurangabad district and is the largest city in the Marathwada region.

According to the 2011 census, the total population of Aurangabad is 11,75,116.

The city is a tourism hub, surrounded by many historical monuments, including the Ajanta Caves and Ellora Caves, which are UNESCO World Heritage Sites, as well as Bibi Ka Maqbara (replica of Taj Mahal). It is also called as the city of gates – it has 52 heritage gates, which can be observed on the city roads.

### **2.2 About Aurangabad Municipal Corporation**

The Aurangabad Municipal Corporation (AMC) is a Class C municipal corporation (as defined by Government of Maharashtra) governing an area of 170 sqkm with a population of 11.75 lakhs, as per Census 2011. AMC has 115 electoral wards across nine (9) administrative zones.

### **2.3 About Aurangabad Smart City Development Corporation Limited**

The Ministry of Home and Urban Affairs (MoHuA), Government of India (GoI) has rolled out Smart City Mission (SCM). Aurangabad is one of the Urban Local Bodies (ULBs) selected under the competition of SCM based on the Smart City Plan (SCP) submitted by the City through Government of Maharashtra (GoM). Objective of the Smart Cities Mission is to drive economic growth and improve the quality of life of people by enabling local area development and harnessing technology, especially technology that leads to Smart outcomes. Area- based development will transform existing areas (retrofit and redevelop), including slums, into better planned ones, thereby improving livability of the whole City. New areas (greenfield) will be developed around cities in order to accommodate the expanding population in urban areas.

The Aurangabad Smart City Development Corporation Ltd. (ASCDCL) is the Special Purpose Vehicle (SPV) constituted as per the directives of MoUD, Govt. of India for executing Smart City Mission (SCM) in Aurangabad City.

## 2.4 eGovernance at AMC

As part of Government of Maharashtra's E-governance implementation policy, AMC appointed an agency in 2011-12 to implement E-governance modules. As of date, the following softwares/modules exist:

- MAINET for Accounts, Property Tax Payment/Assessment, Birth & Death Registration, and Marriage Registration;
- Legal Tracking System for Law Department;
- an internal software for Stores Department;
- Building Plan Management System for Town Planning Department;
- and Tally ERP for Accounts Department.

## 2.5 About GIS for AMC

In line with the growth & the changes in expectation levels for municipal service delivery and the pressures exerted by ever-increasing urbanization, AMC has identified a few key challenges in the near future, one of which is the use of latest information technology tools & service delivery platforms to improve organizational efficiency, enhance stakeholder satisfaction and enhance organizational image. An urgent need was felt to upgrade the existing eGovernance platform that is not ready to cope up with the technological advancements. To this effect, AMC has envisaged the implementation of an Integrated Municipal eGovernance System (IMEGS) that can act as a single solution to AMC's information needs emanating from within and without.

A separate tender for the IMEGS project is already issued by ASCDCL.

ASCDCL also intends to undertake a GIS survey for the city of Aurangabad using the latest tools & technologies for the latest real time maps of various layers within the city, and apply the same for better revenue collection through various municipal services.

## 2.6 Purpose of the Request For Proposal (RFP)

The primary purpose of this RFP is to enable ASCDCL to select an Agency that undertakes the set of activities, identified for the Agency under the proposed GIS project. The details of the assignment, scope of work, evaluation process are outlined in the document.

The RFP is not an offer by ASCDCL but an invitation to receive proposals from eligible and interested bidders in respect of the above mentioned project. The RFP does not commit ASCDCL to enter into a binding agreement in respect of the project with the potential bidders.

### 3 INSTRUCTIONS TO BIDDERS

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#### 3.1 Prequalification

The following table lists the pre-qualification criteria for the bidders. It is expected that the bidder shall furnish necessary documentation in support of every point mentioned in the table.

Sr. No.	Condition	Documents Required
<b>A.</b>	<b>Bidder Qualifications</b>	
A.1.	<p>a. A Bidder may be a single entity (“Sole Bidder”) or group of entities coming together to submit their Bid (the “Consortium”). In case of a consortium, other than the Lead Bidder, maximum of two (2) consortium partners are allowed.</p> <p>b. The Sole Bidder or, in case of a consortium, the Lead Bidder must be a registered entity under the relevant Act (e.g. Companies Act or Partnership Act or any other relevant Act) in India.</p> <p>c. The Sole Bidder shall be in operation in India for a period of at least five (5) years ending the last date of the month previous to the publication of the tender. In case of a consortium, each of the consortium members shall be in operation in India for a period of at least 5 years ending the last date of the month previous to the publication of the tender..</p> <p>d. In case of bidder being a Consortium, an agreement shall be executed and submitted with clear and definite description of the responsibilities and the scope of work to be undertaken by individual members of the consortium.</p>	Copy of Certificate of Incorporation or equivalent; Pan Card; GST Registration; Memorandum and Articles of Association; Power of Attorney as per Annexure; Consortium Agreement as per Annexure; a board resolution OR power of attorney in the name of the person executing the bid, authorizing the signatory.
A.2.	The sole bidder, or the lead bidder in the case of a consortium, should be in the business of providing GIS solutions for at least five years	Purchase orders and completion certificates of GIS projects, over the past five years.

Sr. No.	Condition	Documents Required
	ending the last date of the month previous to the publication of the tender.	
A.3.	The average annual turnover of the sole bidder, or the lead bidder in case of a consortium, should be <b>at least Rs. 3.3 crores</b> during the last three consecutive financial years. (I.e. 2017-18, 2018-19, 2019-20) .	Audited balance sheets and profit and loss accounts shall be submitted for the corresponding three years.
A.4.	The sole bidder, or the lead bidder in case of a consortium, should have a positive net worth in each of the previous three financial years	Auditor's certificate
A.5.	The sole bidder, or all the members in case of a consortium, shall not be under a declaration of ineligibility issued by any state/central government department or undertaking, within India.	A self-declaration to this effect shall be submitted. Details of all projects under arbitration shall be submitted. Format is provided in Annexure V
A.6.	The sole bidder, or the lead bidder in case of a consortium, should have support infrastructure in Maharashtra at the time of the submission of the bid.	GST Registration
A.8.	The sole bidder, or all the members of the consortium, shall possess an ISO 9001 certificate.	Copy of certificate
<b>B.</b>	<b>Bidder Work Experience</b>	
B.1.	<p>The sole bidder, or the consortium, shall have experience in implementing at least</p> <p><b>One (1)</b> completed similar work of the value of at least <b>Rs. 8,00,00,000/- (Rupees Eight crores)</b></p> <p><b>OR</b></p> <p><b>Two (2)</b> completed similar works of at least <b>Rs. 6,00,00,000/- (Rupees Six crores)</b> each</p> <p><b>OR</b></p> <p><b>Three (3)</b> completed similar works of at least <b>Rs. 5,00,00,000/- (Rupees Five crores)</b> each</p> <p>"Similar work" is defined as completing a GIS</p>	Purchase orders, work completion certificates and client contact details.

Sr. No.	Condition	Documents Required
	survey and the supply, installation, commissioning, customization, testing, and maintenance of a GIS application carried out within the past five years ending the last date of the month previous to the publication of the tender.	
B.2	The sole bidder, or any of the members of the consortium, shall have at least 100 personnel on its rolls with experience & expertise in GIS survey and applications.	List of personnel & their CVs self certified by the HR department of the company
B.3	The proposed GIS application should have been integrated successfully with an eGovernance application in at least one municipal corporation.	Completion Certificate of the project where such integration has been carried out

**Consortium related conditions:**

1. The bid shall contain the information required for each member of the Consortium
2. Change in the composition of Consortium shall not be permitted by ASCDCL at any stage of the project.
3. A Lead Bidder cannot be Consortium partner with any of the other Lead Bidders for the project.
4. A Consortium partner cannot associate with more than one Lead Bidder for this project
5. Sole responsibility for the completion of work under this contract will be that of the Lead Bidder
6. Lead bidder’s business relationships with its Consortium partner(s) will solely be its own responsibility.
7. Any conflict or disagreement within the Consortium, at any point of time during the currency of the Project, shall be resolved by Lead bidder in such a way that the Project work is not affected in any manner with respect to any deliverable, milestone, operations and SLA as per the provisions of the Contract. Any such conflict or disagreement shall not be invoked by the Lead Bidder to justify non-fulfillment of any of the obligations under the Contract.

**3.2 Pre-Bid Meeting**

1. Voluntary Pre-bid meeting will be organized as per the schedule mentioned in the Section 1 of this document. During the pre-bid meeting, salient features of the tender will be informed and techno-commercial clarifications pertaining to the tender will be answered.

2. However, participation in the pre-bid meeting is optional to the Bidders, and non-participation in the Pre-bid meeting will not be construed as likely non-participation of the Bidder in the tender. It is mandatory for bidders to send pre-bid meeting participation request with attendees' names to ASCDCL at the email addresses mentioned at least 2 working days prior to the meeting.
3. The language of communication for the pre-bid meeting shall be English & Marathi. However, the minutes & the clarifications shall be made in English language only. All the issues & discussion happened during the meeting shall be noted & properly addressed while issuing the clarifications.
4. All pre-bid queries sought to be answered at the pre-bid meeting must be sent by email to the email addresses mentioned in Section 3.4 by the date of the pre-bid meeting.
5. The minutes of the pre-bid meeting & ASCDCL clarifications on the queries raised during the meeting will be posted on the e-Procurement website.
6. The pre-bid queries should be submitted in excel sheet format, along with relevant justification, and with name and details of the organisation submitting the queries.
7. ASCDCL shall not be responsible for ensuring that the bidders' queries have been received by them. Any requests for clarifications post the indicated date and time shall not be entertained by ASCDCL.
8. Bidders must submit their queries as per the format mentioned in the Annexure
9. ASCDCL shall formally respond to the pre-bid queries after the pre-bid meeting. No further clarifications shall be entertained after the date and time of submission of queries.
10. ASCDCL shall endeavour to provide timely response to all queries. However, ASCDCL makes no representation or warranty as to the completeness or accuracy of any response made in good faith. ASCDCL does not undertake to answer all the queries that have been posed by the bidders.
11. Any modifications of the RFP Documents, which may become necessary because of the Pre-Bid Meeting, shall be made by ASCDCL exclusively through a corrigendum. Any such corrigendum shall be deemed to be incorporated into this RFP. However, in case of any such amendment, the bid submission date may be extended at the discretion of ASCDCL.
12. Any corrigendum/notification/addendum issued by ASCDCL, after issue of RFP, shall only be available/hosted on the website URL mentioned in the Schedule of Bidding Process. Any such corrigendum/notification/addendum shall be deemed to be incorporated into this RFP.



### 3.3 Bidder commitment

1. Proposals submitted in response to this invitation will be considered as a contractually binding undertaking on the part of the Bidder, should the Bidder's proposal be found acceptable to CEO, ASCDCL.
2. All materials received by CEO, ASCDCL as a result of this Bid become the property of CEO, ASCDCL and are not returnable. CEO, ASCDCL accepts no financial responsibility for any cost incurred by any Bidder in responding to this Bid. Regardless of the Bidder being selected or not, CEO, ASCDCL reserves the right to use any information presented in the Bid to CEO, ASCDCL's requirement.
3. Proposals submitted in response hereto should not be construed as an obligation on the part of CEO, ASCDCL to award the Order for any or all items/services or a combination of services or items.
4. The bids submitted by the Bidders should be clear & unambiguous. Non specification of the Make & Model of the product/s offered as a part of the proposed solution OR specifying multiple brands shall be treated as an intentional ambiguity kept with the malafide intention of post-award changes & shall be considered non-responsive.
5. The bidder shall propose the system architecture complying with the functional specifications mentioned in this tender document. The supplied bill of materials is indicative and may change based on the recommended system architecture of the OEMs.

### 3.4 Contact Details

All general / technical queries in connection with the tender process including submission of EMD / copies of documents in connection with credentials etc. shall be directed to:

The Additional CEO, ASCDCL	add.ceo@aurangabadsmartcity.in
The Deputy CEO, ASCDCL	dy.ceo@aurangabadsmartcity.in
Project Consultant	info@consultmipl.com

### 3.5 Cost of Bidding

The Bidder shall bear all the costs associated with the preparation and submission of its bid, and CEO, ASCDCL in no case, will be responsible or liable for these costs, regardless of conduct or outcome of the bidding process.

### 3.6 Bidding Document

The Bidder is expected to examine all instructions, forms, terms and specifications in the bidding documents. Failure to furnish all information required by the bidding documents or submission of a bid not substantially responsive to the bidding documents in every respect will be at the Bidder's risk and may result in rejection of the bid.

### **3.7 Amendment of Bidding Documents**

1. At any time prior to the deadline for submission of bids, this office may, for any reason, whether on its own initiative or in response to the clarification requested by a prospective Bidder, modify, change, incorporate or delete certain conditions in the bidding document Or issue additional data to clarify an interpretation of the provision of this RFP by issuing supplements to this RFP. Any such supplement shall be deemed to be incorporated by this reference into this RFP.
2. All prospective Bidders who have received the bidding documents will be notified of the amendment in writing, and will be binding on them.
3. In order to allow prospective Bidders reasonable time to take into consideration the amendments while preparing their bids, CEO, ASCDCL, at his discretion, may extend the deadline for the submission of bids.

### **3.8 Language of Bid**

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

### **3.9 Bid Currency**

Prices shall be quoted in Indian Rupees only.

### **3.10 Eligibility Documents**

1. The Bidder shall furnish, as part of its bid, documents establishing the eligibility and conformity to the bidding documents of Services, which the Bidder proposes to provide services under the contract.
2. The documentary evidence of conformity of Services to the bidding documents may be in the form of literature, drawing and data, and shall consist of a detailed description of the essential technical and performance characteristics of end products.
3. The Bidder shall note that standards for workmanship, material and equipment, and references to International brand names or catalogue

numbers designated by ASCDCL in its Technical Specifications are intended to be descriptive only and not restrictive.

4. It is mandatory for the bidders to furnish the Manufacturer's Authorization Form mentioned in the Annexure of this document for all the hardware and the software proposed for this tender.

