

**Request for Proposal For
Base Map Creation, Survey, Supply,
Implementation & Post Implementation Support
of Geographical Information System Solution for
Vadodara Municipal Corporation.**

Tender no: GIPL/VMSS/14-15/33

Tender cost: Rs. 10,000/- (non refundable)



Guj Info Petro Ltd.

**Block no. 15, 2nd Floor, Udhyog Bhavan, Sector-11,
Gandhinagar-382011, Gujarat.**

Last date for submission of Online tender: 19th January 2015 up to 1700 hrs

Date of opening of Technical tender: 20th January, 2015 1600 hrs



Tender Schedule

Item Description	: Base Map Creation, Survey, Supply, Implementation & Post Implementation Support of Geographical Information System Solution for Vadodara Municipal Corporation.
Location	: Vadodara
Tender Fees	: Rs. 10,000/- (Rupees Ten Thousand Only) in form of Demand Draft in favor of "Guj Infopetro Limited" payable at Gandhinagar. Non refundable.
Contract Period	: Warranty mentioned in bill of material
Availability of Tender Document	: www.nprocure.com ; www.eprocure.co.in
Tender Floating Date	: 30/12/2014
Pre-bid meeting	: 09/01/2015 at 15:00 P.M at VMSS building, Khanderao Market, Vadodara
Last Date & Time of submission of Bid.	: 19/01/2015 5:00 P.M
Last Date & Time of physical submission of Tender Fee & all necessary documents	: 19/01/2015 5:30 P.M
Bid Validity	: 90 days from the date of opening of Technical bid
Date & Time for on-line opening of Technical Bid	: 20/01/2015 at 4:00 P.M
Date & Time for on-line opening of Financial Bid	: 22/01/2015 at 4:00 P.M
GIPL reserves its right to reject any or all tenders or split the job between more than one Bidders without assigning any reason thereof.	



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Glossary of Terms

Sr. No.	Acronym	Full Form
1.	VMC	Vadodara Municipal Corporation
2.	VMSS	Vadodara Mahanagar Seva Sadan
3.	API	Application Programming Interface
4.	ATS	Annual Technical Support
5.	CAPEX	Capital Expenditure
6.	COTS	Commercial-Off-The-Shelf
7.	EMD	Earnest Money Deposit
8.	EMS	Enterprise Management Software
9.	FRS	Functional Requirement Specifications
10.	GIS	Geographic Information System
11.	GoG	Government of Gujarat
12.	GoI	Government of India
13.	HoD	Head of Department
14.	ICT	Information and communication Technology
15.	IPR	Intellectual Property Rights
16.	ISO	International Organization for Standards
17.	ISP	Internet Service Provider
18.	IT	Information Technology
19.	JNNURM	Jawaharlal Nehru National Urban Renewal Mission
20.	Kbps	Kilobits per second
22.	LAN	Local Area Network
23.	LoI	Letter of Intent
24.	Mbps	Megabits per second
25.	DC	Datacenter (AMC)
26.	MIS	Management Information Systems
27.	MMP	Mission Mode Projects
28.	N/W	Network
29.	NGO	Non Governmental Organization
30.	NOC	No Objection Certificate
31.	O & M	Operations & Maintenance
32.	OEM	Original Equipment Manufacturer
33.	OPEX	Operating Expenditure
34.	OS	Operating System
35.	PBG	Performance Bank Guarantee



36.	PC	Personal Computer
37.	PSU	Public Sector Undertaking
38.	RFP	Request for Proposal
39.	RTI	Right To Information
40.	SI	Systems Integrator
41.	SLA	Service Level Agreement
42.	SMS	Short Messaging Services
43.	SRS	Software Requirement Specifications
44.	STQC	Standardization, Testing & Quality Certification
45.	TCO	Total Cost of Ownership
46.	UAT	User Acceptance Testing
47.	ULB	Urban Local Body
48.	WAN	Wide Area Network
49.	XML	Extensible Markup Language
50.	GCP	Ground Control Points
51.	DGPS	Differential Global Positioning System
52.	MoA	Memorandum of Agreement
53.	DEM	Digital Elevation Model
54.	SOI	Survey of India
55.	GTS	GIS Terminal Server
56.	STP	Segmentation, Targeting and Positioning
57.	GLSR	Ground level sump reservoir
58.	PGDB	Personal Geodatabase
59.	FGDB	File Geo-database
60.	SDE	Spatial Database Engine



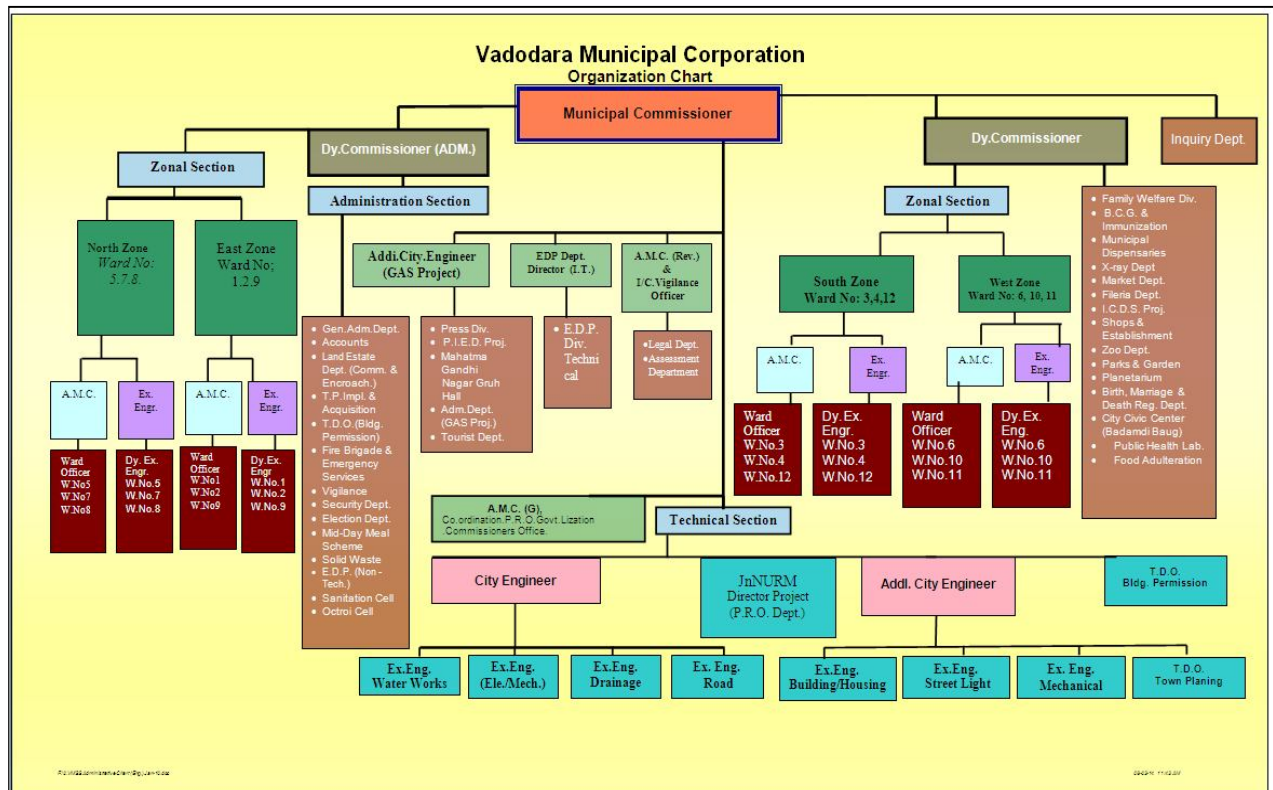
1. Introduction of Customer : Vadodara Municipal Corporation :

Vadodara is administered by the Vadodara Municipal Corporation (VMC). Some of the regions surrounding the city are administered by the Vadodara Urban Development Authority (VUDA). The VMC was established in July 1950 under the Bombay Provincial Corporation Act, 1949. For administrative purposes, the city is divided into four zones and 26 wards.

The two main institutions involved in planning and development in Vadodara are VMC and the VUDA. The jurisdiction of both these agencies is demarcated clearly not only physically but also functionally. The governing acts for both the institutions differ. The principal responsibility of VUDA is to ensure a holistic development of the Vadodara agglomeration covering an area of 714.56 km². whereas VMC is involved in the development of area of 148 km².

Vadodara as it has now been renamed has 10 administrative wards and 28 election wards. For administrative purposes, the VMC area is divided into four namely North, East, South and West.

Organization Chart :





2. Qualification of the Bidder

2.1 Pre Qualification Criteria :

The Bidder's competence and capability is proposed to be established by the following parameters.

Sole proprietorship, registered partnership firm, public limited company, private limited company. The firm/ company should be registered in India and should have at least 5 years of experience.

The Bidder should meet all the criteria given in this section.

Sr. No.	Pre Qualification Criteria	Attachments
1	The Bidder / All the Partners (in case of Consortium) should be a company registered under the Companies Act, 1956 since last 5 years for the period ending 31.03.2013	Certificate of incorporation / consortium letter/certificate
2	The Bidder can be a company or corporation or a consortium of companies / corporation. In case of a consortium, the same shall not consist of more than two companies / corporations and shall be formed under a duly stamped consortium agreement. The original stamped consortium agreement shall be attached along with the Bid Document. In the event of a consortium, one of the partners shall be designated as a "Lead Partner". However, every member of the consortium shall be equally responsible & jointly & severally liable for the successful completion of the entire project.	Consortium agreement signed between partner companies/corporation
3	The Bidder/Lead Partner should have CMM level 3/higher certification OR ISO 9001:2008 and ISO 27001 Certificates	Valid copy of the Certificate
4	The Bidder /Lead Partner or Consortium member should have demonstrable expertise and experience in successful implementation of GIS based projects in last 5 years with 3 (three) successful GIS projects having a cumulative value of 4 crores , with a minimum value of Rs. 50 Lacs for each of the project. Minimum one of the above mentioned project should be for ULB/Government Organization/ Department/Private Organization. The value of hardware will not be considered for qualifying against this criterion.	The bidder must submit details of such projects undertaken along with clients' completion certification/letter.



5	The Bidder/Lead partner or Consortium member should have demonstrable expertise and experience in creation of base maps along with property tagging with at least 1 (One) project for ULBs/Government Organization/ Department/PSU.	At-least One Project
6	The Bidder /Lead Partner or Consortium member should have Experience of Implementation of Creation of Spatial Layers based on Mapping / Ground Verification and Physical Survey	At least One Project with Multiple Geospatial Layers
7	The Bidder /Lead Partner and Consortium member must have cumulative turnover of at least INR 25 crores for during last three financial years as on 31st March, 2013.	Audited and Certified Balance Sheet & Profit/Loss Account of last 3 Financial Years. Also CA certificate mentioning turnover.
8	The Bidder /Lead Partner or Consortium member should have at least 50 permanent experts working for GIS based services including GIS based development.	HR certificate
9	The Bidder /Lead Partner or Consortium member should have Experience of Geospatial Project involving LIS including Scanning, Digitization , Geo referencing of Maps	At least One Project
10	The Bidder /Lead Partner or Consortium member should have Experience of GIS based Portal Development.	At least 1 project
11	The Bidder /Lead Partner or Consortium member should have at least 25 permanent experts working for GIS based field survey.	HR certificate
12	The Bidder /Lead Partner or Consortium member should have experience of integrating MIS data with GIS	At least 1 project
13	The bidder/ Lead partner should have positive net worth in last financial year ending on March 2013.	Audited and Certified Balance Sheet & Profit/Loss Account of last 3 Financial Years.
14	Bidder /Lead Partner and Consortium member should not be under a declaration of ineligibility for corrupt and fraudulent practices issued by Government of India or any other PSU or State Government of India	Certificate / affidavit mentioning that the Bidder is never been engaged in any corrupt & fraudulent practices and has never been blacklisted by Government Departments.
15	The Bidder must have a valid Service Tax Registration in India.	Proof of a valid Service Tax Registration in India.



