

PUNJAB MUNICIPAL INFRASTRUCTURE DEVELOPMENT COMPANY

Office of General Manager (Project)

Room No 511 5th Floor Municipal Bhawan

Plot No 3, Sector 35-A Dakshin Marg

Chandigarh



PART A

INSTRUCTIONS AND GUIDELINES FOR SUBMISSION OF TENDER DOCUMENT FOR

Supply of True Ortho rectified UAV images, DSM, DTM and LAS Data

TENDER NO –

PRICE: RS.5000/- (price non-refundable)

To be submitted by 27-12-2018 by 1500 hrs.

CONTENTS

1. Introduction
2. Particulars of the Tender
3. Eligibility for participation in tender
4. Guidelines for preparation of Tenders
5. Probable Sites for processing of data
6. Submission of Tender
7. Terms and Conditions
8. Rights to revise the job
9. Clarifications about Tender Documents:
10. Other notes

Annexure I	Terms of Reference
Annexure II	Technical Specifications
Annexure III	Performa for Bank Guarantee
Annexure IV	Performa for Contract Agreement
	Performa for appendix 'A' to Performa for Contract Agreement
Annexure V	Performa for No Demand Certificate by the Tenderer

PUNJAB MUNICIPAL INFRASTRUCTURE DEVELOPMENT COMPANY

Supply of True Ortho rectified UAV

Images, DSM, DTM and LAS Data

1. Introduction

Punjab Municipal Infrastructure Development Company (PMIDC) is a non- profit company. Which is mandated to Promote creation, up gradation and maintenance of infrastructure projects such as water supply, solid waste management, sanitation, storm water drains, roads, bridge, street lighting, drainage, sewerage, sewerage disposal, transportation system, parking lots, shopping complex, industrial parks, trade centers, technology parks, slum improvement etc. In order to achieve the objective, company is looking for the professional firms who are in the business of generating true Ortho images, DEM and DTM using UAV.

- 1.2 The bidder should be an individual firms having experience in above task. No consortium is allowed for private firm.
- 1.3 Government Department having such experience is allowed to participate. Government department is allowed to have consortium if required.
- 1.3. The successful firm is expected to collect drone images with minimum 75% forward and lateral overlap and processing them using DGPS points with appropriate software to generate true Ortho mosaics, DSM, DTM and LAS data using DGPS points. SOI control points along with their position can be collected from PMIDC. Markers at control points before flying will be placed by the bidder so that these markers appear in the images and these points are used for Geo-referencing and processing. Ortho photo mosaic of whole town will be generated by the bidder as one and supplied to PMIDC in soft copy. DSM, DTM, LAS and xyz data should be generated for the area and supplied.
- 1.4 The area is mostly built-up and spread across whole Punjab State. The approximate area for which images are required is about 1500 sq. km.
- 1.5 As digital data being produced is of restricted nature as per Govt. of India Policy, the bidder is required to establish Lab for processing of data at PMIDC location with all its equipment and software for the duration of project. This clause is not applicable if bidder is a Government Department.

The tenders must be submitted in two sealed covers separately for technical bids as well as commercial bids, which are to be super scribed as “**Technical Bid for Supply of True Ortho-rectified Drone images**” and “**Commercial Bid for Supply of True Ortho-rectified Drone images.**”” respectively.

Both these covers and other documents should be sealed and kept in another sealed cover to be super scribed as **"BID FOR Supply of True Ortho-rectified Drone images,**

The commercial bids will be opened only in respect of short listed technically qualified bidders. The short listing of tenderer(s) will be done based on their expertise and/and qualification criteria.

For technical qualification, bidder has to fly minimum 10 sq. km built up area of Punjab, process the data and submit it as sample for consideration by technical committee. The sample supplied if found suitable the cost of the images can be paid to the bidder at L1 rates arrived after the conclusion of tender.

The Successful Tenderer(s) will be required to enter into a contract with PMIDC or his nominee regarding the above job.