### 3.11 Earnest Money Deposit

1. The Earnest Money Deposit shall be in the form of an online transfer (through the etendering site of ASCDCL). Bid security in any other form will not be accepted.
2. Unsuccessful Bidder's EARNEST MONEY DEPOSIT will be discharged / refunded as promptly as possible. The successful Bidder's EARNEST MONEY DEPOSIT will be discharged only after the completion of the contract papers and submission of performance security. No interest is payable on the bid security amount.
3. The EARNEST MONEY DEPOSIT shall be forfeited:
  - a. If a Bidder withdraws its bid during the period of Bid validity specified by the Bidder on the Bid Form;
  - b. Or in case of a successful Bidder, if the Bidder fails: a) To sign the Contract; or b) To furnish the performance security.
4. No exemption for submitting the EMD will be given to any agency including MSME Units.
5. Any tender submitted without the earnest money deposit will be summarily rejected.
  - a. If any of the bidders modify their bid during the validity period.
  - b. If any bidder tries to influence the evaluation process.
  - c. In case the selected bidder fails to accept the work order / purchase order and provide the performance security within the specified time limit.

### 3.12 Period of Validity of Bids

1. Quoted prices shall be firm & valid for a period of **one year** from the due date, or extended due date of the tender for the placement of order. However, incase of software licenses (application & database), quoted prices shall be firm and valid for the entire duration of the project which means ten years after go-live. For successful Bidders, the quoted price shall remain firm without any escalation till execution of the complete job.

2. In exceptional circumstances, CEO, ASCDCL may solicit the Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing.

### **3.13 Clarification to tender document**

At any time after the issue of the tender documents and before the opening of the tender, CEO, ASCDCL may make any changes, modifications or amendments to the tender documents and shall send intimation of such changes to all those who have downloaded the original Tender documents.

### **3.14 Submission of Bids**

Tender documents will be available on web site up to date and time as mentioned in the tender notice. Tenderer who wish to participate in this tender shall have to register on web site [www.mahatenders.gov.in](http://www.mahatenders.gov.in)

### **3.15 Deadline for Submission of Bids**

1. Bids must be submitted online through [www.mahatenders.gov.in](http://www.mahatenders.gov.in) not later than the time and date specified in the tender notice.
2. CEO, ASCDCL may, at his discretion, extend this deadline for submission of bids by amending the bid documents, in which case all rights and obligations of CEO, ASCDCL and Bidders subject to the deadline will thereafter be subject to the deadline as extended.

### **3.16 Withdrawal of Bids**

1. The Bidder may modify or withdraw his bid before the last date of submission of bids through the e-Tendering website [www.mahatenders.gov.in](http://www.mahatenders.gov.in).
2. No bid may be modified after the deadline for submission of the bids.
3. No bid may be withdrawn in the interval between the deadline for submission of bids and the expiration of the period of the bid validity specified by the Bidder on the Bid Form. Withdrawal of a bid during this interval shall result in the Bidder's forfeiture of its bid EMD.

### **3.17 Opening of Bids**

1. ASCDCL will open all bids (only Technical Bids at the first instance) through the e-Tendering website at the following address: ASCDCL Smart City Office, Aurangabad

2. The Bidder's representative who is present shall sign an attendance register evidencing their attendance. In the event of the specified date of Bid opening being declared holiday for ASCDCL, the Bid shall be opened at the appointed time and location on the next working day.
3. The Bidder's names, bid modifications or withdrawals, bid prices and the presence or the absence of requisite bid security and other details will be announced at the time of opening.
4. Financial Bids of only those Bidders who qualify on the basis of evaluation of technical bid & Demonstration will be opened at pre-specified time and date which will be communicated to the qualified Bidders well in advance.

### **3.18 Award Criteria**

1. CEO, ASCDCL will award the contract to the successful Bidder as per the evaluation criteria mentioned in the bid evaluation section provided further that the Bidder is determined to be qualified to perform the contract satisfactorily.
2. CEO, ASCDCL reserves the right to award the contract in parts to more than one Bidder, provided further that the Bidders(s) are determined to be qualified to perform the contract satisfactorily.

### **3.19 Variation in Actual Quantity**

CEO, ASCDCL reserves the right to vary (increase / decrease) the component quantities in the tender, post award to the successful bidder.

### **3.20 Right to Accept / Reject Any or All Bids**

CEO, ASCDCL reserves the right to accept or reject any bid, or to annul the bidding process and reject all bids at any time prior to the award of Contracts, without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the grounds for the CEO, ASCDCL action.

### **3.21 Notification of Awards**

1. Prior to the expiry of the period of the bid validity CEO, ASCDCL will notify the successful Bidder in writing. The Bidder will confirm the same in writing.
2. The notification of award will constitute the formation of the Contract.
3. Upon the successful Bidder's furnishing of performance security, CEO, ASCDCL shall notify each unsuccessful Bidder.

### **3.22 Corrupt or Fraudulent Practices**

1. ASCDCL requires that the agencies participating under this tender observe the highest standards of ethics during the procurement and execution of such contracts. In pursuance of this policy, ASCDCL defines for the purposes of this provision, the terms set forth as follows:
2. "Corrupt practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of the public official in the procurement process or in contract execution; and "fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or execution of a contract to the detriment of ASCDCL, and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive ASCDCL of the benefits of the free and open competition;
3. ASCDCL will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question;
4. ASCDCL will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a contract if it at any time determines that the firm has engaged in corrupt and fraudulent practices in competing for, or in executing, a contract.
5. The past performance of the Bidder will be crosschecked if necessary. If the facts are proven to be dubious the Bidders tender will be ineligible for further processing.

### **3.23 Interpretation of the clauses in the Tender Document / Contract Document**

1. In case of any ambiguity in the interpretation of any of the clauses in Tender Document or the Contract Document, CEO, ASCDCL's interpretation of the clauses shall be final and binding on all parties.
2. The decision taken by CEO, ASCDCL in the process of Tender evaluation will be full and final.

### **3.24 Right to terminate the process**

1. CEO, ASCDCL may terminate the RFP process at any time without assigning any reason. CEO, ASCDCL makes no commitments, explicit or implicit, that this process will result in a business transaction with anyone.

2. This RFP does not constitute an offer by CEO, ASCDCL. The bidder's participation in this process may result in CEO, ASCDCL selecting the bidder to engage to further discussions and negotiations towards execution of a contract. The commencement of such negotiation does not, however, signify a commitment by CEO, ASCDCL to execute a contract or to continue negotiations.
3. CEO, ASCDCL has the right to terminate this discussions and negotiations process without assigning any reason and no costs will be reimbursed to the participating bidders.

### **3.25 Rights to the Content of the Proposal**

All the bids and accompanying documentation submitted as bids against this RFP, will become the property of ASCDCL & will not be returned after opening of the prequalified proposals. If any bidder does not qualify in pre-qualification evaluation, the technical proposal may not be evaluated. The Commercial Proposal shall be returned unopened to the bidder after the completion of the entire bid evaluation process. Also, the commercial proposals of technically disqualified bidders would be returned unopened to the bidders after the completion of the entire bid evaluation process. CEO, ASCDCL is not restricted in its rights to use or disclose any or all of the information contained in the proposal and can do so without compensation to the bidders. ASCDCL shall not be bound by any language in the proposal indicating the confidentiality of the proposal or any other restriction on its use or disclosure. CEO, ASCDCL has the right to use the services of external experts to evaluate the proposal by the bidders and share the content of the proposal either partially or completely with the experts for evaluation with adequate protection of the confidentiality information of the bidder.

### **3.26 Disqualification**

The proposal is liable to be disqualified in the following cases:

- a. Proposal submitted without bid security;
- b. Proposal not submitted in accordance with the procedure and formats prescribed in this document or treated as non-conforming proposal;
- c. During validity of the proposal, or its extended period, if any, the bidder increases his quoted prices;
- d. The bidder qualifies the proposal with its own conditions or assumptions;

- e. Proposal is received in incomplete form;
- f. Proposal is received after due date and time;
- g. Proposal is not accompanied by all the requisite documents;
- h. A commercial/technical bid submitted with assumptions or conditions.
- i. If the bidder provides any assumptions in the commercial proposal or qualifies the commercial proposal with its own conditions, such proposals will be rejected even if the commercial value of such proposals is the lowest (best value)
- j. Proposal is not properly sealed or signed;
- k. If bidder provides quotation only for a part of the project;
- l. Information submitted in technical proposal is found to be misrepresented, incorrect or false, accidentally, unwittingly or otherwise, at any time during the processing of the contract (no matter at what stage) or during the tenure of the contract including the extension period of the contract if any;
- m. Commercial proposal is enclosed with the same envelope as technical proposal;
- n. Bidder tries to influence the proposal evaluation process by unlawful/corrupt/fraudulent means at any point of time during the bid process;
- o. In case any one bidder submits multiple proposals or if common interests are found in two or more bidders, the bidders are likely to be disqualified;
- p. Bidder fails to deposit the Performance Bank Guarantee (PBG) or fails to enter into a contract within 30 working days of the date of notice of award or within such extended period, as may be specified by CEO, ASDCL;
- q. Bidders may specifically note that while evaluating the proposals, if it comes to CEO, ASDCL's knowledge expressly or implied, that some bidders may have colluded in any manner whatsoever or otherwise joined to form an alliance resulting in delaying the processing of proposal then the bidders so involved are liable to be disqualified for this contract as well as for a further period of three years from participation in any of the tenders floated by ASDCL;
- r. If, the bid security envelope, technical proposal and the entire documentation (including but limited to the hard and soft/electronic copied of the same, presentations during technical evaluation, clarifications provided by the bidder) submitted along with that found to contain any information on price, pricing policy, pricing mechanism or any information indicative of the commercial aspects of the bid;
- s. Bidders or any person acting on its behalf indulges in corrupt and fraudulent practices; and



- t. In case bidder fails to meet any of the bidding requirements as indicated in the RFP.

### **3.27 Sub-contracting**

3.27.1 For the purpose of this tender a Sub Contract would mean “Any agreement, purchase order, or any such legal instrument issued by the agency for this Project / contract to a third party, the subcontractor, calling for the performance of a defined piece of work or production and/ or delivery of specified Goods or services as permitted herein.”

3.27.2 Sub-contracting or outsourcing will not be permitted. However, sub-contracting, with prior approval and consent of ASCDCL, for activities that are non-technical in nature, may be considered at the sole discretion of ASCDCL.

### **3.28 Tripartite Agreement**

This contract will be executed as a tripartite agreement between ASCDCL, AMC and the selected bidder.

## 4 SCOPE

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### 4.1 Project Scope

The GIS Project at AMC is proposed to provide a robust and reliable decision support system to AMC officials by creating a GIS Platform that can later be used for integrating the GIS data and the proposed e-Governance system. The GIS maps once available shall also be used for the purpose of the Aurangabad Smart City project.

The broad scope of work shall be as follows:

- Detailed Survey within Aurangabad City
- Supply installation and Maintenance of the GIS base solution (Platform) for creation, storage & maintenance of GIS data as well as develop & customize GIS application for AMC (both desktop & web).
- Maintenance of GIS Platform & Web Based GIS Solution.
- Sizing of servers required for hosting the GIS solution.
- Building and implementing architecture for GIS in AMC for regular GIS data updates and maintenance of the same to be used in GIS applications.
- Supply, Installation & Maintenance of the proposed servers and requisite software (OS, Drivers etc.) for the same.
- Creation of various layers on the basemap by collecting the Spatial & Attribute data for various other layers required like Properties, Sewerage, Storm Water, SWM, Public Utilities, Electrical Poles, Development Plan, etc.
- The project execution period shall be 6 months. Annual Operation and Maintenance for 10 years after defect liability period (which will be of one year after successful implementation of the project).
- The bidder shall perform all such work and / or supply all such items, tools, resources, equipment and services not specifically mentioned in the scope of work but that can be reasonably inferred as being required for successful implementation and completion of this assignment without any additional cost to ASCDCL.
- Notwithstanding anything contained in this document, regardless of what appears in the indicative schedule of quantities, it shall be the responsibility of the agency to supply, install, commission, test & maintain all the components required to make the proposed GIS solution a) total & fully functional b) function as per the functional requirements set in this document, without any financial or any other obligation to ASCDCL.

- It will be the responsibility of the bidder to visit all the sites where activity has to be conducted to verify the site condition and build their technical proposals accordingly.
- Till the software configuration, customization, and integration are completed, the agency shall manage the system on its own development platform (on the cloud). Once the software is ready for use, the data center on the cloud shall be deployed.
- The system shall be seamlessly integrated with the IMEGS (Integrated Municipal eGovernance Application being developed by ASCDCL).

The GIS survey should be undertaken using a combination of drone based survey and on the ground physical survey. The drones should be leased by the agency as per their requirement. All data, images & videos captured by the drones will be a property of ASCDCL.

The drone-based survey should be repeated at least once a year till the completion of the project period.

#### 4.1.1 Preparation of City Base Map

The scope of work includes Preparation of City Base map with utility mapping and infrastructure details

- Using the on screen/heads on digitization technique, prepare a base map by digitizing all the features available in the satellite map like Buildings, Vacant Plots, Roads (National Highways, State Highways, City Roads and Internal Roads), Bridges (Flyovers, Railway Bridges), Railway Tracks, Parks, Gardens, Stadiums, Slums, Traffic Squares, Water Bodies (River, Lake, Pond, Drainage, Canal), Water supply (Mains, Distribution line, Valves, OHT, Public taps, House connection), Sewerage (House connection, manholes, open drainages, disposal site), Street lights (Pole location, High mast towers, transformers ), etc.. While doing the digitization, a special care of data correctness to be taken like no overshoots / undershoots, proper layering, proper symbology etc.
- Location and alignment of drain / channels/ nallah Sewerage Pit / Manholes, capture all the entities in flow network. The connectivity between Households and network and flow direction to be taken up to STP inclusive of all components.
- **Solid Waste Management** – Bins of all categories and Yard. Water supply / Storage Overhead Tanks / Street Taps / GLSR (ground level sump reservoir).

- **Storm water drainage-** Storm water drains network and the flow direction and network up to Tank inclusive of all components. Obtain information on existing storm water drains, whether they are pucca or kachcha, and their place of disposal and distance through survey. Location of culverts and their condition also shall be captured.
- **Street lighting** - Obtain information on the location of lighting poles, existence of lighting fixtures and distance to nearest transformer and its capacity.
- **Sanitation** - Obtain information on the material, size and length and condition of sewer lines, their connectivity to town wide sewerage system, septic tank and its condition and point of disposal, number and condition of Community toilets / Public toilets
- All the underground features related to Water, Sewerage, Storm Water drainage network, telecommunication and electrical lines and underground service line that may exist shall be mapped and integrated with the base map. The derivation of these utility network lines can be done by valve location and manholes.
- The Bidder shall contact and communicate to the line departments of AMC to conduct the survey and collection of data.
- The hard copy of the maps with all the above digitized features is to be prepared on 1:1000 scales for updating of base map through field survey verification process.
- The Bidder shall prepare a final base map incorporating the data collected from survey. Soft copy of base map in GIS file (shape file, dwg, dgn, mdb etc.) and according to citywide and ward wise hard copy of base maps are to be prepared at 1:1000 scale and submitted to AMC. The base maps will be prepared in various layers for ease of operation in GIS.
- It shall be the responsibility of the Bidder to ensure that the Final Base Map is fully compatible and operational as per the requirement of AMC, in all respects.
- It shall be the responsibility of the bidder to coordinate for the procurement of latest satellite image from NRSC. Bidder should prepare final base map by capturing all missing features on latest satellite image.
- The high resolution maps will be transferred to ASCDCL immediately and shall remain under the ownership of ASCDCL.