16	The bidder should have a back-end support agreement/arrangement with GIS software license provider and the Original Equipment Manufacturers (OEMs) of IT Hardware, which includes the post-sales support activities for entire project duration (Implementation and O&M phase)(In case of 3rd party software application).	The undertaking from OEM/ License provider to be submitted.
17	The bidder should be authorized by its OEM and license provider to quote in the bid.	The authorization certificate of OEM/ license provider for GIS applications'
18	Capacity Building and Training	At least 1 Project with more than 50 users

Note: In case the member showcasing the project reference was a part of a consortium then a letter from the lead member declaring clearly the scope of work executed by the respective member.

3. Instructions to Bidders

3.1 Introduction & Issuer

Gujarat Infopetro Ltd, Government of Gujarat (hereinafter referred as "GIPL")/Commissioner, Vadodara Municipal Corporation invites all the interested bidders to submit their technical and financial offers for "Base Map Creation, Survey, Supply, Implementation & Post Implementation Support of Geographical Information System Solution for Vadodara Municipal Corporation", in accordance with the scope of work, conditions and manner prescribed in this Request for Proposal (RFP) document.

3.2 Advice to the bidders

Bidders are advised to study this RFP document carefully before participating. It shall be deemed that submission of Bid by the bidder has been done after their careful study and examination of the RFP document with full understanding to its implications. RFP is to be submitted as per enclosed format only. Attach the certificates, brochures & other documents asked for in the RFP document.

3.3 Transferability of the RFP document

This RFP document is non-transferable.

3.4 Misplacement of the RFP document



GIPL shall not be responsible for any postal delay about non-receipt / non-delivery of the documents.

3.5 Cost of Bidding

The Bidder shall bear all costs associated with the preparation and submission of its bid and shall in no event or circumstance be held responsible or liable for these costs, regardless of the conduct or outcome of the bidding process. The Tender document is downloadable free of cost to all the bidders. The soft copy may be downloaded from the <https://gipl.nprocure.com> Bidders are required to submit the Demand Draft of Rs. 10,000/- from Nationalized bank, in the name of "Guj Infopetro Limited" payable at Gandhinagar, as onetime tender processing fee (Non- refundable).

3.6 Completeness of Response

Bidders are advised to study all instructions, forms, terms, requirements and other information in the RFP documents carefully. Submission of bid shall be deemed to have been done after careful study and examination of the RFP document with full understanding of its implications.

The response to this RFP should be full and complete in all respects. Failure to furnish all information required by the RFP documents or submission of a proposal not substantially responsive to the RFP documents in every respect will be at the Bidder's risk and may result in rejection of its Proposal and forfeiture of the Bid EMD.

3.7 Proposal Preparation Costs

The bidder is responsible for all costs incurred in connection with participation in this process, including, but not limited to, costs incurred in conducting informative and other diligence activities, participation in meetings/discussions/presentations, preparation of proposal, in providing any additional information required by AMC to facilitate the evaluation process, and in negotiating a definitive contract or all such activities related to the bid process. GIPL will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

This RFP does not commit GIPL to award a contract or to engage in negotiations. Further, no reimbursable cost may be incurred in anticipation of award or for preparing this bid.

All materials submitted by the bidder become the property of AMC and may be returned completely at its sole discretion.



3.8 Signing of Communication to the GIPL

All the communication to GIPL; the bid documents shall be signed on each page by the authorized representative of the bidder and authority letter should be attached with the bid

3.9 Pre-bid Queries

All enquiries / queries from the bidders, related to this RFP must be submitted on or before 12/01/ 2015, and must be directed in writing (email) exclusively to the contact person.

*Chief executive Officer
Guj Infopetro Limited
Email: projects@gipl.net*

The preferred mode of delivering written questions to the aforementioned contact person would be through email. Fax / Telephone calls will not be accepted. In no event will the GIPL be responsible for ensuring that bidders' inquiries have been received by GIPL.

After distribution of the RFP, the contact person notified by GIPL will begin accepting written questions from the bidders. GIPL will endeavor to provide a full, complete, accurate, and timely response to all questions. However, GIPL makes no representation or warranty as to the completeness or accuracy of any neither response, nor does GIPL undertake to answer all the queries that have been posed by the bidders. The responses to the queries from all bidders will be distributed to all.

No pre bid queries will be accepted from any bidder after 12/01/2015 at 17:00 Hrs. All queries should be sent to CEO, Guj Info Petro Ltd. in the following format:

Sr. No	Section No./ Pg. No.	Component/Sub- component	Reference/ Subject requiring clarification	Clarification Sought
		

Note: The queries not adhering to the above mentioned format may not be responded.



3.10 Amendment of RFP Document

At any time prior to the last date for receipt of bids, GIPL, may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the RFP Document by an amendment.

The amendment will be notified in tender document / RFP published on website and may be communicated to all prospective Bidders by publishing the amendments on the website and the amendments so published will be binding on them. The amendment will have to be downloaded from website <https://gipl.nprocure.com> Interested bidders are requested to visit on frequent basis the e-procurement website to get latest update of the RFP.

In order to afford prospective Bidders reasonable time in which to take the amendment into account in preparing their bids, GIPL may, at its discretion, extend the last date for the receipt of Bids.

The bidders shall be allowed to resubmit their bid- if required, after such amendments.

3.11 Supplemental information to the RFP

If GIPL deems it appropriate to revise any part of this RFP or to issue additional data to clarify an interpretation of provisions of this RFP, it may issue supplements to this RFP. Any such corrigendum shall be deemed to be incorporated by this reference into this RFP.

3.12 GIPL's right to modify submission deadline

GIPL may, in exceptional circumstances and at its discretion, extend the deadline for submission of proposals by issuing a corrigendum on the website, in which case all rights and obligations of the project and the bidders previously subject to the original deadline will thereafter be subject to the deadline as extended

3.13 Submission of Bids

Online submission of Bids:

- The Bidder shall complete the Technical Bid and a Financial Bid furnished with the document giving details as per the format mentioned in the e-Tendering website <https://gipl.nprocure.com>. The bidder shall also complete



the bid form as per format on e-procurement portal and submit it with the financial bid on <https://gipl.nprocure.com>

- Telex, e-mailed or facsimile bids will be rejected.

Financial bid should only be submitted in electronic format on <https://gipl.nprocure.com> ; no physical copy shall be submitted. In case financial bid is submitted along with the technical bid, the bid will be rejected.

Bidder shall register with the <https://gipl.nprocure.com> for facilitating them in submission of the bid documents on the e-tendering website; In case any of the bidders is not registered they will have to get the registration completed on their own.

Bidder shall submit one hard copy of the entire technical bid with required seal and signature on each page in a separate envelope.

"Hardcopy" of the technical bid should be sealed in one envelop and labeled "Technical Bid". The "Technical Bid" and "EMD and Bid processing fee" should be sealed in two separate envelopes and then sealed in one bigger Envelope.

Bidder shall ensure that the physical copy of "Technical bid, EMD and Bid processing fee" is delivered either by hand delivery or by Registered Post only. No courier will be accepted.

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 the tendering Authority, the Bid shall be opened at the appointed time and location on the next working day.

The Bidder's names, bid modifications or withdrawals, and the presence or the absence of requisite bid security and any other details as GIPL may consider appropriate, will be announced at the time of opening.

Bids that are not opened and read out at bid opening shall not be considered for further evaluation, irrespective of the circumstances.

Prices shall be quoted in Indian Rupees Only.

3.14 Bid Submission Format

The entire proposal shall be strictly as per the format specified in this Request for Proposal. Bids with deviation from this format shall be rejected.

Physical bid should clearly mark as



Tender for "Base Map Creation, Survey, Supply, Implementation & Post Implementation Support of Geographical Information System Solution for Vadodara Municipal Corporation.

E-Tender No. : GIPL/VMSS/14-15/33

3.15 Late Tender offers

Any tender offer received by GIPL after the deadline for submission of tender offer prescribed by GIPL, pursuant to the clause above, will be summarily rejected.

3.16 Offer validity Period

The offer should be valid for a period of 90 days from the date of the opening of tender.

3.17 Address of Submission of bids

Offers should be addressed to the Chief Executive Officer at below given address:

Guj Info Petro Ltd.
Block no. 15, 2nd Floor, Udhyog Bhavan,
Sector-11, Gandhinagar-382011,
Gujarat

3.18 Earnest Money Deposit

Bidder/ SIs are required to give a Demand Draft or Bank Guarantee from Nationalized Bank drawn in favour of "Guj Infopetro Limited", payable at Gandhinagar and valid for 90 days from the due date of the tender for Rs 5,00,000/- (Rupees Five Lakhs only) as Earnest Money Deposit (EMD) along with their offer. Offers made without EMD will be rejected.

The earnest money deposit shall be non-interest bearing and is refundable to unsuccessful Bidders. The successful Bidder's EMD will be discharged upon the Bidder executing the Contract and furnishing the Security Deposit of 5% of the total work order.

The EMD may be forfeited

- a) If a Bidder withdraws its tender during the period of bid validity
- b) Or in case of a successful Bidder, if the Bidder fails
 - To sign the contract in accordance with terms and conditions;
 - To furnish Bid Security Deposit as specified in terms and conditions



3.19 DOCUMENTS COMPRISING THE BID

The bid prepared by the Bidder shall comprise of the following components. The bids not conforming to the requirements shall be summarily rejected.

i) Technical Bid

Technical Bid shall comprise Cover Letter, Technical Proposal and other required documents such as brochures, product details, supporting evidences of turnover, past work orders etc. Refer Annexure I for the Technical Bid contents and formats. Please note that no price schedule shall be indicated/ submitted in/ as a part of the Technical Bid and it shall only be quoted in the Financial Bid. The technical bid shall be submitted online at www.nprocure.com and in case of any discrepancy the bid submitted online will be considered final. The hard copy of the bid is for reference purposes only.

Bidders are requested to note the following:

- Bidder shall submit Power of Attorney or Authorization Letter of the person signing the bid.
- Bidder shall include the details of solution architecture of the integrated solution in the Technical Bid
- Bidder shall include the COMPLIANCE STATEMENT as a separate section in the Technical Bid.
- Bidder shall include in a separate sheet the ASSUMPTION and DEVIATION on technical specification, Installation and Maintenance etc. as a separate section in the Technical Bid.
- Bidder shall include any software required to make their solution fully functional as per requirement.