2. PARTICULARS OF THE TENDER

The tender document can be purchased from the office of "General Manager Projects, PMIDC with a request letter against payment of Rs.5000/- (non-refundable) per tender by Demand Draft obtained from any nationalized bank payable at Chandigarh in favor of "Mission Directorate, Government of Punjab" on any working day between 9.30 hrs. to 1700 Hrs. The tender document can also be down loaded from the PMIDC web site www.pmidc.punjab.gov.in. In case the tender document is down loaded from the Website, the tenderer(s) are required to enclose a demand draft for Rs.5000/- (non-refundable) per tender obtained from any nationalized bank payable at Chandigarh in favor of "Mission Directorate, Government of Punjab" while submitting the tender forms.

Sr.No.	Name of work	Estimated project cost	Earnest Money	Cost of Tender	Project Period
1	"Selection of UAV based mapping agency as service provider for providing ultra-high resolution ortho-mosaic, digital surface model, digital terrain model & Point Cloud for property tax application" in Punjab	Rs. 2,00,00,000 (Tentative)	4,00,000	5000	Within 90 days

Designation and address of the authority inviting tender:

The General Manager (Project)
PMIDC
Room No 511 5th Floor Municipal Bhawan
Plot No 3, Sector 35A, Dakshin Marg
Chandigarh
Pin 160022

Total No. of pages in this Tender Document : 39 (Thirty nine)
Sale of Tender Document Commences : 06-12-2018
Last date for Sale of Tender Document : 27-12-2018 (1400hrs.)
Pre-bid Conference at PMIDC's office : 17-12 -2018 (1400hrs)
Last date of submission of Technical& Price Bids : 27-12 -2018(1500 hrs.)
Opening of Technical Bids at Room No 517 PMIDC office : 28-12-2018 (1100 hrs.)
Opening of Price Bids: will be intimated to technically short listed vendors by mail.

Tender documents will be available at : 1. www.Pmidc.punjab.gov.in
: 2. General Manager (Project)
The Room No 511, 5th Floor
Municipal Bhawan, Plot No 3, Sector 35A
Chandigarh
Pin code -160022

Cost of Tender : Rs. 5,000 /- (Nonrefundable)
Amount of EMD : Rs. 4, 00,000/-

Address for submission of Tender
General Manager (Project)
The Room No 511, 5th Floor
Municipal Bhawan, Plot No 3, Sector 35A
Chandigarh
Pin 160022

3. ELIGIBILITY FOR PARTICIPATION IN TENDER

(Documentary evidence is required for each clause)

- (i) Min two year Experience in mapping or related task
- (ii) Min three year Experience in image capturing for mapping using UAV
- (iii) Should be a company/agency dealing with Geo spatial projects.
- (iv) Should have flown UAV at least 1000 sq km area
- (v) Should have an annual turnover of at least Rs.2crores/year for last two years. Turn over should only be from UAV/Drone image capturing.
- (vi) The bidder should be a registered firm with GST.
- (vii) The bidder should be an individual company. (No consortium is allowed to Pvt. Company except Govt. Department), Should have infrastructure to establish a lab for image processing.

Note: - In case of a Govt. department the above clauses are not applicable but the successful department cannot further out source this task.

4. GUIDELINES FOR PREPARATION OF TENDER

- (i) The technical bid must be accompanied by a photocopy of the receipt obtained for the purchase of the tender document. In case tender document is down loaded from website, a Demand Draft for Rs.5000/- payable at Chandigarh, drawn in favor of "Mission Directorate, Government of Punjab" Otherwise the offer will be summarily rejected without assigning any reason.
- (ii) The tender bid must be submitted as per Performa's given in the tender.
- (iii) Ambiguous and Incomplete tender(s) will be summarily rejected. Amendments and addition to tender after opening the tender will not be accepted.
- (iv) For all purposes of the contract including arbitration there under, the address of the contractor (bidder) mentioned in the tender shall be the address to which all communication addressed to the bidder will be sent, unless the contractor has notified a change of address and got it acknowledged by the General Manager(Project), PMIDC.
- (v) Each page of the tender submitted for bid should be signed by the tenderer himself or a person duly authorized by the tenderer(s). The tender should be a complete document and should preferably be bound as a Volume.
- (vi) Cost of preparation of tender, attending the tender opening, meetings of the Negotiation Committee, and arrangements for demonstration/presentation will be the responsibility of the tenderer(s). The General Manager(Project), PMIDC, will not be responsible to meet any such expenditure.