#### 4.1.2 GIS Spatial Data Collection and Application Development

As a part of the project scope, ASDCL intends to prepare GIS spatial data on a scale of 1:1000 using the latest high resolution satellite imagery, field verification of missing features using drones and physical surveys, collection and superimposition of cadastral maps & existing administrative boundaries and generation of building footprints / plots, infrastructure details, water bodies and landmarks. The agency shall generate all the data sets as per the design standards of National Urban Information System (NUIS) or better, like using metric standard instead of FPS. Following activities are to be covered under the project:

- Procurement of high resolution pan-sharpened Satellite Images (0.6 Mts Resolution) for the area under AMC, to capture buildings / Properties
- Collection of reference maps viz, existing base maps, Revenue maps, SOI Toposheet including municipal zone (existing and proposed)/Tax Zone/ Ward boundary map/utilities area (like water, drainage)
- Evaluation of Input data such as source and reliability, positional accuracy, attribute authenticity etc
- Collection of adequate number of (say 2 per sq km) Ground Control Points (GCPs) through Global Positioning System (GPS) survey / from Public Domain
- Post processing of ground control data
- Geo-referencing of satellite imagery using sufficient number of Ground Control Points (GCPs) collected through GPS survey/from Public Domain
- Scanning and geo-referencing of Cadastral (Revenue) and reference Maps;
- Interpretation and digitization of satellite data in the different layers. The digitization process shall include vectorisation, symbolization, layering, edge matching, topological integrity, and data base linking;
- Generating of GIS basemap using the high resolution satellite images;
- Field verification to update the features, which are not visible on the satellite images;
- Production of draft base map with different layers (e.g. property layer along with unique IDs.);

- Incorporation of tax zone, ward, municipal area, electoral area existing and proposed planning area boundary etc;
- Preparation of final GIS base map incorporating corrections;
- Final GIS base map with the digitized Cadastral maps with accurate matching (Within 1 meter accuracy)
- The digital Geo-referenced base map showing properties shall be integrated at database level using an open source relational database with property tax master data such that tax collection monitoring can be fully web-based with spatial intelligence.
- The agency shall provide analytical tools to compare city maps procured from time to time to automatically identify and report any changes / modifications to the maps from time to time.

#### 4.1.3 Brief Scope Related to Preparation of Spatial Data

The agency is expected to provide technical and management support during the planning, design and implementation phases of preparation of spatial database as described below but not limited to, for satisfactory performance of the services within the Contractual framework.

##### 4.1.3.1 Preparation of Spatial Database

The main objective of the GIS project is to create spatial data on a scale of 1:1,000 for the total area under the AMC jurisdiction which is approx. 170 Sq.km. The details of features & layers to be interpreted are given in this document. The preliminary interpreted map should be ground verified and the final map is to be prepared by incorporating the ground truth data. These detailed maps need to be generated using the latest technologies like image processing and digital data capture using High Resolution Pan-sharpened Satellite Images supplemented by the ground truth collection.

##### 4.1.3.2 Procurement of High Resolution Satellite Image

The High Resolution Pan-sharpened Satellite Images shall be procured by the agency at their cost and should have owned it in a legal way. Satellite data should be as far as possible cloud free to carry out the task.

- Resolution: 60 cm
- Area coverage: present spread of the AMC jurisdiction (170 Sq.km).
- Data Products: Digital images

#### 4.1.3.3 Collection of reference map

AMC will supply reference map viz, existing base map, Revenue map, SOI Toposheet including municipal zone (existing and proposed)/Tax Zone/ Ward boundary map/utilities area (like water, drainage) to the selected agency.

#### 4.1.3.4 GCPs Collection

GCPs data should be collected through Public Domain for the geo-referencing of High Resolution Satellite images. GCPs should be selected at well-defined sharp points both on the ground and on imagery. The GCPs should be selected over the permanent features in such a fashion that they are uniformly distributed throughout area of interest.

#### 4.1.3.5 Geo-referencing of satellite imagery

To correct various geometric anomalies in raw satellite imagery, Ground Control Points (GCP) collected through GPS Survey/ Public Domain should be used for Geo-referencing of the imagery. Geo-referencing and Geo-coding of data should be done using WGS-84.

#### 4.1.3.6 Scanning and Geo-referencing of Cadastral and Reference Maps

The agency should scan the Cadastral (Revenue) and other Reference Maps at 300 dpi to get the desired clarity and the same should be stored in digital format. The scanned Map should be geo-referenced with the help of geo-referenced satellite image. Geo-referencing should be using WGS-84.

#### 4.1.3.7 Generation of GIS Base Map

The satellite image should be interpreted and digitized in the different layers. The digitization process shall include vectorisation, symbolization, layering, edge matching, topological integrity, and data base linking. In the case of digitization, the data has to be checked for dimensional accuracy, completeness, displacement, edge matching, symbology, and layering. All features like Buildings, Open Spaces, Agriculture, Vegetation / Forest Land, Waste land, Wetland, Roads (National Highways, State Highways, Other District Roads and Streets), Bridges (Flyovers, Railway Bridges, etc), Railway Tracks, Parks, Gardens, Zoos, Playgrounds, Stadiums, Traffic Islands, Water Bodies (River, Stream, Reservoir, Lake, Pond, Drainage, Canal etc), Over Head Tanks, etc should be extracted from the high resolution satellite image.

#### 4.1.3.8 Survey and Updation of GIS Base Map

The agency will be responsible for field verification to update the features, which are not visible on the satellite images. The hard copy Hybrid Plots prepared through on screen digitization of imagery as discussed above shall be used for field survey of the features captured from the satellite image, especially for Buildings, Open Space, Agriculture, Vegetation / Forest Land, Waste land, Wetland, Roads (National Highways, State Highways, Other District Roads and Streets), Bridges (Flyovers, Railway Bridges, etc), Water Supply Network, Drainage/Sewerage Network, Over Head Tanks, etc for the updation purpose and finalization of layer wise GIS base map with the attributes.

Any discrepancy noticed in the ground shall be marked in the survey plot and the related required attribute data will be collected to subsequently incorporate into the spatial database by the agency.

The agency shall use a handheld device loaded with a survey application to fill in the details. The handheld device shall connect to the GIS server at all times to update the data collected. The application shall be able to provide administrative features including route planning, daily achievement etc.

It shall be the responsibility of the bidder to provide the requisite number of people and adequate technology (drones) for the completion of the survey within the given timeframes. All safety considerations, governmental guidelines and restrictions in terms of survey as issued by respective authorities shall be followed.



The survey shall prioritise the accumulation of data related to properties and water connections.

The agency shall conduct the survey of the city on an annual basis using drones.

#### 4.1.3.9 Incorporation of Reference Map

The agency should digitize the reference maps viz, tax zone, ward, municipal area, electoral area existing and proposed planning area boundary etc and incorporate it into the GIS base map.

#### 4.1.3.10 Production of draft base map

The agency should prepare draft base map with different layers (e.g. property layer along with unique IDs.) and provide it to the AMC for data validation.

The corrections suggested by the AMC should be incorporated into the base map by the agency to prepare Final GIS base map.

#### 4.1.3.11 Final GIS Base Map

Final GIS base map is to be prepared incorporating the scanned and geo-referenced Cadastral maps and the data collected from survey & different entities. The GIS base map is to be prepared at 1:1000 scale. The GIS base maps will be prepared in various layers for ease of operation in GIS. The details of the layers for base map are given at Annexure.

Finally, the digital Geo-referenced base map showing properties shall be integrated at database level using open source relational database with property tax master data such that tax collection monitoring can be fully web-based with spatial intelligence.

The bidders will ensure that the GIS base map is updated annually, with the help of additional surveys, if required.

#### 4.1.4 GIS Application Development

Citizen involvement in government and urban planning would be greatly enhanced by the ability to share spatial data using a properly designed, developed and maintained suite of GIS tools.

The evaluation and selection of the agency of choice will be based on how closely the proposed agency services conform to the following requirements.

- The agency should clearly indicate the technology platform, tools and API Libraries which will be used for the solution.
- If the technology stack proposed requires any 3rd party components which have licensing requirements the same should be clearly mentioned.
- The agency should propose a solution that includes costs of unlimited, perpetual license usage and full support and maintenance costs during the project duration and the support period of minimum-5 years, for all components of proposed GIS infrastructure including any 3rd party components, in the commercial bid.
- ASCDCL shall prefer Open Source software infrastructure for the GIS solution for reducing the Total Cost of Ownership (TCO).
- The proposed GIS solution shall be database independent and shall be capable of running on multiple open source database platforms. The database should have transactional capabilities and support for storing spatial data.
- The proposed GIS solution shall be capable of running on Linux platform without any performance, scalability, availability and feature sacrifices. However, the application should be platform agnostic and should be portable to other hardware and software platforms that the proposed application development platform supports.
- The end users should be able to access the system using a web browser from different platforms including Windows, Linux, and Mac OS to ensure maximum use by various Internet users. Nevertheless, the program must be compatible with all web browsers that support the W3C HTML and DOM standards. These include Google Chrome, IE, Mozilla Firefox, and Apple Safari. This excludes "IE-only" systems, and will ensure that the GIS will be accessible to users with non-Windows machines. Any additional browser plug-ins required should be mentioned in the proposal and such plug-ins should be supported by the above mentioned web browsers in a standard and hassle-free way.
- The GIS infrastructure should scale with high volume requests. In addition, the response time should be consistent on increased load. In general the following response time conditions should be met by the software-

Zoom in and out using a basemap with no other map layers loaded	Redraw times must be less than 3 seconds
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Zoom in and out using a basemap and 5 additional map layers loaded	Redraw times must be less than 3 seconds
Return query results from an attribute search	Query results must be returned in less than 3 seconds on the server and be sorted according to accuracy and relevance to the search terms
Display map layer attributes using the information tool	Information must be displayed as quickly and as clearly as possible including a method to return multiple results in less than 3 seconds on the server

#### 4.1.5 Functional Requirements

The users should be able to use the new GIS infrastructure with minimal training on the system. All functions should be intuitive, user friendly, and graphically oriented.

The proposed system must provide the following minimum functionalities. AMC may require program customization in the future. The agency should indicate the response to each of the following in the proposal in a YES or NO fashion to each item supported by proposed solution, as well as list any additional features.

- A hierarchical data model suitable for efficient database management
- Adherence to OGC standards wherever available
- Zoom “In”, “Out”, and “All” features to see detailed and outline view of the map areas. Standard zoom features like support for “+” and “-” buttons to zoom in and zoom out to the next/previous levels respectively and zoom bar for directly achieving the zoom level are required.
- Support for Pan View mode. Support to use the hand icon to move the viewing window. Double clicking on any location on the map should recalculate and center the map to the clicked point.
- Single Map Feature Identification for Multiple Layers.
- Display Cursor State Plane Coordinate Position.
- Organize Logical Map Layers into On-Screen Data Layer Groupings.
- Password Protection Security Feature for Sensitive Map Data Layers.

- Search Tool: Ability to search one or more layers based on the user preferences. The results should be displayed with the respective links so that the user can further click and locate the desired maps. Also, users should have the ability to drill down and look at the related attributes.
- Standard Predefined Database Search for all utility layers based on the available attributes
- Should also have the ability to add new layer/category to the existing layers.
- Ability to Zoom AMC's various zones/wards.
- Dynamic Graphic Scale on Main Map View Page.
- Open Query (ability to customize a database search) for all GIS Layers with Boolean Searches for all available Database Fields.
- "Map Tips" Function to Display addition information for attributes during cursor hover.
- Single Click Search for Adjoining Features for Selected Map Layer Entity. Provide "Hyper-Link" to Schools, Fire stations, Lakes, Gardens, Cities, City transports, Water supplies, and other important places.
- Multi-Page Size Print Function with Graphic Scale and North Arrow.
- Single Button Launch of On-line Help Menu with Explanation of Map Tools.
- Automatic "Site Status Page" Display During Routine Site Maintenance.
- Externally Driven Default Map Display based on the user profile preferences.
- The program must provide password protection for all or some of the GIS data layers.
- The GIS solution should support Marathi user interface appearance, user interaction like text input, search for strings in Marathi and the output should be including all phonetically similar strings, in addition to English.
- The proposed GIS solution shall support attribute database to the respective spatial layers.
- Facility to super impose vector maps with satellite imagery.
- Ability to select / mark a map portion to be referenced into another application (Property, Grievance, Solid Waste Management etc.)

### **Concurrency Design**

- Maximum Number of users on Intranet simultaneously viewing spatial data - 100
- Maximum Number of users on Intranet simultaneously editing spatial Data - 10
- Maximum Number of users on Internet simultaneously viewing spatial data through AMC web portal – 100

### **Additional Features**

- GIS layers discovered should be updated in the system and integrated with the IMEGS application on a real time basis
- The GIS application should have the capability of generating real time and daily reports in terms of significant findings of the survey
- The GIS findings should support the municipal corporation in development planning including new roads, townships, pipelines, etc.
- The GIS application should be used in the works management module has the starting point of every project to be undertaken with the help of a unique GIS ID.
- The GIS application should support in the creation of a digital measurement book to be used for making contractor payments.

#### **4.1.6 Data Center Services**

The Bidder shall be responsible for hosting the entire GIS application in the data center that will be built as a part of this tender. Similarly, the DR proposed should also have the capability to mirror the GIS data.

#### **4.1.7 Administrative processes**

The successful bidder will work with the respective departments in terms of identification of new properties, publishing public notices, registering objections and finalizing the property in the system. All costs associated with the same shall be borne by the successful bidder.