3.20 Qualifying Criteria

Prior to the detailed evaluation of the Technical Bids, GIPL shall determine whether each bid is (a) complete, (b) is accompanied by the required information and documents and (c) is substantially responsive to the requirements set forth in the RFP document. Only those bidders, who fulfill all the criteria mentioned in the section "Pre qualification criteria" of the tender, shall be eligible and qualified for further technical scrutiny as per the Evaluation Framework given below.

Bidders should obtain minimum 60 Marks in the technical evaluation to qualify for opening of the Commercial Bid. GIPL's evaluation in this regard shall be final and binding on the Bidder.

GIPL may at its sole discretion, waive any minor informality or non-conformity or irregularity in a Bid Document, which does not constitute a material deviation, provided such a waiver does not prejudice or affect the relative ranking of any Bidder.



3.21 Clarification of Offers

To assist in the scrutiny, evaluation and comparison of offers, the Chief Executive Officer, GIPL\ Commissioner, VMC, may at his discretion, ask some or all Bidder/ SIs for clarification of their offer. The request for such clarifications and the response will necessarily be in writing.

3.22 GIPL\VMC's right to accept any Bid and to reject any Bid or all Bids

Notwithstanding anything stated herein, GIPL reserves the right to accept full or part of the Bid or reject any Bid, and to cancel/annul the bidding process and reject all Bids at any time before the award of the Contract, without assigning any reason and thereby without incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidder's of the grounds for GIPL's action/decision

3.23 Evaluation Criteria

GIPL will form evaluation committee to evaluate both technical & commercial bids. Technical Evaluation conducted by the GIPL Technical Evaluation Committee shall be final and binding on all the bidders.

Bidders who have qualified as per the Pre-Qualification Criteria of this RFP document shall be evaluated and scored by the Technical Evaluation Committee based on a weighted point system, assessing each bidder's ability to satisfy the requirements set forth in the RFP Document.

A broad criterion for the evaluation along with the marks assigned to each of the criteria is as follows:

3.24 Evaluation of the Technical Proposal

The evaluation Committee will evaluate the Technical Proposal using the evaluation parameters as below and would select the technically qualified Bidder. All projects to be considered should be successfully completed and customer certificate must be submitted. All projects to be considered must be from central/ State / UT Govt or PSU Organization in India.

Evaluation of Technical Proposal

SI. No.	Evaluation parameter	Max. Marks	Eligible Documentary Evidence
E1	Project References	40	
1.	Geospatial Project involving GPS Survey upto	5	Work orders&



	Digital Elevation Model <ul style="list-style-type: none"> • upto200 sq. km – 2.5 Marks • Greater than 200 sq. km– 5 Marks 		completion certificates
2.	Geospatial Project involving 3D Photogrammetry Data Capture, Ground validation, Over Ground Utility survey <ul style="list-style-type: none"> • Up to 200 sq. km – 5 Marks • Greater than 200 sq. km– 10 Marks 	10	Work orders & completion certificates
3.	Geospatial Project involving LIS including Scanning, Digitization , Geo referencing of Maps <ul style="list-style-type: none"> • Up to 200 sq. km – 2.5 Marks • Greater than 200 sq. km– 5 Marks 	5	Work orders & completion certificates
4.	Creation of Spatial Layers based on Mapping / Ground Verification and Physical Survey Upto <ul style="list-style-type: none"> • Upto50 Layers – 2.5 Marks • Greater than 50 Layers – 5 Marks 	5	Work orders & completion certificates
5.	Geospatial Project involving Capacity Building and Training <ul style="list-style-type: none"> • Upto50 Users – 2.5 Marks • Greater than 50 Users – 5 Marks 	5	Work orders & completion certificates
6.	Geospatial Survey with linking to property layers <ul style="list-style-type: none"> • Up to 350000Properties – 5 Marks • Greater than 350000 Properties – 10 Marks 	10	Work orders& completion certificates
E2	Experience of Key Personnel	10	
	Quality of GIS Expert Proposed in the company	5	
	Quality of the GIS Manpower Proposed for the project	5	
E3	Approach and methodology	50	
	Approach and methodology	20	
	Presentation	30	
	Total (E1 +E2+E3)	100	

Minimum Technical Score of 60 out of 100 is required to qualify for opening of financial Bid. Only those bids having minimum score would be considered 'Qualified' and eligible for opening of financial bids.

3.25 Evaluation of Financial Proposal

The financial proposals of only technically shortlisted Applicants (qualified bidders) will be opened and will be ranked in terms of their total evaluated cost using QCBS process with Technical Score having weightage of 70% and Financial Price having weightage of 30%.

Formula for Normalization of Technical bid for each bidder $T_n = (T_b / T_{max}) \times 100$
Where T_b is the bidder's technical score and T_{max} is the Highest technical score.
Formula for Normalization of Financial bid for each bidder $F_n = (F_{min} / F_b) \times 100$



Where F_b is the bidder's financial bid value and F_{min} is the Lowest bid value. Individual bidder's T_n and F_n will be added to reach the final value. Further 70% of T_n and 30% F_n will be taken. The Bidder who scores the highest of $(T_n \times 70/100 + F_n \times 30/100)$ shall be considered as successful bidder.

3.26 Selection Process

The qualified bidder with the lowest Weighted Cost to GIPL Authority based on above mentioned QCBS Criteria shall be selected for the award of the project.

3.27 Substantially Responsible Bids

A substantially responsive Bid is one, which conforms to all the requirements, terms, conditions and specifications of the Request for Proposal.

Any attempt by a Bidder to influence the bid evaluation process may result in the rejection of the Bidder's Bid

3.28 Modification and Withdrawal of Offers

Modification or Withdrawal of Offers is not permissible after its submission. If the offer is withdrawn before the validity period, the EMD will stand forfeited.

3.29 Conditional offers by the Bidders

Bidder should abide by the terms and conditions specified in the RFP Document. If bidder submit conditional offers it shall be liable for outright rejection.

3.30 Negotiations, Contract Finalization and Award

GIPL / VMC shall reserve the right to negotiate with the bidder(s) whose proposal has been ranked first by the tender evaluation committee on the basis of best value to the Project.

Commercial bids will be opened for the technically qualified bidders and the bidder who scores highest may be awarded the contract. However, at the time of finalization, Commissioner, Vadodara Municipal Corporation, Vadodara may enter into negotiations with a selected Bidder. Commissioner, Vadodara Municipal Corporation, Vadodara reserves the right to award the contract, based on initial offers received or otherwise, without discussion and without conducting any further negotiations. Further, the selected Bidder may not reassign any award made as the result of this bid, without prior written consent from Commissioner, Vadodara Municipal Corporation, Vadodara.



3.31 Award Criteria

GIPL / VMC will award the Contract to the bidder whose Bid has been determined to be substantially responsive and has been determined as the Best Value Bid (a proposal which qualifies in all the evaluation stages and proves to be the lowest Financial quote), provided further that the bidder has demonstrated that it is qualified to perform services required for the project satisfactorily.

The LOI / work order could be awarded to the either Prime bidder or consortium partner depending their roles and responsibilities allocations defined in their MoU.

3.32 Signing of Contract

At the same time as GIPL / VMC notifies the Successful bidder/ System Integrator that its Bid has been accepted, GIPL /VMC shall enter into a contract, incorporating all agreements (to be discussed and agreed based on draft Contract Agreement (Annexure) between GIPL and the Successful bidder/Lead Bidder/Consortium Partner. Such agreements shall cover, in detail, aspects/ terms of the Contract.

3.33 Security Deposit

Within 30 days of the communication by GIPL/VMC (by Letter / E-mail) successful bidder will have to sign a Contract Agreement with GIPL / VMC & submit Security Deposit equal to 5% of the Order value in the form of Demand Draft or bank guarantee as instructed in letter / Email by authority.

3.34 Performance Bank Guarantee

The Bidder would be required to submit a performance bank guarantee of **5%** of the final contract value, from any of the Nationalized Bank and commercial banks as instructed by Authority

The proceeds of the performance bank guarantee shall be payable to VMC as compensation for any loss / penalties / liquidated damages resulting from the Bidder/ SIs failure to complete its obligations under the contract for post implementation support.

4. Project scope

4.1 Introduction

Geographic Information System (GIS) technology has found its way into many municipalities across the India. Many Urban Local Bodies (ULB) now rely on GIS technology as a support tool to design development plans to make important decisions. Geographic Information System (GIS) activities are undertaken for implementation of data base generation, planning, preservation and proper



monitoring of the Municipal Administration. Before the advent of GIS as well as e-Governance the Municipal Information System was not boldly initiated. It was quite hazardous and time consuming to serve the local citizens in various sectors especially in Property Tax, Water connection, Construction of Roads & Drains, Issuing of Birth & Death Certificates, Garbage cleaning etc. It also shows the geospatial view of the current municipal area linked with the corresponding database. The introduction of automated system in place of conventional manual system has improved manifold the work efficiency of the Municipality. Now, GIS is being used as one of the main tools of e-Governance for transparent administration.

The overriding GIS task of providing and on-going support for planning and decision-making is thus replaced with 'request-delivery' type duties within a municipal government. To overcome the 'request-delivery' cycle, GIS managers must remove the burden of complexity often found in GIS technologies. This can be accomplished by embedding simplified GIS applications throughout every department of municipal governments. The GIS application normally envisaged as part of an "information infrastructure" needed for providing effective municipal government services as a decision support system and a solution providing information sharing across multiple departments, apart from bringing in greater efficiency, speedy decision-making and transparency in the functioning of the ULBs.

The solutions are mainly centrally managed GIS providing the advantage of lower cost of ownership through single, centrally managed GIS application that is scalable to support multiple users from anywhere any time. Urban local bodies (ULB's) in India which are statutorily responsible for provision and maintenance of infrastructure and services in cities and towns are under fiscal stress. Many of these ULBs are becoming increasingly dependent on the state and central governments for their operation and maintenance requirements. Besides the limitations of small resource base, poor planning process, lack of poor resource generating abilities, poor information system and records management are some of the basic weaknesses in the present municipal administration. For better management of ULBs, GOI has taken several steps. One such policy level step is the 74th Constitutional Amendment Act. It is an initiative to decentralize power and strengthen democracy at local level and empower the urban local bodies with political,

Although GIS and its related technologies have made major impacts on the way utilities manage both infrastructure and operations, there are still many opportunities to improve both the way in which GIS is used and the management of infrastructure and operations. The greatest limitation still haunting the industry is the quality of available data. Even in this information age, much of the data available is outdated, incomplete, inaccurate, or in the wrong format. The good news is that as low quality data is validated, verified, and/or migrated using GIS technology, it will continue to improve.

The GIS Project at Vadodra Municipal Corporation (VMC) is planned to provide a robust and reliable decision support system to VMC officials by integrating the GIS data and the proposed e-Governance / ERP system.