5. PROBABLE WORK SITES

General Manager (Project), PMIDC, if available will provide space for processing center but however in case, the space is not available, the company has to arrange a place at mutually agreed location so that security aspect of data is taken care of. Successful Bidder has to arrange for computers and Media etc. for storage of the data. Bidder will also install appropriate s/w if required. Processing work shall be carried out by the bidder using his own instruments HW / SW / Manpower. No extra cost to this effect shall be paid by General Manager (Projects), PMIDC.

Technical guidance if any can be had from PMIDC and Clarification shall only be asked in writing. The instructions issued by the General Manager (Project) and issued in writing shall be adhered to and they will be binding on the bidder.

6. SUBMISSION OF TENDER

The following Performa's are attached for preparation of tender document

- a) The schedule of the tender document (PART 'B') contains Checklist,
- b) Application form (Performa 1),
- c) Questionnaire (Performa 2 for Technical Bid),
- d) Pricing Schedule (Commercial Bid - on Performa 3),
- e) Bid particulars (Performa 4),
- f) Format of Warranty (Performa 5)
- g) Data Security (Performa 6).
- h) Technical Compliance Sheet (Performa 7)

The tender must be completed in all respects as per the check-list.

- i) The schedule to the tender form should be returned intact after completion, in original, whether tenderer(s) are quoting for any item or not. Pages should not be detached from the Schedule of the Tender Document or omit any entry for any item(s) not tendered for and, in such case the corresponding space for item(s) should be reflected by words '**not quoted**'.
- ii) In case of insufficient space in the Performa for the required purpose, additional pages may be added. In such case, additional page(s) duly signed by the tenderer(s) must be numbered consecutively, at the end with cross reference of appropriate Para of the tender document.
- iii) Tenders can be either dropped in the tender box or they can be sent by Registered Post or Courier/Speed Post so as to reach the" General Manager (Project), PMIDC" on or

before the specified date and time. General Manager (Project), PMIDC, shall not be responsible for any postal delay. The tenderer(s) may get it confirmed in their own interest, about the submission of tender(s) from the General Manager (Project), PMIDC

7. TERMS AND CONDITIONS:

(a) Essential Requirements:

Any tender (Technical Bid) not accompanied by the following documents will be summarily rejected: -

- i. Registration No. of the firm with validity
- ii. Income Tax return for the last three years with income tax certificate issued by the competent authority.
- iii. GST certificate issued by competent authority.
- iv. **Amount of EMD: Rs. 4,00,000** drawn in favor of PMIDC payable at Chandigarh.
- v. Receipt for purchase of tender document or Demand Draft for Rs.5000/- in case the tender document is down loaded from the PMIDC website.

Note: If any modification of the schedule is considered necessary, the tenderer(s) should communicate by means of a separate letter and send the same with the tender bid.

(b) RATES:

The rates for **True Ortho-rectified mosaic, DSM, DTM, Point Cloud in LAS and XYZ format along with RAW images in JPEG be quoted.** The rates should be quoted as per Sq km and should be in Indian Rupees.

(c) TERMS OF PAYMENTS

90% payment towards the supply of True ortho-rectified images and DEM shall be released by the General Manager(Project) PMIDC after the acceptance of data by a technical committee constituted by PMIDC for this purpose. The Data will be delivered in Hard Disc as well as in DVDs. The balance payment shall be released at the completion of project. The Bidder can supply data immediately after processing. Town wise data will be delivered and checked by the committee and if data supplied for the complete town is found satisfactory the committee will recommend the release of money for the town

(d) PENALTY

- (i) A penalty of 2% of the cost per sq Km shall be deducted from the payment to the vendor if the agreed time schedule is not adhered to. The bidder has to place markers at the Control points at his own cost before flying.
- (ii) In case the progress of work allotted to a particular tenderer(s) is not satisfactory or is below the standards , as defined in the technical specifications vide Annexure II and the tenderer(s) has failed to improve upon the same in reasonable time, the allotted job will be withdrawn without assigning any reason thereof. In such case, the tenderer(s) should remove their systems / Hardware if any from PMIDC premises within 15 days from the date of receipt of such notice, failing which the penalty will be levied, as per market rate, for

holding the office premises unauthorized. In case of termination of job order due to aforesaid reason, the security deposit furnished by the tenderer(s) shall be forfeited and no payment will be made towards the work carried out.