#### **4.1.8 Indicative list of minimum features / layers to be visible in the GIS maps**

<b>S.N.</b>	<b>DATA CATEGORY</b>
<b>A</b>	<b>BOUNDARY</b>
1	DP boundary & DP features
2	Municipal boundary
3	City boundary
4	Mouza boundary

<b>S.N.</b>	<b>DATA CATEGORY</b>
5	Cantonment boundary
6	Zone boundary
7	Ward boundary
8	Block boundary
9	Locality, Peth, Colony, Mohalla boundary
10	Revenue Survey Boundary
11	City Survey Boundary
12	Revision Survey Boundary
13	Hissa boundary
14	Inam Revision Boundary
15	Non Agriculture area boundary
16	Individual Plot boundary
17	Gaothan Boundary
18	Encroachment Boundary
<b>B</b>	<b>TRANSPORT</b>
1	Highway
2	Highway Center Line
3	Ring Road
4	Ring Road Center line
5	Bypass Road
6	Bypass Road Center line
7	Link Road

<b>S.N.</b>	<b>DATA CATEGORY</b>
8	Link Road Center line
9	Service Road
10	Service Road Center line
11	National highway
12	NH Center Line
13	State highway
14	SH Center Line
15	District Road
16	DR Center Line
17	Other City Roads
18	Center Line of City roads
19	DP proposed roads
20	Center Line of proposed roads
21	Streets , Bylanes
22	Center Line Street bylanes
23	Fly over
24	Center line Flyover
25	Subway below road or ground
26	Foot Path
27	Road Divider
28	Bridge over River
29	Culverts on streams
30	Area under Railway Property

<b>S.N.</b>	<b>DATA CATEGORY</b>
31	Railway tracks- broad gauge
32	Railway tracks- meter gauge
33	Railway tracks- narrow gauge
34	Railway Yard
35	Railway over bridge
36	Railway Station
37	Railway Shed
38	Airport land property
39	Land used for movement and parking of Aircraft including Runway
40	Airport taxing bay
41	Aeroplane Hangar
42	Any other Airport land
45	Bus station
46	Bus Agar
47	Truck Terminus
48	Taxi stand
49	Open parking lot
50	Traffic islands
51	Land of petrol pump/service station/LPG/CNG/Kerosene station
52	Weighbridge locations and areas
54	Nagrotthan Roads
55	Transport routes
56	Cycle track



<b>S.N.</b>	<b>DATA CATEGORY</b>
57	Open Layout
<b>C</b>	<b>UTILITY</b>
1	Water Infrastructure
2	Small water tank (haud)
3	Water Pipeline
4	Gas Pipeline
5	Low tension transmission line
6	High tension transmission line
7	Power transmission line - Underground
8	Electrical Substation
9	Dam/ barrage/ embankment
10	Storm Water Drain, represented by single line on the map
11	Sewer Line open, represented by single line on the map
12	Sewer line covered, represented by single line on the map
13	Sewer pipe line, represented by single line on the map
14	Open Nalla represented by single line on the map
15	Covered Nalla represented by single line on the map
16	Open Drainage, represented by single line on the map
17	Covered Drainage, represented by single line on the map
18	Area of Sewer Line open
19	Area of Sewer line covered
20	Area of Sewer pipe line

<b>S.N.</b>	<b>DATA CATEGORY</b>
21	Area of Open Nalla
22	Area of Covered Nalla
23	Area of Open Drainage
24	Area of Covered Drainage
25	Telephone tower location
26	Power Station, MSEB locations and area
27	Transformer locations
28	Transmission tower lines
29	Telephone Exchange locations and area
30	Wireless Station locations
31	Mobile telephone tower locations
32	Police Station locations and area
33	Police Chowki locations
34	Dumping Ground
35	Garbage Collection Point
36	Kondwada
<b>D</b>	<b>COMMERCIAL</b>
1	Dispensary/hospital/ clinic locations and area
2	Pathological laboratory locations
3	Blood Bank locations
4	All Govt. offices locations and area
5	Manhole locations

<b>S.N.</b>	<b>DATA CATEGORY</b>
6	Bank locations and area
7	Non-banking financial institute locations
8	Insurance company or corporations
9	Stock Exchange or commodity exchange
10	Co-operative credit societies locations
11	Automatic Teller Machine centers and Money exchange centers
12	Rest house/Circuit house locations
13	Public Toilets locations
14	Public Urinals locations
15	Fountains locations
16	Statue locations
17	Public Taps locations
18	Vegetable Market locations and area
19	Markets locations and area
20	Slaughter House locations
21	Kabrasthan locations and area
22	Grave Yard locations and area
23	Crematorium locations and area
24	Traffic Signal locations
25	Traffic Police Booth locations
26	Well locations
27	Over head Tanks locations
28	Ground level tanks locations and area

<b>S.N.</b>	<b>DATA CATEGORY</b>
29	Lamp Post /Street Lights
30	Electric Pole locations
31	Telephone Pole locations
32	Floor Mill locations
33	Flag, Flag Post, Flag Podium, etc locations
34	Pump House locations and area
35	Court locations and area
36	Dharmashala locations and area
37	Shopping Mall locations and area
38	Multiplex locations and area
39	Fire Station locations and area
40	Post Offices locations and area
41	Cinema Hall/Theatre/Drama Theatre locations and area
42	Club Houses locations and area
43	Garrages locations
44	Hoarding
<b>E</b>	<b>BUILT UP</b>
1	Fence
2	Compound wall
3	Fountain locations and area
4	Building pukka
5	Building kaccha

<b>S.N.</b>	<b>DATA CATEGORY</b>
6	Proposed Buildings
7	Open spaces in the building, courtyard, etc.
8	Industrial estate
9	Workshops locations
10	Factory locations and area
11	Slum area
12	BSUP
13	Non BSUP
14	Village settlement
15	Prison locations and area
16	Historical place locations and area
17	Museum locations and area
18	Octroi Naka locations
19	Gate locations
20	Huts
21	Libraries
22	Municipal Properties
23	Open land
24	Markets
<b>F</b>	<b>LAND USE / LAND COVER</b>
1	Agriculture land
2	Forest land

<b>S.N.</b>	<b>DATA CATEGORY</b>
3	Plantations
4	Group of Trees/Canopy
5	Shrubs
6	Irrigation Canal
7	Double line drainage
8	Single line drainage
9	Polygon of river
10	Water in depressions
11	Dry pond
12	Impounded water storage structure
13	lake area
14	Creek area
17	Open area on outskirts/Wasteland
18	Open land residential unoccupied/ Vacant land
19	Open land non-residential (commercial/Industrial) land
20	Rocky area
21	Mudflat area
24	Quarry/ mines area
25	Water treatment plant area
26	Sewerage treatment plant
27	Restricted / masked area
28	Tree
29	Brick creation area

<b>S.N.</b>	<b>DATA CATEGORY</b>
30	Well
31	Space between two adjacent fields/Bunds
32	Golf Course area
33	Land occupied by Racing Track
34	Land other than land occupied by Racing Track
<b>G</b>	<b>RECREATION</b>
1	Park/ garden locations and area
2	Playground locations and area
3	Water Park/Amusement park locations and area
4	Swimming Pools locations
5	Stadium locations and area
6	Sports Complex locations and area
7	Zoological park & Botanical Gardens locations and area
8	National park locations and area
9	Planetarium locations and area
10	Aquarium locations
11	Gymkhana locations
12	Ranga Mandir locations and area
13	Cinema Hall/Theatre locations and area
14	Unstarred Hotel locations
15	Hotels upto 4 star locations and area
16	5 star Hotels and above locations area

<b>S.N.</b>	<b>DATA CATEGORY</b>
17	Cultural / Community Center locations
18	Marriage Hall/Convention Hall/ Party Hall
19	Town Hall locations and area
20	Radio Station locations and area
21	TV Station locations and area
22	Film Shooting Studio locations and area
23	Open Air Theatre locations and area
<b>H</b>	<b>WORSHIP CENTERS</b>
1	Mandir
2	Mosque
3	Gurudwara
4	Church
5	Idgah
6	Dargah
7	BudhaVihar
8	Jain Temple
9	Heritage
<b>I</b>	<b>EDUCATION</b>
1	University locations and area
2	Colleges locations and area
3	High School locations and area



<b>S.N.</b>	<b>DATA CATEGORY</b>
4	Middle School locations and area
5	Primary School locations and area
6	Library locations and area
7	Institutions locations and area
8	Nursery/Kids Corner/ Playgroup
9	Coaching Classes locations
<b>J</b>	<b>HEALTH</b>
1	Clinic (below 10 beds) locations
2	Hospitals locations
3	Nursing Homes locations
4	Superspeciality hospitals locations and area
5	Government Hospitals locations and area
6	Cow Sheds locations
7	Stable locations
8	Poultry Farm locations
<b>K</b>	<b>LABELING / NUMBERING</b>
1	Revenue Survey Number in English/Marathi
2	City Survey Number in English/Marathi
3	Revision survey Number in English/Marathi
4	Hissa Number in English/Marathi
5	Inam Revision Survey Number in English/Marathi
6	Zone Numbers in English/Marathi

S.N.	DATA CATEGORY
7	Block Numbers in English/Marathi
8	Plot Numbers in English/Marathi
9	Building Number in English/Marathi
10	Floor Number in English/Marathi
11	Survey station details (Theodolite, Plain table, Chain survey point, etc).
12	Dimensions of Road, Rail or Nalla dimensions in English/Marathi

Further layers may be added by ASCDCL during the duration of the project.

#### 4.1.9 Integration with the IMEGS application

ASCDCL is embarking on an integrated Municipal eGovernance System (IMEGS) for AMC and the GIS application defined in this tender document shall be integrated with IMEGS. The responsibility of the integration will lie with the agency selected for the IMEGS project, however, all coordination & cooperation necessary in this regard shall be provided by the GIS agency.

#### 4.2 Application Architecture

1. The proposed architecture is an n-tier architecture, which is compliant to the Open Industry Standards & Protocols. However, preference will be given to the system built using open source technology stack and the database.
2. The GIS application is envisaged to be an n-tier architecture which has following minimum layers:
  - a. **Presentation Tier**– This tier consists of Web Server which caters to the HTTP / HTTPS requests from users (Intranet and Internet)
  - b. **Business Logic Tier** – This tier caters to the business rules requirement of the application. Application server is the main building block of this tier
  - c. **Data Tier** – Data tier stores application / transaction data to the database

#### 4.3 System Requirements

#### 4.3.1 General Requirements

- The GIS software shall be an integrated, ready to be deployed, software suite and integrate with standard eGovernance softwares.
- The envisaged system should be designed to meet the relevant STQC Standards.
- The application shall conform Indian standards of information security, published from time to time by MEITY.
- The GIS application should support virtualization environment & should support at least 3 popular VM softwares.
- The GIS application shall be able to integrate with the current as well as upcoming applications in a seamless fashion. It shall be possible to login to both the applications through single sign-on for applicable users.
- The system will be centrally deployed and globally accessed. Access shall not be restricted locally.
- The system shall be designed to be scalable and extensible.
- The software, along-with all of its sub-systems shall be capable of operating in an environment requiring a single sign-on. Also, it shall have a security feature of signing-off a user after a user-defined time-period of inactivity.
- All application components shall have a browser based user interface with common look and feel and user friendliness with good looking graphical interface.
- The application shall be compatible with all popular browsers available including Chrome, Firefox, IE and Safari.
- All systems shall take into account appropriate security, performance, efficiency and maintainability issues.
- Data shall only be accessed through an application to create, update and delete transactions.
- The system shall support load balancing at the web, application and the database layers of the system.
- The application shall be workable with the Disaster Recovery IT infrastructure of the data center with functions like real time failover without data loss.
- The latest version of the software shall be quoted. Bidders are required to mention the version number of the application.
- The bidder shall prepare technical manuals to enable configuration, customization, enhancement, deployment and make the same available to ASCDCL.

- The bidder shall be capable of providing 24 X 7 support services on functional and technical issues, upgrades, bug fixes etc. in person or through remote arrangements with resolution time commitment of 24 hrs.
- The product OEM shall have application support roadmap for the proposed solution for a minimum period of ten years from the date of commissioning of the solution.
- The source code of application (in case proposed application is open source) / customization (in case proposed application is proprietary) shall be owned by ASCDCL. The database shall be completely owned by ASCDCL.
- The solution shall be extensible to address new or changing business scenarios and business rules without having to do major rewrite of the software components.
- The solution shall provide all the relevant leading technology (e.g. XML, Flat file, messaging etc.) to meet the integration requirements. The bidder shall specify the methodologies of the integration with the sub-systems mentioned in the tender document including products / tools required for the integration.
- The solution shall have necessary audit trails for the integrated application. It shall be possible to trace the transaction to the source application / application user through audit trails.
- The configuration recommended / proposed shall have capability of handling transactions for the next 10 years keeping in mind the application response guidelines mentioned in the tender or as finalized with the successful bidder. The bidder shall consider an increase of around 20% - 25% in the number of transactions and storage.
- The proposed system architecture / configuration shall be sized to ensure the system operations at approximately 70% utilization.
- The bidder shall consider 100% concurrency of the estimated number of users by the bidders. (The total number of users in AMC should be considered as 4000, including the AMC users in CFCs)
- The bidder shall consider adequate concurrency and system resilience for the citizen facing services, considering Aurangabad's current population, population growth and increasing dependence on the digital platform, so that the system continues to remain responsive as per the expected performance parameters, despite the increased loads. The bidder will ensure that the application software and the DC hardware shall be designed to be scalable accordingly.
- The proposed solution shall have functions for User access control, security and backup.

- The bidder shall recommend appropriate security architecture covering authentication and authorization services. The bidders are required to consider the National e-Authentication Framework Guideline released by Government of India, Department of IT and confidentiality and privacy policies and applicable laws on a global basis.
- The solution proposed by bidder shall be based on the e-Pramaan Framework on National e-Authentication for Public Services released by Ministry of Communications and Information Technology, Department of Information Technology, Government of India.
- The bidder shall propose appropriate security architecture for remote access.
- All application components of the solution shall be accessible through a Single Sign-on through encrypted password.
- The application should support PKI / Digital Certificate based two (multiple) – factor authentication for all types of users & transactions.
- The application should support / operate on the 64-bit platform
- All browser based applications operate through the https protocol.
- The solution shall have the capability to define security authorization control to the Solution through the job roles defined in the organizational structure. It shall provide the capability to define user groups and group level access control to individual or groups of applications as per the organizational structure
- Changes / customizations made to the application shall be separate from the core code.
- It shall be possible to apply updates & upgrades – major or minor, as and when released by the OEM of the application to the customized application
- The application should provide support for data entry in English and Marathi. The application should support Unicode format
- The bidder shall furnish a certification from the application vendor/s confirming the compatibility of the application/s with the future updates and upgrades without losing the customized component and without making any additional changes or configurations to the application/s.