The broad scope of work and the responsibility of the System integrator (SI) for the GIS implementation include, but not limited to the following: -



4.2 GIS Project Scope

Various services that are imperative to achieve the proposed GIS solution and which need to be delivered by Successful Bidder/SI include:

- Procurement of Satellite data on behalf of VMC. (The price of the same shall be reimbursed on actuals and is not a part of the commercials of the project)
- Supply and installation and Maintenance of the GIS base solution(Platform) for creation, storage & maintenance of GIS data as well as develop & customize GIS application for VMC (both desktop & web).
- Supply and installation of the GIS base solution (Platform) for creation, storage & maintenance of GIS data as well as develop & customize GIS application for VMC (both desktop & web based).
- Maintenance of GIS Platform & Web Based GIS Solution.
- Sizing of servers required for hosting the GIS solution.
- Building and implementing architecture for GIS in VMC 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, Driver etc.) for the same.
- Creation of the base map using the high resolution satellite images for VMC area with help of data processing and digitization.
- Carrying out topographic survey of VMC wards to carry out a ground truthing of mapped features through Satellite imagery.
- Property Survey & Tagging of properties within VMC boundary and verification of property assessment data.
- Creation of various layers on the base map by collecting the Spatial & Attribute data for various other layers required like Sewerage, Storm Water, SWM, Public Utilities, Electrical Poles, Development Plan, etc. using exiting physical data format available at VMC along with the help of field and door to door survey
- Testing and Training
- Annual Technical Support for 3 years for GIS platform, application and hardware supplied under this project
- Post Implementation Software Enhancements / Customizations

The objectives of the proposed project are as follows.

- Acquiring the satellite data. .
- Collection of Ground Control Points using by GPS surveys, and geo referencing the satellite images
- Processing Steps On Images
- Creation of large scale base map (1: 2500) from the geo-referenced and mosaiced satellite data by feature extraction.
- Field verification and updation and preparation of GIS base maps for the study area by incorporating the administrative boundaries and other information.
- Collection of attribute data associated with the mapped geographic feature through field survey in consultation with the client.



- Development of web based application to display the property related features and attributes with basic query functionalities.

4.2.1 Mapping of Vadodara City

Satellite Imagery

VMC would assist in providing all necessary formalities in procuring supply cloud free high resolution multispectral Satellite imagery data sets to the selected Bidder/SI.

Area coverage: At Present, spread of VMC with sufficient buffer is ~ 160 sq. km

Data Products: Satellite images

On procuring Satellite imagery by VMC, the Bidder/SI shall ensure the correctness of the imagery and data with truth data of field.

Only the security cleared imagery must be used for the preparation of Base Maps. Use of data from alternative online sources such as Google Earth / Google Maps is strictly prohibited as this is strictly against the usage policies of the respective services. The Bidder/SI will be solely liable for any legality and any such deviations will lead to disqualification of the Bidder/SI.

Post Processing of Satellite Imagery

To correct various geometric anomalies in raw satellite imagery, Ground Control Points (GCP) collected through Differential Global Positioning System (DGPS) survey will be used for Geo referencing of the imagery.

- i. The Bidder/SI shall carry out Geo Referencing and Geo-coding of data on WGS- 84 with projection on UTM.
- ii. For the DGPS Survey, the Bidder/SI should select the Ground Control Points (GCPs) at well defined sharp points both on the ground and on imagery. The Ground Control Points (GCPs) should be located at nearly desired locations and should be clearly visible on the imagery. Sketch, coordinate both in latitude, longitude and Easting, Northing of GCP's including GPS observation and adjustment data should be provided to VMC for necessary approval.
- iii. The Bidder/SI shall make sure that while taking DGPS survey all positions fixes must use at least three or four Satellites.
- iv. The horizontal accuracy of the GCPs should be 0.3– 0.5 meters.
- v. During static point-mode surveys, the minimum recording duration at each survey point shall be 60 seconds with at least 30 individual position fixes during that period.
- vi. The Bidder/SI shall make sure that the pair of GCP's to be established is collected at every 2 sq. km (depending upon the size and shape of the Municipal Corporation Boundary) and these should be evenly



distributed over the VMC City area.

- vii. The Bidder/SI shall also ortho-correct the geo-referenced imageries by creating DEMs from contours.
- viii. The Bidder/SI shall also do a mosaicing of the image tiles which are geo- referenced and ortho-rectified. The mosaics shall be verified once by the GIS representatives from VMC before proceeding for base map creation.

4.3 GIS Project Implementation Services

To achieve effective output and benefits from the E-Governance implementation for all the services of the ULBs, large scale and detailed GIS base maps are required. The Municipal Commissioner of Vadodra Municipal Corporation intends to appoint a Bidder/SI to carry out the work of Preparation of Base map , Property mapping for various zones/wards of Vadodra Municipal Corporation using high resolution Satellite imagery and existing administrative boundaries, slum boundaries, generation of building footprints / plots, infrastructure details, water bodies, landmarks, etc.

Also develop customized GIS applications for departments in VMC based on the inputs received from the Survey being carried out by VMC.

The primary objective of GIS Solution is to prepare a detailed base map encompassing VMC boundaries with various layers like property, utility, assets, etc. and conduct survey and integration of the same with the e-Governance application to support in better decision making and revenue generation. Interpretation, Updation and digitization of all physical features such as Building(foot prints), Roads and other visible features from Satellite imagery and field reality. The Satellite imagery would be procured in the name of VMC and delivered to the Bidder/SI. The digitization process shall include vector creation, Symbol creation, layering, edge matching, topological integrity, and data base linking and QA/QC

Creating GIS based total station survey data, by the successful Bidder/SI accordingly.

Total of Satellite survey data for 160 sq. km will have to be captured by the selected bidder and the bidder has to ensure all the standard procedures are adhered to during capturing & Processing of Satellite Data. The Property tax assessment data in digital format to carry be carried out for field verification and property tagging.

The Bidder/SI is expected to make best use of the technology to create the above mentioned data requirements and create a comprehensive GIS Database with various utility and non- utility layers.

Bidder/SI is expected to suggest inclusion of any important information other than that mentioned above, during the pre-bid meeting and subsequently during the project execution, for improving the overall Urban Management. Any relevant data available with VMC, with respect to above proposed GIS layers, would be shared with the selected bidder/SI.



Following activities needs to be carried out for successful implementation of the GIS project at VMC:

4.3.1 Generating Baseline data

Review of any relevant data sets available with VMC and prepare the baseline data accordingly.

4.3.2 Collection of Data:

The Bidder/SI shall collect all the available data/maps from VMC (soft copy and or hard copy) namely; municipal boundary, Zone boundary, Town survey maps, Field measurement book (if available), ward boundary, slum related data, sanitation, and basic infra-structural facilities and land marks, details of Town Planning Schemes to be incorporated superimposed / synchronized and corrected suitably to match current field data; The Bidder/SI shall also incorporate data sets for locality, ward, zone and municipal boundaries

The data model and database shall be updated and changed to accommodate the requirement of the project.

4.3.3 Data Dictionary / Data Model:

The Data Model for storing the spatial & Non-Spatial data shall be decided by the VMC in consultation with the successful Bidder/SI in accordance with the National Large Scale mapping Policy. The Bidder/SI shall modify the data model and update the same with the help of detailed round of discussion with each concerned VMC department officials. The bidder shall use proper tools to create the data model. The final data model shall be approved by the VMC and before proceeding further the data model needs to be finalized. Once the data model is finalized, the Bidder/SI shall give the details of the data model diagram (ER Diagram) to VMC for future references or for any modifications in future.

The bidder shall take care of the changes in the Data Model as per the requirements from the VMC users and shall maintain the changes history for the entire period, the selected bidder is working with VMC under the contract.

4.3.4 Base map creation & topographic survey and Utility mapping activities:

Preparation of GIS Base Map

The selected bidder/SI is expected to provide technical and management support during the planning, design, development and implementation phases of GIS base maps preparation and utility mapping activity as described below but not limited to, for satisfactory performance of the services within the Project Duration.

The main objective of the project is to develop a detailed GIS Base map on a



scale of 1:2500 for all the wards/zones of VMC. The details of features to be interpreted are given later in the document. The preliminary interpreted map should be ground verified and the final map is to be prepared by incorporating the ground truth data. The ground truthing and the topographic survey shall be carried out for all the wards of VMC. These detailed maps consisting of the micro level land use and utility services need to be generated using the latest technologies like DGPS, image processing and digital data capture using high resolution Satellite imagery supplemented by the ground truth collection.

For Areas under tree cover, total stations to be used for generating accurate base maps.

Base Map Preparation and Digitization

Post the processing of the Satellite imagery by removing the geometric anomalies (if any), the Bidder/SI shall prepare a Grid of 1Km x 1Km for positioning VMC with respect to its geographic location. These grids then further shall be divided into 250m x 250m scenes for future usage like Map Book creations, Smart Asset ID creation etc. and future analysis. All the grids and scenes shall have unique IDs.

The Bidder/SI shall then take sufficient number of Ground Control Points (GCPs) collected through Differential Global Positioning System (DGPS) survey. The Bidder/SI shall prepare an up-to-date large-scale base map (Scale 1:2500) of all the wards/zones of Vadodra City using Satellite imageries. The Bidder/SI shall then prepare a new Database using the existing Database available with VMC, as unified Geo-spatial Data with infrastructure details.

Using the heads on digitization technique, the Satellite image is to be digitized to prepare a base map by digitizing all the features available in the Satellite map like Buildings, Vacant Plots, Roads, Bridges, Railway Tracks, Parks, Gardens, Stadiums, Slums, Traffic Squares, Water Bodies (River, Lake, Pond, Drainage, Canal etc), Over Head Tanks, etc. While doing the digitization, a special care of data correctness to be taken like no overshoots / undershoots, proper layering, proper symbology etc.

The Bidder/SI shall also integrate information of Utilities features such as Street lighting, Water supply line, Sewerage network, Wastewater, Storm water drain, sanitation facilities (Household/public/private), Solid Waste management and unauthorized properties as provided by VMC as layers with base map.

Bidder may undertake the base map creation activity at VMC premises, bidder has to bring all the required IT and Non- IT infrastructure for undertaking this activity. In such case, VMC will only provide raw power and empty room.

The digital map data should be GIS compatible. Each map object should be defined uniquely by its feature code and symbology (point, line, and polygon) and should be approved by VMC. Demonstration on digital map production line, producing digital base map using any of the digital mapping system should be made to the VMC.



Town Planning

The GIS application shall integrate all details of town planning schemes in terms of spatial data viz. Survey Map, Original Plot, Final Plot, etc. and non-spatial data like F- form, B-form, etc.

The selected bidder shall have a detailed requirement gathering from the town planning department to detail out all the requirements towards creation of FRS and SRS to be developed in the GIS application for the town planning as well development & planning department.

4.3.5 Property Survey & Tagging:

The bidder has to undertake property survey & tagging for all the properties registered with Vadodara Municipal Corporation and validate the existing data field available with VMC. This activity is very critical and would be completed by Bidder's team with support from VMC field officials. The property survey & tagging of properties has to be carried out in Zone wise manner. Bidder can create a separate module for VMC field officials to get web based property maps on which the VMC officials can tag the property assessment numbers with their field knowledge. They can also take the print of the available data sets and base map image, validate the same in the field, bidder may be required to confirm on the area of the property and other related parameters and identify any available delta in the area of the property under survey.