- (iii) Data at any stage if found inferior in quality, the entire lot will be rejected and no payment will be made for such a supply. Such task has to be revised by the bidder at his own cost.
- (iv) The General Manager (Project) PMIDC reserves the right to deduct any amount from the bill as may be if considered reasonable for unsatisfactory execution of the work recommended by the technical committee.
- (v) The General Manager (Project) shall have the right to inspect the work or get it inspected by his representative or any authorized officer at any stage. The bidder shall provide all possible information and extend such cooperation as desired by the inspecting authority of the department during the inspection work. In case, the Inspecting authority finds that the services and the material used are adversely affecting the quality of work, the department reserves the right to treat this as a breach of contract. As a result, the contract shall be terminated at the expenses of the Service Provider.
- (vi) The contract may be terminated by The General Manager (Project) PMIDC by notice in writing to the contractor if at any time the contractor either directly or through their employees, agents or subcontractors commits any breach of their obligations under this tender. In addition to the order, The General Manager (Project) PMIDC reserves the right to levy appropriate damages and deduct from the earnest money deposit (EMD) given by the contractor or foreclose the Bank Guarantee given in lieu of performance guarantee.

(e) Non Disclosure Agreement

The successful contractor has to execute confidentiality agreement incorporating that any data/information which will be handled/ shared will be kept in strict confidence and neither the contractor or its associates or channel partners or contractor's employees part with the data/information in any form to anybody without prior written consent of The General Manager (Project) PMIDC

(f) Security

The contractor will ensure that all security (both physical and logical) to protect Department's data, site, etc by incorporating standard security measures.

(e) ARBITRATION AND JURISDICTION

If any dispute or difference arises between the parties hereto as to the construction, interpretation, effect and implication of any provision of this contract, including the rights or liabilities or any claim or demand of any party (or its extent) against the other party or its sub-contractor or in regard to any matter under these presents but excluding any matters, decisions or determination of which is expressly provided in this contract, such disputes or differences shall be referred to an arbitrator to be appointed by mutual consent of both parties. If the parties cannot agree on the appointment of the arbitrator within a period of one month from the notification by one party to the other of existence of such dispute, then the arbitrator shall be nominated by the Principal Secretary to the Government of Punjab. A reference to the arbitration under this clause shall be deemed

to be submission with the meaning of the Arbitration and Conciliation Act 1996 and any modification or re-enactment thereof and the rules framed there under for the time being in force.

Any dispute arising out of the contract should be within the jurisdiction of Chandigarh only.

Minor cases of redressal, if any, can be referred to the Secretary, Local Government, Govt. of Punjab, Chandigarh.

(f) **SIGNING OF TENDER**

The individual signing the tender or other documents in connection with the tender must specify whether he signs as -

- (i) A 'sole proprietor' of the firm or constituted attorney of such sole proprietor;
- (ii) A 'partner' of the firm if it be a partnership, in which case he must have the authority to refer to arbitration in case of disputes concerning the contract.
- (iii) 'Appropriate authority with delegated powers', if it is a company.

In case of (ii) above, a copy of the partnership agreement or general power of attorney in either case, attested by a Notary Public, should be furnished, or affidavit of the partnership agreement or the general power of attorney of all the partners admitting execution should be furnished.

In the case of partnership firms, where no authority to refer disputes concerning the business of the partnership has been conferred on any partner, the tender and all other related documents must be signed by every partner of the firm.

A person signing the Tender or any documents forming part of the contract and on behalf of another shall be deemed to warrant that he has authority to bind the other. In such case he should supplement legal document with the tender.

Each page of schedule to tender and Annexure thereof, or additional pages if any, should be signed by the Tenderer(s).