#### 4.3.2 Reports

- It is assumed that the GIS application shall deliver a standard set of reports
- It is anticipated that certain customizations in the standard reports or designing of new reports may be required to fulfill AMC's functional requirement. List of such reports and specifics shall be finalized during the system study / analysis phase of the implementation effort.

- The application shall have a custom report designing tool to facilitate the users to define their own reports with selectable fields across all modules and user roles.
- The application shall provide the ability to send alerts and notifications in the form of SMS, email, WhatsApp or any other social media channel.

#### **4.4 Scope of Work, Deliverables & Timeline**

The entire project is expected to be completed within 6 months of the issuance of the work order.

#### **4.5 Supply of Licenses, Tools & Accessories and Documentation**

4.5.1 ASCDCL expects full access licenses for the GIS Application which can be used across modules without any restriction and shall be able to perform full or limited tasks based on the assigned role. These users shall also use transaction, employee service, and technical & system administration for the offered Municipal eGovernance Application product along with the relevant tools, accessories, and documentation as a part of the offered solution.

4.5.2 The number of user licenses required for ASCDCL shall be as per the prevalent industry-standard, completely meeting the current as well as the future operational requirements of AMC. The bidders are required to quote the unlimited and unrestricted licensing policy for the application software. Total number of users may be estimated by the bidders to calculate the load on the system & the rationale thus arrived should be submitted to ASCDCL as part of the technical bid.

#### **4.6 Product configuration, interface design and customization**

4.6.1 The Bidder shall undertake system configuration and customization based on the approved To-be processes, thereby ensuring compliance to the processes as envisaged at the business process design stage.

4.6.2 The Bidder shall conduct trial runs with the AMC database, and may further reconfigure the IMEGS solution if the results are not up to the expectations of AMC. Only the approved/ accepted solution shall be implemented in the Go-live phase.

4.6.3 The bidder shall adopt the GUI as per AMC's expectations. The customization shall involve color scheme, fonts, font sizes, images, etc.

#### **4.7 AMC Project Implementation Locations**

The project shall be primarily undertaken at the AMC headquarters in Aurangabad. The agency will also be asked to provide the access to the application through the Operational Command Center (OCC) being constructed by ASCDCL under the Smart city program as well as any other location specified by ASCDCL.

#### **4.8 Data Center**

- 4.8.1 The bidder shall provide Tier III Data Center services for the duration of the project. The Tier III Data Center shall meet the appropriate IEEE standards.
- 4.8.2 The bidder shall propose the application and the required hardware sizing as per the guidelines published by the OEM. The solution shall conform to the recommended level of sizing and not bare minimum level.
- 4.8.3 The server architecture shall have minimum separate servers for the Presentation, Application and Database tiers. The server infrastructure shall consider high availability clusters at all tiers mentioned here.
- 4.8.4 The bidder shall furnish a letter from eGovernance application OEM clearly certifying the proposed system architecture for the workability of the application/s as per the functional and performance requirements mentioned in this document.
- 4.8.5 The system architecture shall include production, staging / testing and development servers including RDBMS database along with the detailed hardware and software specifications as required by the solution.
- 4.8.6 The proposed solution shall have Storage Area Network based data storage.
- 4.8.7 The system architecture shall consider database and application server in the high availability mode in case of hardware failure.
- 4.8.8 The bidder shall factor future growth in transactions in providing the DC services as per requirements of AMC.
- 4.8.9 The proposed data center shall be physically within the geographical boundaries of India.

The agency shall ensure that post award of the project, the data center service provider enters into an agreement between AMC, ASCDCL and the agency.

#### **4.9 Database Software**

- 4.9.1 The proposed application database shall consider reputed database software in terms of the international market share mentioned in any of the latest international market statistical data published by organizations like Gartner, IDC/IHS, etc. Bidders are required to furnish relevant details as proof.
- 4.9.2 The proposed RDBMS software shall be of enterprise class without any restrictions on using the database for data interfacing to and from external systems apart from the application. The supplied database shall not be limited to the application. It shall be possible to use the database for multiple applications through multiple instances.
- 4.9.3 The proposed RDBMS shall be latest version published by the OEM and shall have at least ten years' support roadmap from the date of installation from the OEM. A certificate from the OEM to this effect shall be furnished by the bidder.

#### **4.10 System OS**

- 4.10.1 The proposed application OS shall be of enterprise class and shall be of the latest version published by the OEM.
- 4.10.2 The OEM shall support the proposed OS/es for atleast ten years from the date of installation. A certificate from the OEM to this effect shall be furnished by the bidder.

#### **4.11 User Acceptance Testing (UAT)**

The agency shall undertake UAT for all the components of the project including, software, hardware, networking and data centre. The UAT format will be mutually decided during the course of the project implementation. The UAT must be signed off by the concerned department (incase of software), the head of the systems department, AMC, a representative from ASCDCL and the Project Consultant.

#### **4.12 System Training**



4.12.1 The bidder shall give technical training to the identified employees of AMC. The training shall include system architecture, operating system administration, database administration, database tuning, application installation, configuration and customization training.

4.12.2 The database training shall include installation and configuration training along with common database administration tasks required for AMC to operate and maintain the Database system.

4.12.3 Application restoration, maintenance, performance monitoring activities

4.12.4 The successful bidder shall also supply detailed training material to AMC, to enable AMC to train more number of officers independently.

#### **4.13 Facilities Management**

4.13.1 The bidder shall provide engineers / professionals for the period as mentioned in the schedule of quantities. Engineers stationed at the training center are expected to perform following tasks, but not limited to:

- Maintain and operate GIS application.
- Notice and take proactive action for the continuance of the application
- Make schedule and perform system administration tasks in coordination with the AMC IT cell.
- Maintain documentation of every user request, issues, changes pertaining to the application after successful implementation of the system
- Any other work as may be required to maintain, operate the system / application, and other system administration tasks and responsibilities.
- Check system updates for critical patches
- Check security requirements of the application and ensure application / data security at periodical intervals.
- Coordinate with network / security professionals already working for AMC for mitigating any application / data related threats
- Check log generation, analyze and report all application, database hardware and software components in liaison with AMC IT cell.
- Conduct annual GIS surveys for addition / modification of layers

#### **4.14 Project Charter**

4.14.1 A detailed Project charter including the detailed Project Plan, indicating all activities with resources required with their roles and responsibilities and time schedule will be required to be prepared at the start of the project and submitted to ASCDCL for approval.

4.14.2 The project charter shall also contain brief project description, approach and methodology, milestones, project organization with their roles and responsibilities, project risks and mitigation plans, dependencies etc. The implementing Agency shall also include in the program for supplying, installing and implementing the software covered under this contract.

4.14.3 The bidder shall form a project team as mentioned below. The team shall be stationed at the mentioned AMC locations till the successful implementation of the project. Please note that this is an indicative list of resources considering the application roll out timeline mentioned in this document. The successful bidder shall finalize number of resources for each category with AMC team.

Sr. No.	Position & no. of Resources Required at AMC	Experience (Years)	Domain
<b>A</b>	<b>GIS Implementation Team (Bidder)</b>		
1.	Project Manager (1 person)	8 – 10 years	The PM Shall have experience in implementing GIS solution in ULBs. The PM shall have handled similar project implementation in India. The project manager shall have experience in all aspects of project life cycle.
2.	Team Leader (1 person)	6 – 8 years	The team leader shall have relevant experience in implementing GIS in India & one ULB in Maharashtra The team lead shall have GIS implementation experience from private organizations also.
3.	Field Survey Staff (Appropriate numbers for carrying out the survey – minimum 200 nos.)	2 – 3 years	Appropriate experience of conducting GIS surveys.
4.	Drone Survey Staff	2-3 years	Appropriate experience of conducting drone based GIS surveys.

#### 4.15 Project Roles and Responsibilities

This project will be executed through a tripartite agreement between ASCDCL, AMC and the successful bidder.

Various project teams are envisaged to be setup comprising of representative of ASCDCL, the representatives from various departments of AMC having expertise in AMC processes, representatives of the Consultant and the Project Manager from the implementation agency. These teams shall be responsible for the coordination and finalization of the to-be processes of AMC, BPR, and Project Implementation.

The teams shall meet at regular intervals as mentioned below to identify and resolve issues, identify and mitigate project risks, keep track of the implementation schedule, check project milestones, and the next plan of action.

Role	Responsibilities	Members	Frequency of Interactions
Core Committee	<ul style="list-style-type: none"> <li>• Ultimate decision-maker</li> <li>• Provide project oversight and guidance</li> <li>• Review/approve project elements</li> <li>• Resolve any Issues</li> </ul>	<ul style="list-style-type: none"> <li>• CEO, ASCDCL</li> <li>• Commissioner, AMC</li> <li>• Project Consultant</li> <li>• Project Manager, Implementation Partner</li> <li>• Any other representatives appointed by CEO, ASCDCL</li> </ul>	<ul style="list-style-type: none"> <li>• Monthly Meetings</li> </ul>
Steering Committee	<ul style="list-style-type: none"> <li>• Commit department resources</li> <li>• Approves resource allocation strategies, and significant changes to resource allocation</li> <li>• Resolves conflicts and issues</li> </ul>	TBD by the CEO, ASCDCL	<ul style="list-style-type: none"> <li>• Fortnightly Meetings</li> </ul>

Role	Responsibilities	Members	Frequency of Interactions
	<ul style="list-style-type: none"> <li>• Provides direction to the Project Manager</li> <li>• Review project deliverables</li> </ul>		
Project Manager	<ul style="list-style-type: none"> <li>• Manages project in accordance to the project plan</li> <li>• Serves as liaison to the Steering Committee</li> <li>• Serves as liaison to other project sub-systems</li> <li>• Receive guidance from Steering Committee</li> <li>• Supervises subject consultants</li> <li>• Supervise agency(s)</li> <li>• Provide overall project direction</li> <li>• Direct/lead team members toward project objectives</li> <li>• Handle problem resolution</li> <li>• Manages the project budget, timelines and deliverables</li> </ul>	<ul style="list-style-type: none"> <li>• As appointed by the successful bidder</li> </ul>	<ul style="list-style-type: none"> <li>• NA</li> </ul>
Project Coordinator	<ul style="list-style-type: none"> <li>• Acts as liaison among various project stakeholders, service providers, hardware OEMs, user activity coordination.</li> <li>• Offload tasks of the Project</li> </ul>	<ul style="list-style-type: none"> <li>• As appointed by the successful bidder</li> </ul>	<ul style="list-style-type: none"> <li>• NA</li> </ul>

Role	Responsibilities	Members	Frequency of Interactions
	Manager for the liaison work <ul style="list-style-type: none"> <li>• The role shall continue beyond GIS project implementation as handholding support.</li> </ul>		
Project Team Members	<ul style="list-style-type: none"> <li>• Understand the user needs and business processes of their area</li> <li>• Communicate project goals, status and progress throughout the project to personnel in their area</li> <li>• Review and approve project deliverables</li> <li>• Creates or helps create work products</li> <li>• Coordinates participation of work groups, individuals and stakeholders</li> <li>• Provide knowledge and recommendations</li> <li>• Helps identify and remove project barriers</li> <li>• Assure quality of products that will meet the project</li> </ul>	As appointed by the successful bidder	<ul style="list-style-type: none"> <li>• As finalized by ASCDCL, Consultant and Implementation Partner</li> </ul>

<b>Role</b>	<b>Responsibilities</b>	<b>Members</b>	<b>Frequency of Interactions</b>
	<ul style="list-style-type: none"> <li>goals and objectives</li> <li>Identify risks and issues and help in resolutions</li> </ul>		
Domain Experts	<ul style="list-style-type: none"> <li>Lend domain expertise and guidance in understanding user requirements and mapping business processes to IMEGS processes</li> </ul>	As appointed by the successful bidder	<ul style="list-style-type: none"> <li>As finalized by ASCDCL, Consultant and Implementation Partner</li> </ul>
Project Management Consultant	<ul style="list-style-type: none"> <li>Acts as liaison to AMC, Implementation Partner, External Stakeholders, Government Departments for project initialization, implementation, departmental interactions, communication between various committees, keep track of project deadlines and deliverables, scrutiny and feedback of various documentations, etc.</li> </ul>	IMEGS Project Consultant	<ul style="list-style-type: none"> <li>As finalized by ASCDCL, Consultant and Implementation Partner</li> </ul>

The following table highlights the roles of various entities envisaged in the project:

<b>Entity</b>	<b>Role</b>
ASCDCL, Project Owner	Project approvals & payment

AMC, Project Co-Owner	Project approvals, space provision, permissions for work, functional manpower for project discussions, other roles identified in the document
MIPL, Project Consultant	Project Management
Agency	Project implementation & maintenance and all roles as identified in this document

#### 4.15.1 Communications Methodology:

The following is a list of communication events that should be established for this project:

##### A. Monthly Status Reports

The Project Manager shall provide monthly written status reports to the Steering Committee. The reports shall include the following information tracked against the Project Plan:

- Summary of tasks completed in previous month
- Summary of tasks scheduled for completion in the next month
- Summary of issue status and resolutions

##### B. Monthly Steering Committee Meeting

These status meetings shall be held at least once per month and shall be coordinated by the Project Manager. Every member of the Steering Committee shall participate in the meeting. The Project Manager shall send the status report to each member of the team prior to the meeting time so everyone shall review the same in advance.

##### C. Bi-Monthly Project Team Status Meeting

These status meetings shall hold every other month. Every member of the Project Team shall be invited to participate in the meeting. Project Manager shall send the status report to each member of the team prior to the meeting so everyone can review it in advance.

##### D. Website Use

User Group Participants and Domain Experts may be updated monthly at the discretion of the Project Manager. The information shall be posted to the project's website.

#### **4.16 Issue Management**

The information contained within the Project Plan will likely change as the project progresses. While change is both certain and required, it is important to note that any changes to the Project Plan will impact at least one of three critical success factors: Available Time, Available Resources (Financial, Personnel), or Project Quality. The decision by which to make modifications to the Project Plan (including project scope and resources) shall be coordinated using the following process:

- I. As soon as a change which impacts project scope, schedule, staffing or spending is identified, the Project Manager shall document the issue.
- II. The Project Manager shall review the change and determine the associated impact to the project and shall forward the issue, along with a recommendation, to the Steering Committee for review and decision.
- III. Upon receipt, the Steering Committee shall reach a consensus opinion on whether to approve, reject or modify the request based upon the information contained within the issue documentation, the Project Manager's recommendation and their judgment. Should the Steering Committee be unable to reach consensus on the approval or denial of a change, the issue shall be forwarded to the Core Committee, with a written summation of the issue, for ultimate resolution.
- IV. If required under the decision matrix or due to a lack of consensus, the Core Committee shall review the issue(s) and render a final decision on the approval or denial of a change.
- V. Following an approval or denial (by the Steering Committee or Core Committee), the Project Manager shall notify the original requestor of the action taken.
- VI. All decisions of the core committee shall be final and binding on the implementation partner

#### **4.17 User Manual**

4.17.1 The Bidder shall supply system Users' (Operations & Maintenance) Manual in Marathi & English languages in soft (MS Word and PDF) & hard format.