This exercise aims to validate and update the existing property tax database available with VMC. This activity shall be carried out have property assessment number tagged to each mapped property in GIS with the help of VMC field officials. Also this activity will give information on property mapped in GIS but not available in the property tax department assessment data and can be considered as unassessed properties.

Similarly properties on field but not mapped in GIS can also be mapped with the help of field officials and bidder's GIS mapping team.

4.3.6 UPDATION OF BASE MAP

Bidder will collect the data in the proposed field data sheet format for the data collection. The base map hard copy will prepare through on screen digitization of imagery and used for ward wise survey for the updation purpose and finalization of layer wise Base Map with the attributes.

The completeness of the map cannot be achieved without the nomenclature of the features. To fulfill this all the names of the roads, buildings, localities are collected in the field to incorporate on the map. Again the rectified and geo-referenced image of the area is taken as reference data for collecting such names.

PROPERTY / CADASTRAL MAP UPDATE AND VERIFICATION

The updated Property / Cadastral Maps prepared following digitization and updates from the latest HRSI digitized map and linking with detailed attributes that will be surveyed on field through DGPS method. The survey aims to validate attribute entries, as well as to undertake any spatial updates to the Cadastral database.



Bidder shall study the existing system of Property database in respective ULBs and collect the existing property data from ULBs for verification purpose during the detailed survey of Property.

4.3.7 PROPERTY UPIC CARDS

UPICs have to be allotted to all the properties and UPIC allotment letters (or/and cards) issued owners or occupiers of those respective properties. Type of UPIC card should be mentioned in the Technical Bids and cost thereof should be quoted in the Financial Bids.

The work related to issue and customization of UPIC Card shall be done centrally at the Central Data Processing Station for which office space shall be provided by the Municipal Corporation to the selected Agency and the same shall be issued and delivered by courier / speed post to the applicant / property owner / property occupier.

4.3.8 Data Migration

The bidder will transfer / update the locally created database (door to door survey and other survey data) at VMC into centrally located GIS database in the GIS Lab. These updates shall be done in consent with the Core team of VMC officials. Also this data will be then checked and verified by the Core team by random sampling and quality checks.

4.3.9 Final Base Map

The bidder shall prepare a final base map incorporating the data collected, processed and digitized after survey process. Hard copy base maps are to be prepared at 1:2500 scale ward wise. The base maps will be prepared in various layers for ease of operation in GIS application. The details of the various layers (indicative not exhaustive) to be part of the final base map are given as below:

Sr. No	Layer Name	Vector Representation	Data Source
1.	Municipal Boundary	Polygon	VMC
2.	Area of Interest Boundary	Polygon	VMC
3.	Ward Boundary	Polygon	VMC
4.	Zone Boundary	Polygon	VMC
5.	Election Ward	Polygon	VMC
6.	Town Planning Schemes	Polygon	VMC/VUDA
7.	Development Plan	Polygon	VMC/VUDA
8.	Slum Boundary	Polygon	VMC, Imagery and
9.	Plots Boundary	Polygon	VUDA, Town
10.	Buildings foot prints	Polygon	Imagery
11.	Streams/Drainage/Canal	Line	Imagery and Field Survey
12.	Over Head Tanks	Polygon	Imagery, VMC and



13.	DGPS Points	Point	Field Survey
14.	Over Ground Sewerage Network/Drainage Network	Line	VMC and Field Survey
15.	Storm Water Network	Line	VMC and Field Survey
16.	Khari cut Canal Network	Line	VMC and Field Survey
17.	Manholes	Point	VMC and Field Survey
18.	Water Supply Network (over Ground)	Line	VMC and Field Survey
19.	Water treatment plants	Point	VMC and Field Survey
20.	Fire Stations	Point	VMC and Field Survey
21.	Street Lights	Point	VMC and Field Survey
22.	Bridges/Flyover	Line	Imagery and Field Survey
23.	Parks/Gardens	Polygon	Imagery, VMC and Field
24.	Health Institutions	Polygons	Imagery, VMC and Field
25.	Tube Well	Point	VMC and Field Survey
26.	Hand Pump	Point	Field Survey
27.	Water Pumping Stations	Point	VMC and Field Survey
28.	Traffic Square	Point	Imagery and Field Survey
29.	Railway Network	Line	Imagery and Field Survey
30.	Road Network	Line	Imagery and Field Survey
31.	Footpath	Line	Imagery and Field Survey
32.	Sewerage Treatment Plant and Sewerage Pumping Station	Point	VMC and Field Survey
33.	Cell Phone Tower/ Telephone Tower	Point	VMC and Field Survey
34.	Bus Shelters	Point	VMC and Field Survey
35.	Landmarks	Point	VMC, Imagery and Field
36.	Key features for Solid Waste Management		
37.	Mapping of key Institutions with sanitation	Point	VMC and Field Survey

4.3.10 Checking and Verification of Property digitized map:

From the base map created by the bidder/SI 5% of each ward properties will be randomly selected as sample for the accuracy. The deviation between ground and map should not be more than 1 mt of a single line/edge. If the incorrectness in accuracy is found in more than 5% of samples, the entire ward will be rejected and bidder/SI will be required to carry out re-survey and re-digitization of that ward.



4.4 Linking of Departmental data with Surveyed dataset Integration with ERP

VMC also intends to tightly integrate the spatial data with comprehensive ERP solution being planned at VMC. The solution should have applications that automate the transaction processing of the core departments of VMC (Refer Annexure below). It shall be an integrated GIS based Enterprise Wide Resource Planning suite of applications.

4.5 Application Development

The selected bidder should develop a web base GIS application for VMC. This application will cater to the viewing, analysing, & utilizing the Geographic Information needs of the different departments of VMC. This should also play a role of decision support system for VMC departments for which the field information and geographic data plays a vital role.

VMC needs a GIS platform to support web based GIS application as well as desktop based GIS for smooth editing of GIS data. Following are the details of the approximate usage of the proposed GIS application:

- Maximum No. of users on Intranet simultaneously viewing spatial data - 200
- Maximum No. of users on Intranet simultaneously editing spatial data - 10
- Maximum No. of users on Internet simultaneously viewing spatial data through VMC web portal – 500

The selected bidder is expected to follow the complete SDLC for the development of the GIS application.

Proposed/Developed GIS Application software should follow National Spatial Data Infrastructure (NSDI) Meta standards and should be compatible with National Urban Information System (NUIS) Scheme.

4.6 Development of Data Centre

4.6.1 Supply and Installation of the requisite Server Site Hardware and related software

- The bidders/SI will have to do proper Sizing and undertake Supply, Installation & Commissioning, testing, certification and Maintenance software licenses and IT infrastructure required for GIS implementation. Indicative specifications for these servers are given in Annexure -.....
- The IT infrastructure will be centrally located at space provided by the VMC. Power and backup system will be provided by the VMC.
- SI would ensure that support and maintenance, backup, performance and up-time levels are compliant with SLAs.



4.6.2 Tentative Bill of Material:

S. No	Item	Qty.
1	Database Server (Server 1)	1
2	Web Cum Application Server (Server 1)	1
3	SAN Storage (10 TB Usable)	1
4	Backup Appliance	1
5	Backup Server (Server 2)	1
6	Test and Staging Server (Server 2)	1
7	42 U Rack	1
8	Switch	1
9	Workstation with Single Display and Desktop GIS Software and Image Processing Software	5
10	Workstation with Dual Display and Desktop GIS Software, Image Processing Software and Photogrammetry Software	1

4.6.3 Specification of IT Infrastructure:

Intelligent integrated Data Center/ Server room Infrastructure			
Sr. No	Description	Parameter	Compliant (Y/N)
1	Cooling Unit	2 x 7 KW Rack Mount Precision cooling with variable capacity scrolls Compressor System to be placed at the bottom, which should occupy less U Rack space. Also the cooling unit should be DX based cooling with Out Door Unit (ODC)	
2	UPS System	2 x 10 KVA rack mount UPS with P.F. upto 0.9 & efficiency more than 92% ~94% - 2 numbers. Each UPS should have 10 min back up and UPS & batteries should be mounted inside the cabinet only in N+N	



		mode	
3	Fire Detection & Suppression	In case of fire it will detect within 7 seconds & Supress within the cabinet itself.	
4	Monitoring/ OPDC Services	24/7 NOC proactive monitoring & reports to be shared every month.	
5	Sensors	various sensors like humidity, temperature, door switch, water leak are available	
6	Monitoring	Smoke detectors, water leaks detection system, Temperature sensor, CCTV system, beacon & all these parameters to be monitored proactively.	
7	Security System	Biometric access control & Surveillance Camera should be integrated in the Rack itself	
8	PDU's	Rack mount PDU of type IEC19/13, Each rack shall have two PDU's	
9	Electrical System	Electrical system with essential MCB/MCCB	
10	U' Space	Usable U Space in the solution should be 55 U	
11	Service Support	Local Service support should be available	

Racks, KVM & Accessories

Feature Requirements	Specification	Compliant (Y/N)
Standards & Dimensions	Min 42U Rack with 1 set of KVM and other accessories as required mounting all the IT equipment supplied through the scope of this tender.	



Server Type 1		
Feature Requirements	Specifications	Compliant (Y/N)
Chassis	The server should be able to accommodate 4 processors.	
Processor	4 x Latest Generation x86 with min 2.4 Ghz with 12 cores per processor	
No. of cores per processor	Min 12 cores per processor.	
Memory	1 TB DDR3with ECC, DDDC, mirroring scalable to 4 TB	
HA Features	Should support <ul style="list-style-type: none"> • MCA Recovery, • Memory Scrubbing • DDDC • Dynamic core de-allocation and sparing • Dynamic memory page de-allocation • Redundant service processors, clocks and core I/O 	
Flexibility options	<ul style="list-style-type: none"> • CPU core on-line addition • Memory Riser Card on-line addition • I/O card on-line addition 	
Controller	RAID controller for RAID 0/1/5/6/10/50 with 1 GB,	
Disk capacity	4 x 900 GB 10K RPM SAS disks. Should be able to accommodate 8 internal disks.	
Optical drive	DVD Multi drive	
Expansion slots	16 slots of PCI-Express 3.0	
Power supply	Should support up to 4 - 80 PLUS Platinum Hot plug Redundant power supply	
FAN	Hot plug redundant FAN	
Ethernet	8 x 1000 Base-T should support AFT, SFT and ALB	
Management	<p>Dedicated Management port for remote management.</p> <p>Should able to support the following functions</p> <ol style="list-style-type: none"> a) Monitor PSU/temperature/FAN/degeneration (CPU/memory) b) Collecting hardware event log c) BIOS/POST stall monitor, OS stall monitor d) HW err, Boot err (by SNMP,E-Mail) (via LAN) e) Remote reset/power on-off/dump f) OS shutdown g) Remote media (CD/DVD, FD, Flash) (via LAN) h) Remote control via Web browser (Without dedicated application) 	



	i) Make / change / deletes of the hardware partition	
Temperature and Humidity	Operating: 10 to 40 °C/ 50 to 104 °F , 20 to 80% Non-operating: -10 to 55°C/14 to 131°F, 20 to 80%	
OS Support	<ul style="list-style-type: none"> • Microsoft ® Windows Server® 2008 R2 (SP1 or later) Standard / Enterprise / Datacenter • Microsoft® Windows Server® 2012 Standard / Datacenter • Red Hat® Enterprise Linux® 6.4 or later (x86_64) • Oracle® Linux 6.4 / UEK R2 or later (x86_64) • VMware® ESXi™ 5.1 Update 2 • VMware® ESXi™ 5.5 	

Server Type 2	Compliant (Y/N)
The server system should be offered with Dual Quad Core RISC / EPIC / x86 Processor.	
Should have 16 GB DDR3 scalable up to 256 GB.	
Should be offered with 2 No of 900GB SAS HDD with RAID 5.	
Should have at least 2 No's of PCI Express Slots.	
Should have 2 x 1000BASE-T Gigabit Ethernet NIC	
Should have at least 4 USB, 1 management LAN.	
Server should be supplied with Microsoft® Windows Server® 2008 R2 Enterprise latest (64 bit) / Enterprise Linux as per solution.	