#### **4.18 Documentation**



4.18.1 The Bidder shall prepare & maintain proper project documentation, such as Project Management Plan (Complete as well as location-wise) system drawings, test plans, test results, minutes of the review meetings, training plans etc.

4.18.2 All project documents are to be submitted in bound hardcopy and in a softcopy/ CD format for archival

4.18.3 All project documents shall have a version number and major changes from the last submission shall be highlighted in the beginning of the revised documents

4.18.4 Project documents include but are not limited to the following:

I. Project Documentation

- Detailed project plan
- Functional Requirements specifications
- Software Requirements specifications
- Software Configuration Management Plan
- Risk Management Plan
- Architectural Design Document
- Software Detailed Design Document
- Infrastructure Requirements and Deployment Architecture specifications
- Business Continuity Plan
- DR Plan
- Source Code/Documentation
- Unit Test Plan with Test Cases
- Integration Test Plan with Test Cases
- System Test Plan with Test Cases
- Policy documents
- User Manuals
- Exit Plan including the interim take over strategy and plan

II. HLD documents (including but not limited to)

- Application architecture documents
- Logical and physical network design

III. LLD documents (including but not limited to)

- SLA and Performance Monitoring Plan
- Training and Knowledge Transfer Plans
- Issue Logs

4.18.5 The agency shall submit a list of deliverables based on the methodology they propose. The agency shall prepare the formats/templates for each of the deliverables upfront based upon industry standards and the same will be approved by the ASCDCL prior to its use for deliverables.

4.18.6 All project documents are to be kept up-to-date during the course of the project.

#### **4.19 Third Party Inspection**

1. Third party inspection shall be arranged by the agency at their own cost by one of the following agencies - Bureau of Indian Standards / DNV / EIL / Lloyd Register of Shipping / Bureau Veritas / IRS / any other BIS registered TPI agency
2. Activities to be carried out by the third party include certifying supplies for quality & performance as per specifications approved drawings/documents & approved Quality Assurance/Test Plans (as approved by Consultant and ASCDCL).
3. TPI clearance shall be mandatory for dispatch of any material from to Site. Scanned copy of such signed Inspection Release Notes shall be e-mailed to ASCDCL & Consultant before dispatch of item/items. Copies of the same shall also form a part of Final documentation.
4. Inspection of all materials and works (at factory/vendor works/sub-vendor works) will be carried out by the TPI agency (with/without ASCDCL & Consultant) to establish conformance to the approved documents & specifications and in case the equipment and materials do not conform to the acceptance norms, they will be summarily rejected. Any cost implications as a result of deviations will be invariably to the Bidder's / agency's account.
5. TPI shall be undertaken for all components including hardware, networking components and off the shelf software

Acceptance/Clearance for dispatch shall not absolve the bidder of his responsibility to supply as per tender requirements.

#### **4.20 Third Party Audit**

ASCDCL reserves the right to undertake third party audit of the hardware and system software supplied by the implementation partner. The implementation partner will have to rectify all defects identified in the third party audit at no extra cost to ASCDCL.

#### **4.21 Relocation of IT resources**

AMC is currently in the process of designing a new headquarters. In case, during the life of the IMEGS project, the new headquarters is commissioned, the agency shall

relocate the entire eGovernance infrastructure, including IT & networking components, to the new headquarters on a cost reimbursable basis. The costs for this purpose shall be approved by the agency from ASCDCL and AMC.

#### **4.22 Country of Origin & Purchase Preference**

Bidders are required to submit a statement indicating Country of Origin (CoO) for all proposed equipment along with the technical bid. The same shall be verified with the certificate of CoO required to be submitted at the time of supply. In cases where there is a discrepancy between the CoO of the supplied products and the CoO indicated during the bidding process, the said component shall stand to be rejected.

All prevalent GoI rules & regulations regarding public procurement and the country of origin shall be applicable. It will be the responsibility of the bidders to ensure that all quoted components are approved for procurement and installation by the appropriate authorities.

Any equipment manufactured in a country which currently has a land border dispute with India, or where conditions are such that supply chains & support during the project or product lifecycle are likely to be affected (to be solely determined by ASCDCL), shall not be acceptable.

#### **4.23 System Sizing**

All system requirements specified in the tender are minimum requirements. Bidders are required to propose the higher specifications based on the requirements of their solution.

Bidders are also required to provide detailed documentation pertaining to their respective system sizing in their technical proposal.

## 5 STANDARD CONTRACT TERMS

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### 5.1 Project Timeline

5.1.1 The entire GIS project shall Go-Live within 6 months from the date of issue of the Letter of Intent.

5.1.2 Post Go-live there shall be a warranty period of 12 months

5.1.3 Post the successful completion of the warranty period, the system shall be maintained for a period of 10 years, from the completion of the warranty period.

### 5.2 Payment Terms

The payment terms against the scope and deliverables are as mentioned below:

Scope	Payment	Payment to be made by
A. GIS Application	20 % payment to be made after delivery of software license and installation on the DC  30 % payment to be made after vectorisation of available maps  30 % payment to be made after completion of customization, integration & migration.  10 % payment to be made after testing & Go-Live  10 % payment to be made after completion of the 1 year warranty period	ASCDCL
B. GIS Survey	Monthly payment based on milestone completion	ASCDCL
C.1 CAMC Charges	Post warranty – quarterly, at the end of every quarter	ASCDCL

Please also refer the Schedule of Quantities.

### 5.3 Payment against deliverables & Sign-off

- Payments against all milestones shall be made only after clear sign-off from respective user departments, Consultant, the IT department of AMC and ASCDCL, and submission of firm tax invoices.
- Successful UAT of the GIS application will be a pre-condition for the initiation of payments for the hardware and O&M.
- In the event of any change in the rate of taxes due to any statutory notification during the term of the agreement, the consequential effect shall be borne by AMC.

#### 5.4 Liquidated Damages

In the event of the Bidder's failure to submit the deliverables as per timelines specified in this RFP, CEO, ASCDCL may at his discretion withhold any payment until the completion of the contract as mentioned in "Payment Terms". CEO, ASCDCL may also deduct from the payment due to the Bidder/ Agency as agreed, liquidated damages to the sum of 1% of the contract price of the corresponding milestone payment of the delayed / undelivered services for every *week*, subject to the maximum value of the liquidated damages being not more than 10% of the value of the corresponding milestone payment of the delayed / undelivered services. This right to claim any liquidated damages shall be without prejudice to other rights and remedies available to AMC under the contract of law. However liquidated damages will not be claimed for the period to delay solely attributable to AMC.

#### 5.5 Termination for Default

a. In the event that CEO, ASCDCL believes that the Agency is in Material Breach of its obligations under the contract, CEO, ASCDCL may, without prejudice to any other remedy for breach of contract, terminate the Contract in whole or part upon giving a one-month's prior written notice to the Agency. Any notice served pursuant to this Clause shall give reasonable details to the Material Breach, which could include the following events and the termination will become effective:

- i. If the Agency fails to deliver any or all of the deliverables with the desired quality within the time period(s) specified in the contract, or any extension thereof granted by the CEO, ASCDCL ; or
- ii. If the Agency is not able to deliver as per the project timelines defined in the RFP with the desired quality, which translates into Material Breach, then the CEO, ASCDCL will serve a thirty days written notice for curing this Material Breach. In case the Material Breach continues, after the expiry of such notice period, the CEO, ASCDCL will have the option to terminate the Contract and invoke the Performance Security / Bank Guarantee.
- iii. If the Agency fails to perform any other obligation(s) under the contract.

b. In case of such a breach, CEO, ASCDCL will serve a thirty days written notice for curing this Breach. In case the breach continues, after the expiry of such notice period, the CEO, ASCDCL will have the option to terminate the Contract and invoke the Performance Bank Guarantee/ Security .

c. In the event the CEO, ASCDCL terminates the contract in whole or in part, the CEO, ASCDCL may procure, upon such terms and conditions as it deems appropriate, services similar to those undelivered, and the Agency shall be liable to the CEO, ASCDCL for any excess costs for such similar services. However, the Agency shall continue performance of the contract to the extent not terminated.

## 5.6 Confidentiality

a. The Agency will be exposed, by virtue of the contracted activities, to internal business, administrative or other information of ASCDCL and stakeholders. The Agency would be required to provide an undertaking that it will not use or pass to anybody the data/information derived from the project in any form. The Agency must safeguard the confidentiality of the ASCDCL's business information, application and data. For this, Agency and employees of Agency are required to sign Non-disclosure agreement with CEO, ASCDCL.

b. Disclosure of any part of the afore mentioned information to parties not directly involved in providing the services requested, unless required to do so by the court of law or other Statutory Authorities, could result in premature termination of the contract. The CEO, ASCDCL may apart from blacklisting the Agency, initiate legal action against the Agency for breach of trust. The Agency shall not make any news release, public announcements or any other reference on RFP or contract without obtaining prior written consent from the CEO, ASCDCL.

c. Agency shall use reasonable care to protect confidential information from unauthorised disclosure and use.

d. Except as otherwise permitted by the Agency, neither of the parties may disclose to third parties the contents of this Agreement or any information/report/advice provided by or on behalf of the other that ought reasonably to be treated as confidential and/or proprietary. Parties may, however, disclose such confidential information to the extent that it: (a) is or becomes public other than through a breach of this Agreement, (b) is subsequently received by the receiving party from a third part who, to the receiving party's knowledge, owes no obligation of confidentiality to the disclosing part with respect to that information, (c) was known to the receiving party at the time of disclosure or is thereafter created independently, (d) is disclosed as necessary to enforce the receiving party's rights under the Agreement, or (e) must be disclosed under applicable law, legal process or professional regulations. These obligations shall be valid for a period of 3 years from the date of termination of this Agreement.

## 5.7 Project Extension

CEO, ASCDCL has the option to extend the Agreement on expiry, to avail the services of the Agency for specific work or continuation of the work carried out during the Agreement without the need to go for a separate bid process. The duration of extension will be decided by CEO, ASCDCL and will be up to a maximum of *One Year*. The decision on the extension will be taken exclusively by CEO, ASCDCL keeping in consideration a) satisfactory performance of the Agency b) technological reasons c) Where circumstances inescapably require recourse to this option.

## 5.8 Intellectual Property Rights

a. ASCDCL will own the copyright in all deliverable materials created under the Contract by Agency. The IPR of any deliverable which has been developed/enhanced/modified by the Agency shall belong exclusively to ASCDCL.

b. There shall be no infringement of any patent or Intellectual & industrial property rights by the Agency as per the applicable laws of relevant jurisdictions, having requisite competence, in respect of the Deliverables or any part thereof, supplied under the Contract. Agency shall indemnify ASCDCL against all cost/claims/legal claims/liabilities arising from third party claim at any time on account of the infringement or unauthorized use of patent or intellectual & industrial property rights of any such parties.

c. Notwithstanding the above, it is agreed that nothing contained herein above shall be applicable to Agency's pre-existing materials and working papers (i.e. Materials owned by the Agency which were created and developed prior to this Agreement without direct reference to the deliverables under the Agreement), which may now be incorporated by the Agency into the final deliverable/reports or the like, supplied to the ASCDCL hereunder in the course of delivering the Services pursuant to this Agreement. However, in the event any such pre-existing material is used in the deliverables/reports provided to the ASCDCL by the Agency, the Agency hereby agrees to grant the ASCDCL an irrevocable, non-transferable, non-exclusive, paid-up, royalty free and perpetual license to use such pre-existing material as it exists in the deliverable /reports prepared by the Agency as a part of the Agreement.

## 5.9 Governing law and Jurisdiction

This agreement and any dispute arising from it, whether contractual or non-contractual, will be governed by laws of India and subject to arbitration clause, be subject to the executive jurisdiction of the competent courts of India.

## 5.10 Limitation of Liability

a. The liability of Agency (whether in contract, tort, negligence, strict liability in tort, by statute or otherwise) for any claim in any manner related to this Agreement, including the work, deliverables or services covered by this Agreement, shall be the payment of direct damages only which shall in no event in the aggregate exceed the total contract value. The liability cap given under the Clause shall not be applicable to the indemnification obligations.

b. In no event shall either party be liable for any consequential, incidental, indirect, special or punitive damage, loss or expenses (including but not limited to business interruption, lost business, lost profits, or lost savings) even if it has been advised of their possible existence.

c. The allocations of liability in this clause represent the agreed and bargained-for understanding of the parties and compensation for the services reflects such allocations. The Agency shall indemnify ASCDCL from and against all Losses because bodily injury, death or damage to tangible personal property arising in favour of any person, corporation or other entity (including the Indemnified Party) attributable to the Agency's negligence or wilful default in performance or non-performance under this Assignment/agreement.

#### **5.11 Performance Security Deposit**



- 5.11.1 Within 15 days of the receipt of notification of award from the ASCDCL, the successful Bidder shall furnish the performance security in accordance with the conditions of the contract, in the Performance Security Form provided in the bidding document or in another form acceptable to ASCDCL, as mentioned in the relevant Section
- 5.11.2 Failure of the successful Bidder to comply with this requirement can constitute sufficient grounds for the annulment of the award and forfeiture of the bid security in which event CEO, ASCDCL may take the award to the next lowest evaluated Bidder or call for new bids.
- 5.11.3 The firm whose tender is accepted shall deposit a Bank Guarantee as Performance Security of a value of 10 % of the total quoted project cost (including the quoted capex and opex) valid till the completion of the contract expected to be of 11.5 years (6 month project completion period + 1 year of warranty + 10 years of CAMC). If additional work is allotted, the agency has to deposit the additional Performance Security accordingly. The Performance Security shall be in the form of Bank Guarantee valid for minimum duration of the contract. In case of project extension, the performance security will have to be extended accordingly.
- 5.11.4 The successful Bidder has to furnish a security deposit so as to guarantee performance of the contract.
- 5.11.5 The Performance Security shall be denominated in Indian Rupees and shall be in the form of a bank guarantee issued by a nationalized / scheduled bank in India, in the format provided in the bidding documents.