SAN

SAN Storage SPECIFICATION	Compliant (Y/N)
The storage should be scalable upto 90 disks or more.	
Should support SAS, NL SAS, SAS SSD, Encryption SAS disk types.	
Should be supplied with 8 GB Cache with flash backup on Dual Controller.	
Should support 8 Gbps FC	
Should be supplied with min 4 Numbers of Fiber Ports.	
Should be supplied with 20 TB usable disk space using a mix of SAS and NL-SAS disks in the ratio of 40:60	
Should support RAID level: RAID-0, 1, 5, 6, 10, 50	
Features for SAN :-	
<ul style="list-style-type: none"> • Hot standby spare • Automatic controller failover 	



<ul style="list-style-type: none"> Multi path I/O support 	
Hot swappable filed replaceable parts: Disk Drives, RAID I/O modules and Power supplies / fans	
Operating system support: Windows, Linux, VMware	
SAN Array should be supplied with Storage Management software, Thin Provisioning module, etc	

Data Backup

Data Backup Appliance	Compliant (Y/N)
Appliance should support Inline deduplication and compression with up to 20:1 of data reduction ratio	
System should be configured with minimum 20TB of physical usable capacity (non-dedupe)	
Should have minimum 3 TB/hr of transfer rate (data ingest speed)	
Should support CIFS & NFS protocol	
Should have minimum 4 x 1 GbE ports, 2x 10GbE ports	
System should be able to support loss of upto 3 disks at the same time.	
Should be compatible with all industry standard backup applications and must be supplied with required software.	
System should have inbuilt capability and configured with data replication to central location.	
System should support one to one, many to one, bidirectional replication topologies.	
Should support WORM feature for data protection & regulatory compliance	
System should be configured with GUI for remote management & monitoring purpose.	
Should have a remote management port to manage the system in case system is down.	
System should support SNMP v1/v2c.	
Should be able to generate Email alerts in case of any information, Warning & Error.	
Should be able to send system reports and logs via emails.	
Should have redundant fans and redundant power supplies	
Form Factor : 2U rack mountable or better	

SWITCH

Specifications	Compliant (Y/N)
Controller	
Should support Open Flow 1.3 or higher	



Should be capable to centrally control & manage at least 150 switches	
Should support virtual functions such as Virtual Bridges & Virtual Routers	
Should support routing functions such as ARP Learning, DHCP relay Agent & NDP Learning	
Support for QoS Functionality - Pass, Discard, Penalty, Traffic Priority, DSCP Marking, Discard Priority Level	
Support for MCLAG Port Redundancy	
GUI for Physical/Logical network Topology, Event Logs & Traffic Statistics	
It should support 8000 Virtual Networks or more	
Should Support Open Flow Matching Conditions - Input Port, Source MAC Address, Destination MAC Address, VLAN ID, VLAN Priority (CoS), Ethernet Type, IP Protocol Number, IPv4 ToS bit/DSCP, source IPv4/IPv6 Address, destination IPv4/IPv6 Address, source transport number, destination transport number, MPLS Label	
Switch	
Should support Open Flow 1.3 or higher	
Should have 48x 1 Gb Ethernet Ports	
Should have 4x 10 Gb Ethernet SFP Ports or Maximum Switching Capacity of 176 Gbps	
Should support 160K traffic flow entries	
Hybrid Switch with support for both Standard L2/L3 Protocol and Openflow Protocol	
Support Jumbo Frame, Maximum 9,234bytes (tagged), 9,230bytes (untagged)	
Operational & Management Features - SNMPv1/v2c/v3 , MIB II, IPv6 MIB, RMON, syslog, CLI, ping, traceroute, SSHv2, telnet, ftp, tftp, NTP, IPv4 DHCP Server/Relay, Prefix Delegation, LLDP, OADP, Port Mirroring, RADIUS, TACACS+, sFlowInternal	



Support for ECMP (IPv4/IPv6), VRRP (IPv4/IPv6), Static Polling (IPv4/IPv6) , VRRP Polling (IPv4/IPv6), Link Aggregation (IEEE802.3ad), Strom Limiting, Graceful Restart (helper), UDLD (IEEE802.3ah) , Ring Protocol, LocalProxyARP, L2 Loop Detection, Uplink trunk redundant, CFM(IEEE802.1ag)	
Internal redundant power supply Hot-swappable	
VLAN Tunneling (Extended VLAN)	
Openflow Statistics: Flow Counter - Received Packets, Received Bytes, Duration, Port Counter, Table Counter	

Workstation

Category	Description	Compliance
Mandatory Certifications	OEM – ISO 9001 Manufacturer, Certified on supplied OS, DMI 2.0 compliance and support, Energy Star 5, UL certification,	
Processor	Intel Core i7 or better 3 GHz, 8 MB Cache and 1600 MHz FSB	
Memory	8 GB 800 MHz DDR3 RAM with 16 GB Expandability	
HDD	2 TB SATA 6 Gbps	
Monitor	18.5 inch HD or larger TFT/LED Digital Color Monitor	
Keyboard	OEM Mechanical Keyboard	
Mouse	Optical with USB interface.	
Optical Device	DVD RW (Min. 16x) or higher	
Ports	6 USB Ports (with at least 2 in front), 1 Serial audio port for microphone and headphone in front.	
Network Features	10/100/1000 on board integrated Network Port with remote booting facility remote system installation, remote wake up.	
Graphics Card	NVIDIA Quadrowith min 2 GB or better	



Power Management	ACPI (Advanced Configuration and Power Management)	
Operating System	Genuine latest Windows 8 Professional (64 Bits) preloaded with Media and Documentation and Certificate of Authenticity	

Desktop GIS Software	Compliance (Y/N)
Facility to view and overlay vector and raster data in different formats and projections	
Open architecture and support seamless access to the data stored in Oracle, Microsoft SQL Server etc.	
Facility for Georeferencing, create topology, set projection system and SQL query	
Facility for map editing with CAD like editing tools	
Provision of thematic mapping	
Facility to create buffer, overlay analysis	
Provision to take prints in defined templates	
Facility to do spatial analysis such as hydrology analysis	
Facility to do spatial analysis, network analysis and 3D analysis like slope/aspect calculation etc.	
Facility for On-the-fly re-projection, Map composer, Identify/select features and edit/view/search attributes	
Data-defined feature labeling	
Data-defined vector and raster symbology tools	
Provision for ability to create and edit spatial files/ layers	
Ability to create spatial database tables from spatial features	
Tools for managing vector attribute tables	
Facility to check the topology of the spatial layers in terms of the dangle errors etc. in vector layer etc.	
Facility to do mosaic of raster data	

Desktop Image Processing Software	Compliance (Y/N)
The software should have the following features and functionalities	
Provision to handle the satellite/ air borne sensor data of different formats	
Display of raster and multiple vector maps in map windows	
Image processing facilities like unsupervised and supervised classification, edge enhancements, cluster, stereo pair from DTM and NDVI creation	
The User Interface to have tree view structure with dockable windows	
Layers in a map window with Map views and layouts	
Data management tools with multiple catalogs in the Main window	



and option for sorting and details view of objects	
Layer management pane with a legend display and display of tables in table windows	
Display of the Operation-tree and Operation-list through Navigator, Command line and Standard toolbar Interactive retrieval of attribute information	
Facility to create a geo-reference, Pyramid layers, rose diagram etc.	
File menu should have facility to Create point, segment and raster map	
Drag and drop facility of the objects	
Facility to link between maps and tables	
GIS analysis tools like provision for the class input, Boolean input, Pairwise comparison, Rank ordering and Weight methods	
Facility for DEM Hydro-Processing, DEM visualization, Drainage network extraction & Network and Catchment extraction etc.	
Script language to perform executing batch processing jobs	

Web GIS Software	Compliance (Y/N)
Web GIS Application Software to operate on Windows and or Operating Systems and support concurrent users to view the datasets in web environment	
Web based GIS Software must allow to implement a centrally managed GIS providing the facility through centrally managed database and GIS applications	
Facility for display of spatial layers, query management like have various query tools for queries based on attributes, location, etc.	
Facility for basic Navigation tools like the software should have tools to Pan, Zoom, and Rotate the Map according to user requirements	
Facility for spatial data classification based on specific attribute value and report generation	
Ability to search and to zoom into the user specified x, y coordinates	
Support Predefined Geographic Coordinate Systems, Projected Coordinate Systems, Predefined Vertical Coordinate Systems	
Support parcel editing.	
Provision for definition of map projection system and geodetic datum to set all the maps in a common projection and scale.	
Facility to click on any feature of the map and return a select set of attributes for feature.	
Facility to perform the spatial intersection analysis like plot area with buffer zone to calculate road widening impact on adjacent land.	
Allow user to open raster images, or satellite images of various standard format.	
Ability to import / export data from / to various formats like shape, MIF, dxf etc. .	
Allow users to export query results to various file formats like bmp, Tiff, Jpeg, pdf, etc.	
Support printing spatial data at different scales and at adjustable	



print quality.	
ODBC compliance enabling interface with RDBMS like Oracle, SQL server, PostGRE, etc. should be there.	
Allow user to create layers or shortcuts to geographic data that store symbology for displaying features.	
Editing and data capturing functions, which will help the user to prepare the graphic data in desired format should be available.	
Allow the user to perform undo / redo operations during edits.	
Support fully automatic and semi automatic raster to vector conversion tools.	
Facility to define joins between the two tables (graphic / non-graphic) of the database to get integrated information in the table and perform GIS analysis.	
Provision of hyper linking the GIS feature as well as its attribute fields with existing documents, drawing files or scanned maps related to that feature.	
Ability to add data from internet or intranet users to the existing map data so that data from other sources can also be utilized by AMC.	
Simple and feature like XML view of a single table, Interoperability relies on simplicity and customisation, Collection of related identifiable objects etc.	
Facility to create and organize user desired number of Spatial Bookmarks and should be able to share the same.	
To have Control environment, feature functions, spatial relationship and geometric functions including math's and transformation functions	
The software should support Map Services, Open Geospatial Consortium, Inc. (OGC) services like WMS, WFS etc.	

Photogrammetry Software	Compliance (Y/N)
The software should support Topographic, ortho photo map production in the domain of urban planning, telecom Environmental monitoring, etc.	
Full photogrammetric processing of aerial and space borne images	
Flexible modular construction	
Wide range of supported sensors	
Full range of output: DTMs, 3D vectors, orthoimages, digital maps	
Uniform program environment for seamless workflow	
Complete quality control at all stages of data processing	
Support industry standard image formats	
Allow the production of all types of photogrammetric output in a variety of popular formats in TIN, DEM, 3D Vector, Ortho images etc.	
Capability to Prepare images, block formation, Aerial triangulation, DTM Creation, Ortho mosaics creation and digital mapping,	
The resource system for network project data storage	
Should have the Solver model for block adjustment	
Have provision to add, edit or delete triangulation points directly	



during block adjustment without need to return to the measurement step	
Capability to create contours lines of cartographic quality during mathematical terrain modeling	
The DTM module should support a 3D window for displaying TIN, DEM, vector objects, images which can be adjusted by changing rotation; camera focal length, projection, scaling; shifts, Z-scaling and stereo view.	
Should have capability to work with any 2D or 3D mouse to operate in the photogrammetric workstation	
Project creation and management, initial data input, block-wide operations	
Should have provision for interior orientation, GCPs input, tie points measurements, relative orientation	
Should have provision for adjustment of Central projection blocks	
Should have provision for adjustment of Pushbroom scanner imagery blocks	
Should have facility for creation and editing of DTM and contour lines	
Should have ortho-rectification and mosaicing facility	
Should have facility for 3D stereo feature extraction	
Should have facility for parallel work with a vector map	
Should have facility for stereo feature extraction	

Training & Capacity Building

- Prepare and organize training programs to facilitate the departmental users in the efficient usage of the whole system.
- The Bidder/SI shall provide training to departmental users to efficiently use the system. The staff thus trained would subsequently train the other staff as and when required.
- The Bidder/SI shall provide training as per the proposed training plan schedule to be shared as part of Approach and Methodology section in technical bid.
- Training would be provided to users of VMC at different levels. Viz, operators, supervisors, senior management and trainers of VMC. The training would be provided in such a way that VMC would be able to run, operate and maintain the complete solution on its own with very minimal intervention and support from SI.
- Training Infrastructure and location will be provided by VMC. However, training materials will be provided by SI.

4.7 Outputs and Deliverables

The desired output and deliverables to be shown and submitted to VMC includes:

Satellite Data

- Satellite data along with GCP files.



- Soft copies of images in .img and Geo tiff/JPEG formats.

DGPS Survey Data

- The processed data of the DGPS survey with a photograph of each GCP .
- A neat sketch of each DGPS point showing the location on A4 size drawing.

Base Map

- Digital data of base map inclusive of all utilities in proposed GIS platform compatible format.
- Hard copies of Ward wise Maps, depicting all entities to be delivered.
- Geo-PDFs of the base map of each ward depicting all layers.

Other Deliverables

- Surveyed Data in an excel / spreadsheet format to be delivered
 - Any other files prepared for integration with GIS.
 - List of unassessed properties (ward wise / zone wise) and its mapping as well assessment status in GIS.
 - Linked property tax assessment data and GIS property mapping data.
- Surveyed Data in an excel / spreadsheet format to be delivered
 - SPOT level data for every 30 m interval and 0.5 meters of contours.
 - Any other files prepared for integration with GIS.

Post Implementation Services

As a part of Post-Implementation services, the successful bidder shall undertake the following services for the period of 3 Years from the date of Implementation Completion Certificate by VMC.

- Annual Technical Support (ATS) for Application software

Successful Bidder would be completely responsible for the defect free functioning of the application software and would undertake following as part of ATS for Application Software:

- Resolve any issues including bug fixing, improvements in presentation and/or functionality and others within a duration mentioned in Service Level Agreement.
 - Provide the latest updates, patches / fixes, version upgrades relevant for the software components.
 - Software version management and software documentation management reflecting features and functionality of the solution.
- Annual Technical Support (ATS) for all Software component Supplied under this project



- Provide the latest updates, patches / fixes, version upgrades, etc.
 - Bidder has to ensure that annual technical support is available for software application, operating systems, and database for the entire O&M phase.
 - Software version management and software documentation management reflecting features and functionality of the solution.
 - Database / Application Software tuning to enhance the performance of the overall system
 - Undertake regular, proactive Database Management activities.
- Infrastructure Management

Bidder will be responsible for providing support and maintenance for all the IT infrastructure components proposed and procured under this RFP

- Bidder has to Monitor and track server performance and take corrective actions to optimize the performance on a weekly basis
- In case of any support from OEMs or other vendors Bidder has to undertake escalation and co-ordination with other vendors for problem resolution wherever required within stipulated time as mentioned in SLA.
- Bidder will also be required for Data storage management activities including regular backup, restore and archival activities.
- Performance tuning of the system as may be needed to enhance system's performance and comply with SLA requirements on a continuous basis.
- Whenever a component has to be replaced because of technical, functional, manufacturing or any other problem, it shall be replaced with a component of the same make and configuration. In case the component of same make and configuration is not available, the replacement shall conform to open standards and shall be of a higher configuration specifically approved by VMC.
- Bidder has to ensure required support staff to maintain the IT infrastructure supplied by them under this RFP

- Data Management

Successful Bidder would be responsible for extending all possible support to different departmental or contract staff for Data Management (like Data entry Screens, Report Generation, Data Analysis, Data Cleansing, etc). Data could be in English as well as in Gujarati. Data should be Unicode compliant. For the data entered during the base map creation, Bidder will be responsible for data management of the collected data and its digitization

- Application Software Enhancements / Modifications



In case VMC requires any modifications or enhancement in the deployed application, VMC may ask for the services of the bidder's staff as per the requirement of the Change. This change would form the part of change management process, Bidder will be asked to submit a formal change request note along with the man-month effort estimation and schedule of deployment of resources. Commercial rates specified by the bidder for various categories of resources will be taken as base for reviewing the change request submitted by the bidder. Post the approval of VMC the Change request will be processed and the activity can be completed.

- Roles and Responsibility of the System Integrator (Successful Bidder)
 - Approval & Sign Off from concerned department. (Internal VMC Only)
 - Provide support and Maintenance with its own man-power for the period of 3 years from the Go-Live stage.
 - Preparation of necessary user manuals for all the modules and review of the same
 - Carry out Training programs / workshops for the department personnel
 - Bidder/SI should prepare and provide to VMC documents including User Manuals, Configuration Manuals, Operational Manual, Maintenance Manuals, etc. as per acceptable standards.
 - During the Project Term, Bidder/SI would be completely responsible for defect free functionality of the application software and would resolve any solution related issues including bug fixing etc. within Project Term agreed between VMC and the Bidder/SI.
 - Bidder/SI should provide the latest updates, patches/ fixes, version upgrades relevant for the GIS solution components

5. Terms and Conditions of the Tender

5.1 Project Milestones

Sr. No.	Description	Completion Milestone (Weeks)
1	Award of Contract & Team Mobilization	T
2	Delivery & Installation of Servers & GIS Platform	T + 9
3	Processing of Satellite Imagery	T + 24
4	GIS Application Development	T + 36
5	Integration of Spatial Data with e-Governance System	T + 46
6	Successful Testing of the Customized GIS Application on the GIS platform	T + 48
7	Submission of System Documentation & User Documentation	T + 50



8	Training	T + 50
9	Project Completion Certificate by VMC (In Phased Manner)	T + 52

T= 7 Days from the day of issuance of work order/ LoI to the successful bidder by GIPL.

5.2 Payment Terms and Condition

The Bidder's request(s) for payment shall be made to the GIPL in writing accompanied by the details of work executed, supported with evidence of accomplishment of the item wise work .

Sr. No.	Description	Weightage
1	Advance on execution of Agreement	20%
2	Approval of Design Documents for Geospatial Data Development and System Deployment	10%
3	Successful installation of Servers & GIS Platform	20%
4	Submission of all layers of data	20%
5	GIS Application Development	10%
6	Integration of Spatial data	10%
7	Project Completion Certificate	10%

5.3 AMC Payment Terms

Payments for AMC shall be made on half yearly basis at the end of every 6 months(in arrears) on submission of invoice and supporting documents issued by competent authorities of GIPL/Commissioner , VMC clearly mentioning satisfactory level of AMC services and submission of monthly PM reports.

5.4 Penalty

If Bidder fails to execute the contract in time, GIPL/Commissioner , VMC may impose any or all of the following:

- For any delay in completion of the task beyond the date specified in the contract for Implementation and support Commissioner, VM, the Owner shall without prejudice to its other remedies under the contract, deduct by way of penalty from the Contract value, a sum equivalent to 0.5 (zero point five) % of cost of respective work for every week of delay, up to a maximum of 5(five) % of the contract value. Once the maximum is reached, the Owner / Commissioner of police may consider termination of the contract without giving any notice and get the work executed at the cost and responsibility of bidder while also invoking the Performance Bank Guarantee.



- Unsatisfactory performance during AMC/Maintenance period will lead to levy of penalty up to maximum of 5(Five) % of the AMC value of that year

5.5 Final Acceptance Testing –

Pre- requisites of Final Acceptance shall have the following:

- Installation & commissioning of all hardware, software supplied under this RFP
- All documentation and relevant acceptance test document (including IT Components, non IT components).
- For both IT & Non-IT equipment / software manuals / brochures / Data Sheets / CD / DVD / media for all the supplied components
- Availability of all the defined services shall be verified and mutually agreed between VMC and the successful bidder
- SI shall be required to demonstrate all the features / facilities / functionalities as mentioned in the RFP.

5.6 Data Security

Selected Bidder and its team have to maintain the confidentiality and security of data in true spirit. In no case, breach in security of data will be acceptable. Violation of this clause may lead to severe penalties, maximum up to termination of involved agency as decided by tender issuing authority. In this regard, selected bidder has comply with the following

5.7 Non-Disclosure Agreement

The selected Bidder has to sign Non-Disclosure Agreement with GIPL/VMC. It will be selected bidder responsibility to get this agreement signed along with contract agreement. Format of Draft NDA is attached in Annexure IX.

5.8 Confinement of data

Any data or related document (both in physical and electronic format) being used for GIS Application/System implementation will not be allowed to be taken outside without the permission of Head of the ward/Department.

5.9 Force Majeure

The Bidder/SI shall not be liable for forfeiture of its performance security, liquidated damages or termination for default, if and to the extent that its delay in performance or other failure to perform its obligations under the contract is the result of an event of force Majeure. For purposes of this Clause, "Force Majeure"



means an event beyond the control of the Bidder/SI and not involving the Bidder/SI's fault or negligence and not foreseeable. Such events may include, but are not limited to, Acts of God or of public enemy, acts of Government of India in their sovereign capacity, acts of war, either in fires, floods, strikes, lock-outs and freight embargoes.