## **5.12 Comprehensive Annual Maintenance Contract (CAMC)**

- 5.12.1 It is mandatory for all the Bidders to provide CAMC support to ASCDCL for all the supplied components & whole system at all AMC locations for a period of 10 years, beyond the completion of regular warranty period of 1 year (12 months from the date of commissioning). Bidders shall therefore quote charges towards composite rate of 10 years of CAMC, as part of its offer without which their bid will be considered invalid & summarily rejected. The post-warranty CAMC amount will be reckoned for evaluation of the bid.
- 5.12.2 Post warranty CAMC charges shall include cost of all spares, equipment, instruments & services (preventive & break-down) for maintenance during the CAMC period at all AMC locations. Bidder's service engineer shall check & service each instruments/equipment/components & its accessories and maintain them in good working condition. During CAMC period, Bidder shall maintain inventory of minimum spares at site required for such maintenance.

## **5.13 Service Level Agreement**

5.13.1 Service Level Agreement (SLA) is the contract between CEO, ASCDCL and the successful bidder. SLA defines the terms of the Successful bidder’s responsibility in ensuring the performance of IMEGS, based on the agreed Performance Indicators as detailed in the Agreement. This section defines various Service Level Indicators for IMEGS, which will be considered by ASCDCL in the Service Level Agreement with Successful bidder. The Service Level Agreement is divided into two broad sections:

- A. **Implementation SLA:** This describes the SLA metrics and penalties involved during the implementation stage of IMEGS
- B. **Operations and Management SLA:** This describes SLA metrics and penalties involved during the Operations and management stage of IMEGS.

#### 5.14 Implementation SLA

5.14.1 The entire work of analysis, design/development, integration, implementation, acceptance and Go-live of the GIS solution shall be completed within a period of 6 calendar months from the date of issuance of LOI / work order. The bidding parties are expected to adhere to the broad timeline and milestone dates while presenting their approach.

Phase	Work	Location	T = Issual of the LOI / work order
Phase I	Requirements gathering	Various AMC Departments / Offices	T + 4 weeks
Phase II	System Customization & GIS Survey	AMC HQ	T + 20 weeks
Phase III	System UAT	Various AMC Departments / Offices	T + 20 weeks
Phase IV	Data Center Operationalisation	AMC HQ	T + 20 weeks
Phase VII	System handover & Go-live	AMC HQ	T + 24 weeks

5.14.2 Please note that the final implementation plan will be prepared in consultation with ASDCL, Project Consultant & the successful bidder. The plan mentioned here is indicative only and may change depending upon the solution and the architecture.

5.14.3 Penalty per week for implementation SLA: A penalty of 1% of total project cost per week shall be levied on the successful bidder who fails to achieve the SLA mentioned for implementation to a maximum of 10% of the total project value.

### 5.15 Operations & Maintenance SLA

5.15.1 The following table lays down the O&M SLA during the warranty period (1 year) and the CAMC period (4 years) and will be a part of the agreement with the successful bidder

Parameter	Service Level	Penalty
System Uptime	Availability of the system through each of the service delivery mechanisms – website, mobile app and CFCs: >= 99.5%	Default will attract penalty as indicated below <99.5 % & >=99% (10% of the total quarterly payment for the respective quarter) < 99% (20% of the total quarterly payment for the respective quarter)
Availability of network links at the DC and DR	Availability for each of the network links: >= 99.5%	Default will attract penalty as indicated below <99.5 % & >=99% (10% of the total quarterly payment for the respective quarter) < 99% (20% of the total quarterly payment for the respective quarter)
DC Hardware availability	Availability for all DC hardware : >= 99.5%	Default will attract penalty as indicated below <99.5 % & >=99% (10% of the total quarterly payment for the respective quarter) < 99% (20% of the total quarterly payment for the respective quarter)
Undertaking of system security audits every six months	Provision of audit report by the end of every six months Undertaking application	Default will attract penalty as indicated below: Payment for the respective quarter will be made against submission of the system security audit report

Parameter	Service Level	Penalty
	enhancement / debugging (if required) based on the report within 15 days of submission of the audit report`	Payment for the quarter will be withheld in case audit report is not submitted or not satisfactory
Preventive Hardware maintenance	Preventive maintenance will have to be undertaken by the O&M manpower every month. Reports for the same to be submitted every quarter.	Payment for the respective quarter will be made against submission of the preventive maintenance reports
Breakdown hardware maintenance	Hardware breakdown has to be attended to within 12 hours of the breakdown	Default will attract penalty as indicated below: Hardware breakdown attended to > 12 hrs and <= 24 hrs (Rs. 10,000/- ) > 24 hrs (Rs. 10,000/- per hour)

System / network / hardware downtime during periodic & mandated system maintenance will be excluded from the downtime calculations above. Such periodic & mandated system maintenance should be conducted only Sundays between 12:00 hours to 5:00 hours, not more than once every quarter.

5.15.2 The selected agency should provide tools / mechanisms to measure the SLA. The tool / mechanism should be able to provide ASDCL, information about downtime for network, and historical information about the same. **The downtime shall be calculated per month and penalty, if any, would be charged per month.** Downtime of any one of the services would result in deduction of that downtime from the total time in the month.

## 5.16 Operational Guarantee

5.16.1 Bidders shall give Operational guarantees covered in this document; this includes guaranteed uptime standard, system response time etc. as specified in performance criteria and scope of work. As system response time and other operational parameters are also dependent upon the hardware and network infrastructure deployed, the implementer is expected to advise ASCDCL on an appropriate systems architecture and server infrastructure requirement.

Sr. No.	Process	Time Duration
1.	System Log-in (GIS Application)	Less than 3 seconds
2.	Time to display results of a simple query	Less than 3 seconds
3.	Time to display results of a moderately complex query involving 4-5 database tables	Less than 5 seconds
4.	Time to display results of a complex query involving multiple database tables	Less than 7 sec

5.16.2 Please note that the response time mentioned above is indicative in nature and may change based on the application and the application infrastructure. This requirement shall be considered as bare minimum and bidders are encouraged to minimize response times if possible.

### 5.17 Insurance

All the hardware and equipment which will be deployed for the purpose of the IMEGS project shall be insured in the name of ASCDCL by the selected bidder. The insurance shall be in the name of ASCDCL and the agency shall ensure that the relevant premium payments are up to date at all times during the project.

### 5.18 Signing of Contract

- 5.18.1 At the same time as ASCDCL notifies the successful Bidder that its bid has been accepted, ASCDCL will send the Bidder the Contract Form/ Memorandum of the Agreement. The draft of the memorandum is attached as a separate volume to this tender.
- 5.18.2 Within 15 days of receipt of the Contract Form the successful Bidder shall sign the contract by paying the required stamp duty & registration fees as per the latest Govt. of Maharashtra directives in this regard and return it to ASCDCL.
- 5.18.3 A representative from the bidder has to sign the contract personally at ASCDCL HQ with proper authority letter from the signing authority of the bidding company he/she is representing authorizing him / her to sign an agreement with ASCDCL.
- 5.18.4 The jurisdiction for the contract shall be Aurangabad in Maharashtra under the jurisdiction of Bombay High Court.

#### **5.19 General**

- 5.19.1 Bidders are required to accept the payment terms without any deviations, and submit priced bids accordingly.
- 5.19.2 Unconditional acceptance of the order and submission of Composite Performance Bank Guarantee is a pre-requisite for release of any payments.
- 5.19.3 It is the clear understanding of the Bidder that the complete scope as defined or, as may be required for the intended objective of this tender is included in the quoted price. No extra payment apart from the quoted price will be made in order to achieve the intended objective. Any activity not specifically mentioned in the tender enquiry/ tender but required to be carried out for achieving the intended objective, will not form basis for considering extra payments.
- 5.19.4 The bidder shall guarantee that the all data received by them during the course of the project shall remain perpetually confidential and shall not be revealed to any third party ever, without the explicit permission of ASCDCL. Any breach in this condition may lead to a suspension and / or termination of the contract and the CEO, ASCDCL shall be within his / her right to levy due penalties for such breach.
- 5.19.5 For operational expenses such as bandwidth/connectivity/internet/gateway, ASCDCL reserves the right to renegotiate quoted prices from time to time, based on then available prices from ISPs / TSPs.
- 5.19.6 ASCDCL reserves the right to:
- Vary quantities for various items

- Procure hardware, active networking devices, and cloud data centre / disaster recovery directly as per governmental rules, regulations or policies
- Defer the delivery of items as per prevalent project conditions

## **6 PROPOSAL SUBMITTAL AND EVALUATION**

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### **6.1 General Instructions**

- 6.1.1 Proposals should be prepared simply & economically and provide a straightforward, concise description of the Bidder's capabilities to satisfy the requirements of this tender. Emphasis should be on completeness and clarity of content.
- 6.1.2 The bidders have to quote for each line item mentioned in the schedule of quantities. Partial quotes will be summarily rejected.

### **6.2 Proposal Format & Contents**

- 6.2.1 Bidders must follow all formats and address all portions of the tender set forth herein, including all the Corrigenda issued, providing all information requested. Bidders may retype or duplicate any portion of this Tender Document for use in responding to the tender, provided that the proposal clearly addresses all of AMC's information requirements.
- 6.2.2 Bidders must respond to every section/subsection of this document under the Technical (Unpriced) Proposal. All information presented in a proposal must be relevant in response to a requirement of this document, must be clearly labeled, and, if not incorporated into the body of the proposal itself, must be referenced to and from the appropriate place within the body of the Proposal. Any information not meeting these criteria shall be deemed extraneous and shall in no way contribute to the evaluation process.
- 6.2.3 All responses, as well as any reference material presented, must be written in English. All proposal pages must be numbered & sections appropriately cross-referenced in the Table of Contents.
- 6.2.4 Commercial Proposal and pricing information shall not be included in the Technical Proposal. Inclusion of Commercial Proposal amounts in the Technical Proposal shall make the proposal non-responsive and the proposal shall be rejected.
- 6.2.5 Bidders must organize their Technical Proposals as defined below to ensure consistency and to facilitate the evaluation of all responses. All the sections listed below must be included in the proposal, in the order presented with the Section Number listed. The required proposal sections are:
- Table of Contents: A table of contents providing a listing for each section of the proposal is required, including the appendices and any additional material submitted.



- **Executive Summary:** The executive summary should provide a concise summarization of the products and services being proposed to meet ASCDCL's needs and why it is the solution ASCDCL should decide to implement. The Bidder should also summarize how large-scale, government, public sector and private business use this product and how this experience indicates that the Bidder's solution is suitable for ASCDCL.
- **Company Overview:** This section should provide information about the Bidder's company, services, and corporate structure -including an organizational review, key contacts, and customer relations. This section must include the following information:
  - A brief description of the company
  - Company history
  - Current size of company
  - Company location
  - Length of time in business
  - Length of time providing type of service outlined in this proposal
  - Qualifications of the company to respond to this tender
  - Names, addresses, telephone numbers, email addresses of principal company contacts for this RFP response.

6.2.6 **Experience and References:** In this section, the Bidder should discuss the firm's experience in executing similar projects, clearly indicating the date of the PO, date of completion, project value & brief description of the project. It is the bidder's responsibility to include/attach, with suitable cross-reference to, the necessary documentary evidence to substantiate the claim. Provide at least three references where the proposed solution is in operation. References must include:

- Contact Name
- Contact Address
- Contact Telephone Number
- Contact E-mail Address

6.2.7 Proposed System Overview: A brief description of the proposed system must be provided so that ASCDCL can gain a basic understanding of the standard capabilities of the system. System strengths and weaknesses should be clearly noted. The system overview should include a detailed system description, detailed system architecture diagram showing part numbers used, detailed specifications and quantities of parts / components used and solution features etc.

- Compliance/Exception to Specifications: Although the specifications in the requirements section represent ASCDCL's anticipated needs, there may be instances in which it is in ASCDCL's best interest to permit exceptions to specifications and accept alternatives. It is extremely important that Bidders make very clear where an exception is taken to the specifications and how alternatives will be provided. Therefore, exceptions, conditions, or qualifications to the provisions of ASCDCL's specifications must be clearly identified as such, together with the reasons, and inserted in this section of the proposal. If the Bidder does not make it clear that an exception is taken, CEO, ASCDCL will assume the proposal is responding to and will meet the specification as written. If, during the technical evaluation, CEO, ASCDCL finds out that some exception was not recorded with the sole intention of misleading the Technical Evaluation Committee, CEO, ASCDCL may decide, at its sole discretion, to treat such proposal as non-responsive.
- Additional Information: All additional information the Bidder deems as pertinent to their proposal, must be included in this section. This includes quality certificates, documentary evidences of various claims made, Manufacturer Authorization Letters (from the OEMs of all the system components), technical sheets & any other document required to be furnished under various sections of this RFP. This section may also include test reports, marketing materials, case studies etc. Please note that all the MAFs are mandatory and should specifically be marked to CEO, ASCDCL. A format for the MAF is provided in Annexure VI.
- The following documents are required to be submitted along-with the Technical Proposal. Non submission of any of the documents may result in the proposal being treated as non-responsive:
  - Declaration that they have not been banned/delisted/blacklisted
  - Manufacturers' Authorization Letter
  - Certificate from the OEMs certifying that the offered products are not End of Life Products

## 6.3 Evaluation Process

### 6.3.1 Pre-Qualification Criteria

- a. the bidder will be assessed on the mandatory prequalification criteria specified in clause 3.1.
- b. ASCDCL will assess the bidder's capabilities against the pre-qualification criteria.

Only those bidders' who meet / exceed the pre-qualification criteria shall proceed for technical evaluation.