If a Force Majeure situation arises, the Bidder/SI shall promptly notify the GIPL/VMC Authority, in writing of such conditions and the cause thereof within twenty calendar days. Unless otherwise directed by the Authority in writing, the Bidder/SI shall continue to perform its obligations under the Contract as far as it is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

In such a case, the time for performance shall be extended by a period(s) not less than the duration of such delay. If the duration of delay continues beyond a period of three months, VMC and the Bidder/SI shall hold consultations with each other in an endeavor to find a solution to the problem.

Notwithstanding above, the decision of the Commissioner, VMC, shall be final and binding on the Bidder/SI.

5.10 Data Ownership

All the data created as the part of the project would be owned by VMC. Successful Bidder shall take utmost care in maintaining security, confidentiality and backup of this data.

5.11 Intellectual Property Rights

The Successful Bidder shall transfer the Source Code of the customized GIS Solution to VMC along with all the rights and privileges. Successful Bidder shall also submit all the necessary instructions for incorporating any modification / changes in the software and its compilation into executable / installable product. The Successful Bidder shall indemnify VMC against all third-party claims of infringement of copyright, patent, trademark or industrial design rights arising from use of the Goods or any part thereof in India.

IPR of the all the Application Software developed/ customized/modified by Successful Bidder for providing the services shall be fully owned by the VMC. All the data generated during the services will be owned by VMC as per the stated policy of Vadodara Municipal Corporation. Successful Bidder will have to provide the tools for accessing the data at the end of maintenance period While passing on the rights (license) of using any third party software/software tool, the service provider shall ensure that such rights are inclusive of the use of that software for development in addition to deployment.

The software licenses supplied by Successful Bidder shall be genuine, perpetual, full use and should provide patches, fixes, security updates directly from the OEM at no additional cost to the VMC for the entire period of contract. All the licenses and support should be in the name of VMC from the date of procurement

In the event of any claim asserted by a third party of infringement of copyright, patent, trademark or industrial design rights arising from the use of the Goods or any part thereof in India the Successful Bidder shall act expeditiously to extinguish such claim.



If the Successful Bidder fails to comply and VMC is required to pay compensation to a third party resulting from such infringement, the SI shall be responsible for the compensation including all expenses, court costs and lawyer fees. VMC will give notice to the service provider of such claim, if it is made, without delay.

5.12 Change in Tax Rates

Current taxes rates have been used in arriving at the final prices. However any change in the statutory taxes during the term of the contract/agreement shall be passed on to the customer and the prices shall be adjusted accordingly.

5.13 Termination of Contract

Under this Contract, VMC may, by written notice terminate the contract with System Integrator in the following ways:

- Termination for Default: In case of Successful Bidder failing to perform obligations under the Contract or if the quality is not up to the specification or in the event of non adherence to time schedule.
- Termination for Convenience: GIPL/VMC by written notice sent to the Successful Bidder, may terminate the contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for VMC's convenience, the extent to which performance of the Successful Bidder under the Contract is terminated, and the date upon which such termination becomes effective.
- Any service that has been completed or rendered and within 30 days after the Successful Bidder's receipt of notice of termination shall be accepted by GIPL/VMC at the Contract terms and prices.

5.14 Exit Management

Exit Management Purpose

This Schedule sets out the provisions, which will apply on expiry or termination of the contract. The Parties shall ensure that their respective associated entities carry out their respective obligations set out in this Exit Management Schedule.

6. Service Level Agreement

The purpose of this Service Level Agreement (hereinafter referred to as SLA) is to clearly define the levels of service to be provided by the successful bidder to VMC for the duration of this contract.

- The business hours are 9:00 AM to 9:00 PM on all working days (Mon-Sat) excluding Public Holidays or any other Holidays observed by VMC. The SI however recognizes the fact that the VMC offices will require to work beyond the business hours on need basis like tax rebate schemes, collection of tax schemes, etc.
- "Non-Business Hours" shall mean hours excluding "Business Hours".
- 16X7 shall mean hours between 08:00AM – 12:00 AM on all days of the week.



- The SLA parameters shall be monitored on a monthly basis as per the individual SLA parameter requirements. However, if the performance of the system/services is degraded significantly at any given point in time during the contract and if the immediate measures are not implemented and issues are not rectified to the complete satisfaction of VMC or an agency designated by them, then the VMC will have the right to take appropriate disciplinary actions including termination of the contract. A Service Level violation will occur if the SI fails to meet Minimum Service Levels, to be measured on a monthly basis, for a particular Service Level. Overall Availability and Performance Measurements will be on a monthly basis for the purpose of Service Level reporting. An "Availability and Performance Report" shall be provided by the SI on monthly basis in the format finalized in consultation with VMC or any other nominated agency by VMC.

The monthly Availability and Performance Report will be deemed to be accepted by the VMC upon review and signoff by the Nominated official from VMC, some of the Service Levels will be assessed through audits or reports; as appropriate to be provided by the SI on a monthly basis, in the formats accepted by VMC. The tools to perform the audit will have to be provided by the SI. Audits will normally be done on regular basis or as required by the VMC.

6.1 Penalty calculation

- The Penalty shall be calculated on a quarterly basis.
- All penalties defined for O&M phase will be exclusive to each other and total penalty for any of the quarter will not exceed more than 5% of quarterly payment.
- Planned Down-time (during non-working hours) is not considered for penalty calculation. Bidder/ SI will have to take at least 2 days prior permission from VMC for the planned down-time. Planned Down-time won't be allowed for more than two times in a month

6.2 SLA for Map Creation & Field Survey

Sr. No	Parameter	Condition	Penalty
2.	Geo-referencing of the satellite image.	The average RMS error shall not exceed 5.0.	0.1% of the base map creation cost.
3.	Assessment data	Should have 96.00% recorded data to be correct in every sense.	100 Rs for every incorrect value found in random sampling.
4.	Map Digitization	100% features to be digitized as per the approved data model.	200 Rs for every missing feature in the output map.



6.3 SLA for IT Infrastructure

Sr.	IT Infrastructure Component	Acceptable Downtime	Penalty Amount(INR)	Critical/ Non-Critical
1.	Database Server	4hours	>4 to <=24 : Rs. 100 per hour >24 hours : Rs. 200 per hour	Critical
2.	Application Server	4hours	>4 to <=24 : Rs. 100 per hour >24 hours : Rs. 200 per hour	Critical
3.	SAN Storage Infrastructure	4hours	>4 to <=24 : Rs. 100 per hour >24 hours : Rs. 200 per hour	Critical
7.	Network Switch	4hours	>4 to <=24 : Rs. 100 per hour >24 hours : Rs. 200 per hour	Critical

6.4 SLA for Software Support

Any patch released by the OEM needs to be applied to the corresponding product within 7 working days. Any bugs / Critical software issues should be rectified within 5 working days from the date of complaint. Any delay in applying the patch will attract penalty of Rs. 200/- per day. Any delay in solving bug / critical software issues will attract penalty of Rs. 200/- per day.



Annexure – I: Technical Bid Form

Details to be provided in the Technical Bid in addition to the documents to be provided as mentioned in the Eligibility criteria of this tender document

Sr. No.	Particulars	Compliance	Annexure
1.	Name of Bidder		
2.	Contact Details		
3.	Registration Number		
4.	Demand draft No (Tender fees)		
5.	Demand Draft No. (EMD)		
6.	PAN /TAN / Service Tax Registration		



Annexure – II: Past Experience Details

Sr. No.	Name of the customer with address of Installation	Scope of Work	Value of the Project (in INR)

Please add additional lines if required.

Name and signature (of the authorized person) with company seal.

Annexure - III: Proposed Resource Deployment

Sr. No	Resource Level	Responsibility/ Area of expertise	Brief Description of Education Qualification & Certifications	No. of Resources deployed at the proposed level



Annexure – IV: Curriculum Vitae (CV)

1. Proposed Position:
2. Name of Firm [Insert name of firm proposing the staff]:
3. Name of Staff [Insert full name]:
4. Date of Birth: Nationality:
5. Education [Indicate college/university and other relevant specialized education of staff member, giving names of institutions, degrees obtained, and dates of obtainment]:
6. Membership of Professional Associations:
7. Other Training [Indicate significant training since degrees under "5 – Education" were obtained]:
8. Countries of Work Experience: [List countries where staff has worked in the last ten years]:
9. Languages [For each language indicate proficiency: good, fair, or poor in speaking, reading, and writing]:
10. Employment Record [Starting with present position, list in reverse order every employment held by staff member since graduation, giving for each employment (see format here below): dates of employment, name of employing organization, positions held, Project handled.]:

From [Year]: To [Year]:

11. Employer:
12. Positions held:

Detailed Tasks Assigned	Work Undertaken that Best Illustrates Capability to Handle the Tasks Assigned
[List all tasks to be performed under this assignment]	[Among the assignments in which the staff has been involved, indicate the following information for those assignments that best illustrate staff capability to handle the project] Name of assignment or project: Year: Location: Client: Main project features: Positions held: Activities performed:



13. Staff is resident / native of:

14. Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes me, my qualifications, and my experience. I understand that any willful misstatement described herein may lead to my disqualification or dismissal, if engaged.

Date:

Signature of the Proposed Staff or Authorized Signatory of the bid



ANNEXURE – IV : PRICE BID

1.1 Commercial Bid Format

Item Description	Total Price (Inclusive of Taxes, other than Service tax)	Total Price in words (Inclusive of Taxes, other than service tax)
[1] Base Map Creation Cost		
[2] Hardware & System Software Cost		
[3] Web Based GIS Application Cost		
[4] Setting up GIS Lab		
[5] Survey Cost		
[6] Annual Maintenance Cost		
[7] Manpower Cost		
Total Cost [1+2+3+4+5+6]		

[1] Base Map Creation Cost

Sr. No.	Description	Unit Price in INR (A)	Qty (B)	Total Price (A*B)
1.	Procurement of Satellite Imagery		160 Sq. Km.	
2.	Base Mapping activity from Satellite – Land use mapping with building footprints		160 Sq. Km.	
3.	Linking of Departmental data with Base map		1	
4.	Integration of GIS Data with e-governance applications		1	
	<u>Total</u>			



[2] Hardware & System Software Cost

Bidder shall provide detailed Bill of Quantity for IT Infra and Software licenses considered in the commercial bid.

[3] Web Based GIS Application Cost

Sr. No.	Description	Unit Price in INR (A)	Qty (B)	Total Price (A*B)
1.	Customized GIS Based Application Software		1	

[4] Setting of GIS Lab

Sr. No.	Description	Unit Price in INR (A)	Qty (B)	Total Price (A*B)
1.	Workstation with Single Display and Desktop GIS Software and Image Processing Software		5	
2.	Workstation with Dual Display and Desktop GIS Software, Image Processing Software and Photogrammetry Software		1	
	<u>Total</u>			

[5] Survey Component cost

Sr. No.	Type of Survey	Unit Cost
1.	Control Survey (GCP) (Per Sq. Km rate)	
2.	Property Survey – Door to Door survey (Per Property rate)	
3.	Issuance of UPIC Card (Per Property Rate)	



[6] Annual Maintenance Cost (ATS / Application Support)

Year	Amount (INR) (A)	Tax (B)	Total (A+B)
First			
Second			
Third			
Total			

[7] On site Manpower Cost

Resource	Monthly Rate	Man Month Required	Total Amount With Tax
.....			
.....			
.....			
Total			