6.3.2 The bids of only those Bidders shall be technically evaluated who stand qualified in the prequalification stage/criteria. All proposals shall be reviewed by the Project Consultants to determine compliance with basic proposal requirements as specified in this tender document. If the Consultant determines that a proposal may be missing one or more such requirements, they shall review the proposal to determine:

- If it meets requirements for further evaluation;
- If ASCDCL shall request clarification(s) or correction(s); or
- If ASCDCL shall determine the proposal non-responsive and reject it

- 6.3.3 All proposals will be primarily evaluated for the compliance with prequalification criteria mentioned in this tender document. Subsequently, the proposed solution of the bidder will be evaluated for compliance with functional requirements specified in this tender document. Only those bidders which have proposed a complete solution satisfying ASCDCL's functional requirements will be selected for detailed technical evaluation. The verification of the compliance of the solution with functional requirements may call for detailed presentations / solution demonstrations / PoCs / customer visits, which may be intimated to bidders at a suitable time.
- 6.3.4 CEO, ASCDCL reserves the right, at its sole discretion, to request clarifications of technical proposals or to conduct discussions for the purpose of clarification with any or all Bidders. The purpose of any such discussions shall be to ensure full understanding of the proposal. Discussions shall be limited to specific sections of the proposal identified by the Project Consultants and, if held, shall be after initial evaluation of Technical Proposals. If clarifications are made as a result of such discussion, the Bidder shall put such clarifications in writing. ASCDCL's intent in this regard shall be communicated to the Bidder/s at least 3 days in advance
- 6.3.5 Detailed technical evaluation of the proposals submitted by the Bidder will be carried out by ASCDCL alongwith the Project Consultant.
- 6.3.6 CEO, ASCDCL reserves the right to negotiate the quoted prices with lowest Bidder.
- 6.3.7 CEO, ASCDCL reserves the right to delete any of the items in the Schedule of Rates at the time of placement of Letter of Intent/Purchase Order. The decision of CEO, ASCDCL shall be final and binding.
- 6.3.8 No suo-moto reduction in prices quoted by Bidder shall be permitted after opening of the bid. If any Bidder unilaterally reduces the prices quoted by him in his bid after opening of bids, the bid (s) of such Bidder(s) will be liable to be rejected. Such reduction shall not be considered for comparison of prices but shall be binding on the Bidder in case he happens to be a successful Bidder for award of work.
- 6.3.9 ASCDCL may request:
- An interview and/or open forum meeting with the technical teams of the Bidders or the OEMs.
  - A visit to the OEM facilities or reference sites as per the benchmarking schedules set with the individual Bidder/s.
  - A reference checking meeting with the clients provided by the Bidder
  - A visit to the office/facilities of the Bidder

- Proof of Concept at the Bidder's cost. For this purpose, ASCDCL shall provide adequate notice of at least 7 days in advance.
- The bids will be evaluated based on the Total Delivered cost (including the quoted CCAMC cost).

#### 6.4 Technical Evaluation Process

The evaluation process for the selection of the Bidder shall be as follows:

##### 6.4.1 Technical Evaluation Matrix

6.4.1.1 The bids shall be assessed and evaluated based on the evaluation procedure prescribed below.

Sr. No.	Criterion	Conditions	Max. Marks
1	Number of employees in the organization in India	More than 500 employees – 10 250 to 500 employees - 8 100 employees to 250 employees – 6	10
2	Average Annual Turnover for the past three financial years	More than Rs. 100 crores – 10 Rs. 50 crores to Rs. 100 crores – 8 Rs. 3.3 crores to Rs. 50 crores - 6	10
3	Experience in executing GIS projects in municipal corporations in India. Only completed projects shall be considered.	2 marks per project	10
4	Proposed GIS application is open source application	Yes – 5 No - 0	5
5	The proposed GIS application should have been used to digitize and manage the following layers: - Properties - Water pipelines - Sewage Lines - Roads - Encroachments	1 mark per layer	5
6	Conformance of the proposed system architecture with tender requirements	High - 10 Medium – 6 Low – 2	10
7	Completeness of the proposed technical solution	High – 10 Medium – 6 Low – 2	10

Sr. No.	Criterion	Conditions	Max. Marks
	in respect to system components		
8	Project Management Plan & Approach	Satisfactory - 10 Average – 6 Poor – 2	10
9	Experience of the proposed project team	High – 10 Medium – 6 Low – 2	10
10	Quality of the presentation during solution demonstration	High – 10 Medium -6 Low - 2	10
11	Availability of GIS resources on the company rolls	More than 100 – 10 50 to 100 – 5 10 to 50 - 1	10
	<b>Total</b>		<b>100</b>

Please note that only those bids, which score a minimum of 70 % overall marks, shall be considered for further commercial evaluation.

Note: Bidders are required to furnish the details with regard to their Technical Evaluation Score claims. Please note that the proposals may be evaluated solely on the basis of the documents submitted as a part of the technical bid.

## 6.5 Final Evaluation

The final evaluation will be based on QCBS basis.

The total techno-commercial score of each bidder will be calculated as follows:

$$TSn = \left\{ \left( \frac{Tn}{Th} \right) \times 70 \right\} + \left\{ \left( \frac{Cl}{Cn} \right) \times 30 \right\}$$

where:

*TSn = Total Techno-commercial score of the bidder*

*Tn = Technical Score of the bidder*

*Th = Highest Technical Score amongst all technical qualified bidders*

*Cl = Lowest Total Quoted Price amongst all technical qualified bidders*

*Cn = Total Quoted Price of the bidder*

The bidder with the highest Total Techno-commercial score will be awarded the contract.

The total quoted price will include the capital cost (Capex) and the operational cost (Opex) for the entire project duration.

## 7 SCHEDULE OF QUANTITIES

Sr. No.	Particulars	Qty	UoM	Basic Rate (INR)	GST %	GST (INR)	Unit Rate Incl GST (INR)	Total Amount (INR)
<b>CAPEX</b>								
<b>A</b>	<b>GIS Application Software</b>							
1	GIS Application Suite	1	LS					
2	Installation & Customisation,	1	LS					
<b>B</b>	<b>GIS Survey</b>							
1	GIS based survey using tools (drones) and manpower to cover the entire city of Aurangabad as per the layers identified in this document	1	LS					
<b>OPEX</b>								
<b>C.</b>	<b>Opex Payments</b>							
1	CAMC Charges including provision of manpower for application maintenance and periodic GIS surveys	10	years					
2	DC Hosting Charges for the entire Application (Tier-III set-up), including applicable broadband / connectivity charges	132	Months					
3	DR Hosting Charges for the entire Application (Tier-III set-up), including applicable broadband / connectivity charges	132	Months					



- The cloud DC & DR rates will be considered for the overall commercial evaluation. However, in case ASCDCL is able to obtain lower rates for the same, CEO, ASCDCL will be free to procure the same directly.

## 8 ANNEXURE I – BIDDER INFORMATION SHEET

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### About the Company

Name of the Company:	
Postal Address (Regd. Office):	
Postal Address (Local Office):	
Constitution, Registration No./Date:	
PAN	
GSTN	

### About the Authorized Signatory:

Name:		Designation:	
Office Address:		Email:	
Tel. Nos.:		Cell No.:	

### Company Financials/Headcount

	FY 2019-20	FY 2018-19	FY 2017-18
Turnover (INR)			
Turnover from relevant area of business as defined in the prequalification table			
Net Worth (INR)			
Total Employee Headcount			

### Company Experience

Project Name	Customer Name & Address	Project Description	Project Value	Contract Period (From-To)	Project Status	Contact Person, Contact Tel. No. & Email
1						
2						

.						
N						

**Company Credentials**

1. QMS - Provide Details
2. Blacklisted/banned/Delisted - Provide Details

## 9 ANNEXURE II – BIDDER’S UNDERTAKING

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Date:

To,

The CEO

ASCDCL, Aurangabad

Sub: Undertaking

Dear Sir,

1. On behalf of M/s..... (Name of the Bidder), I, the undersigned, state that all the information stated above as well as in other parts of our bid is true.
2. I do hereby affirm and undertake to abide by all the terms, conditions and specifications given in the Bid Document while performing the contractual obligations relating to the IMEGS project.
3. Also, I do affirm & assure that the solution proposed by us is complete & total meeting all the functional requirements of the project as stated in the Bid Document.
4. I also confirm that our company, associates, partners or OEMs included in our bid, have never been blacklisted or put on any holiday listing by any Central / State Government / Municipal Corporation.
5. I also confirm that none of the shareholders, Directors or management of our company are involved in any capacity with any other company that is blacklisted or put on any holiday listing by any Central / State Government / Municipal Corporation

Yours faithfully,

(Authorised Signatory)

Name, Signature & Seal of the Bidder

**Place:**

**Date:**

*(To be submitted by sole bidder or each member of the consortium)*

## 10 ANNEXURE III – FORMAT FOR PERFORMANCE BANK GUARANTEE

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TO,  
The CEO  
ASCDCL  
Aurangabad.

IN CONSIDERATION OF the CEO, ASCDCL having its registered office at Aurangabad (hereinafter called "ASCDCL" which expression shall include its successor in business and assigns) issued a tender on Messrs. .... a partnership firm/sole proprietor business/a company registered under the Companies Act, 1956 having its office at (hereinafter called "Bidder" which expression shall include its executors, administrators and assigns) against Tender no..... dated ..... (hereinafter called "Bidder" which expression shall include any amendments/alterations to "Bidder" issued by "ASCDCL") for the supply of goods to/execution of services for ASCDCL and ASCDCL having agreed not to insist upon immediate payment of Performance Guarantee for the fulfilment of the said tender in terms thereof on production of an acceptable Bank Guarantee for an amount of Rs..... (Rupees ..... only).

1. We, ..... Bank having office at ..... (hereinafter referred to as "the Bank" which expression shall include its successors and assigns) at the request and on behalf of Bidder hereby agree to pay to the ASCDCL without any demur on first demand an amount not exceeding Rs..... (Rupees ..... only) against any loss or damage, costs, charges and expenses caused to or suffered by ASCDCL by reason of non performance and fulfillment or for any breach on the part of Bidder of any of the terms and conditions of the said "tender".

2. We, ..... Bank further agree that ASCDCL shall be sole Judge whether the said Bidder has failed to perform or fulfill the said "tender" in terms thereof or committed breach of any of the terms and conditions of "the order" and the extent of loss, damage, cost, charges and expenses suffered or incurred or would be suffered or incurred by ASCDCL on account thereof and we waive in favour of ASCDCL all the rights and defenses to which we as guarantors and/or Bidder may be entitled to.

3. We, ..... Bank further agree that the amount demanded by ASCDCL as such shall be final and binding on the Bank as to the Bank's liability to pay and the amount demanded and the Bank to undertake to pay ASCDCL the amount so demanded on first demand and without any demur notwithstanding any dispute

raised by Bidder or any suit or other legal proceedings including arbitration pending before any court, tribunal or arbitrator relating thereto, our liability under this guarantee being absolute and unconditional.

4. We, ..... Bank further agree with ASCDCL that ASCDCL shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said "tender"/or to extend time of performance by Bidder from time to time or to postpone for any time to time any of the powers exercisable by ASCDCL against Bidder and to forbear to enforce any of the terms and conditions relating to Bidder and we shall not be relieved from our liability by reason of any such variation or extension being granted to Bidder or for any forbearance, act or omission on the part of ASCDCL or any indulgence by ASCDCL to Bidder or by any such matter or things whatsoever which under the law relating to sureties would but for this provision have the effect of relieving us.

5. NOTWITHSTANDING anything hereinbefore contained, our liability under this Guarantee is restricted to Rs. .... (Rupees..... only). Our liability under this guarantee shall remain in force until expiration of twelve months from the due date of intimation to the bidder. Unless a demand or claim under this guarantee is made on us in writing within said period, that is, on or before ..... all rights of ASCDCL under the said guarantee shall be forfeited and we shall be relieved and discharged from all liabilities thereunder.

6. We, ..... Bank further undertake not to revoke this guarantee during its currency except with the previous consent of ASCDCL in writing.

7. We, ..... Bank lastly agree that the Bank 's liability under this guarantee shall not be affected by any change in the constitution of Bidder.

8. "The Bank" has power to issue this guarantee in favour of ASCDCL in terms of the documents and/or the Agreement/Contract or MOU entered into between Bidder and "the Bank" in this regard. IN WITNESS WHEREOF the Bank has executed this document on this ..... day of .....

For ..... Bank  
(by its constituted attorney)

(Signature of a person authorised  
to sign on behalf of "the Bank")

## **11 ANNEXURE IV – AGREEMENT**

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**Provided separately as Volume II**

## 12 ANNEXURE V – PRE-BID QUERY FORMAT

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The pre-bid queries should be **emailed only in MS Excel** format as per the following table:

S.N	Company Name	RFP Section No.	RFP Page No.	Clause	Query



### 13 ANNEXURE VI – DOCUMENTS TO BE SUBMITTED ALONGWITH THE BID

Sr. No.	Envelope and Title	Documents to be attached
1	Envelope 1: “Key Submissions and Techno-Commercial Bid”	
1A	Envelope 1A: “Key Submissions”	Copy of Proof of RFP Fee Payment EMD (Proof of Payment)
1B	Envelope 1B: “Techno-Commercial Bid”	<ul style="list-style-type: none"> <li>• RFP document, Agreement and Corrigendum /Addendum, if any, signed &amp;sealed by the authorized representative</li> <li>• Bidder Information Sheet</li> <li>• Bidder’s Undertaking</li> <li>• Bidder’s Similar Experience along with the necessary documents as per RFP</li> <li>• Manufacturer’s Authorisation Form</li> <li>• Financial Capability Statement as per along with Audited Annual accounts as per RFP.</li> <li>• Power of Attorney</li> <li>• Declaration of Non-blacklisting</li> <li>• No deviation certificate</li> <li>• Technical Compliance</li> <li>• Technical Proposal</li> <li>• Any other documents required as per the RFP terms.</li> </ul> <p><i>The Price Bid / prices should not be mentioned anywhere in Envelope-1.</i></p>
2	Envelope 2: Price Bid	To be submitted online via e-tendering portal

## 14 ANNEXURE VII - SIGN-OFF FORMAT

Date	
Pertains to	<input type="checkbox"/> Application Software <input type="checkbox"/> Data Center <input type="checkbox"/> Operations & Maintenance <input type="checkbox"/> Hardware
Scope	<input type="checkbox"/> Supply <input type="checkbox"/> Installation <input type="checkbox"/> Testing <input type="checkbox"/> Commissioning <input type="checkbox"/> Maintenance <input type="checkbox"/> Training <input type="checkbox"/> Documentation
Particulars	<i>Please describe the exact deliverable completed</i>
Documents referred	<input type="checkbox"/> Tender document <input type="checkbox"/> SRS / SDD <input type="checkbox"/> Project Management Plan <input type="checkbox"/> Any other, please specify
Target Date	
Actual Date	
Delay in days, if any	
Reasons for delay, if any	

<i>For AMC (System Manager)</i>	<i>For ASCDCL</i>	<i>For Project Consultant</i>	<i>For Bidder</i>
<i>Name &amp; Sign</i>	<i>Name &amp; Sign</i>	<i>Name &amp; Sign</i>	<i>Name &amp; Sign</i>
<i>Date</i>	<i>Date</i>	<i>Date</i>	<i>Date</i>

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