(g) **FORCE MAJEURE**

If, at any time, during the continuance of this agreement, the performance in whole or in part by either party of an obligation under this agreement shall be prevented or delayed by reason of *force majeure*, which shall mean war, hostility, acts of the public enemy, commotion, sabotage, fires, floods, explosions, epidemics, terrorisms, government orders or restriction, strikes, lockouts and acts of God (herein-after referred to as an "event"), then the contractor shall promptly notify PMIDC in writing specifying the nature of the event and of the anticipated delay in the performance of the activity and consequent milestone of the contract. Based on the application, PMIDC may at its discretion grant extension of time for completion of the task without any change in the

schedule of the price. The decision of The General Manager(Project) PMIDC in this matter shall be final.

If at the expiry of such period of extension, any of the reasons for the delay still remain, PMIDC may either agree for a further period of extension or suspend the contract or treat the contract as terminated.

All disputes arising out of this tender will be subject to the jurisdiction of courts of law in Chandigarh.

In the event of the contract being terminated by reason of force *majeure*, the contractor shall take such steps as are necessary to bring the services to an end, (including terminating any subcontracts placed by the contractor) in a cost effective, timely and orderly manner.

(h) **DELIVERY OF TENDERS**

The tenders must be submitted in two sealed covers separately for technical bids as well as commercial bids, which are to be super scribed as “**Technical Bid for Supply of True Ortho rectified Drone images**” and “**Commercial Bid for Supply of True Ortho rectified Drone images**” respectively.

Both these covers and other documents should be sealed and kept in another sealed cover to be super scribed as “**BIDFOR Supply of True Ortho rectified Drone Images**” Tenders can be either dropped in the tender box or they can be sent by Registered Post or Courier/Speed Post so as to reach **The General Manager (Project) PMIDC, Room No 511, 5th floor, Municipal Bhawan, Plot No3 Sector 35A, Dakshin Marg Chandigarh** on or before the specified date and time. **The General Manager (Project) PMIDC** shall not be responsible for any postal delay.

(i) **BID SECURITY / EARNEST MONEY:**

Each tenderer must furnish the Earnest Money @ specified in Para 7, in the form of Demand Draft / Bankers Cheque /“Deposit at Call’ Receipt from any Nationalized Bank in the name of “PMIDC, payable at Chandigarh.”

Any bid submitted without earnest money will be rejected.

(j) **LATEST HOUR FOR RECEIPT OF TENDER**

The tender must reach **The General Manager (Project) PMIDC** not later than 1500hrs on 27-12-2018. Tender(s) received after this time will not be considered.

(k) **PERIOD FOR WHICH OFFER WILL REMAIN OPEN**

Tenders shall remain valid for acceptance for the minimum period of six months from the actual date of opening of the tenders. If the tenderer is found successful and efficient the work can further be awarded for other areas at L1 rates arrived at in this tender.

(l) **OPENING OF TENDER**

Tenders will be opened in public on 28-12- 2018 at 1100 hrs. in the office of **The General Manager(Project) PMIDC** in the presence of such tenderer(s) or one of their authorized representatives who may wish to attend.

(m) **RIGHTS OF ACCEPTANCE OF TENDERS**

The Governor of Punjab or his nominee does not bind him to accept any tender and reserves the right of accepting the whole or any part of the tender or portion of the quantity offered.

The Governor of Punjab or his nominee reserves the right to reject any or all offers received in response to this tender or cancel/withdraw the tender notice without assigning any reason prior to the award of contract.

(n) **PERFORMANCE AND CAPABILITY EVALUATION**

The tender will be evaluated as per the criteria defined in Para 6 of Annexure 1. If any bidder fails in evaluation, The General Manager (Project) PMIDC will have full right to technically reject this tender and debar the bidder from financial bid.

(o) **RESULT OF TENDERS**

Acceptance of tender(s) shall be communicated by e-mail/letter of acceptance or formal acceptance of the tender to the successful tenderer(s). In case where the acceptance is communicated by e-mail/letter, the formal acceptance of tender will be forwarded as soon as possible. Instructions communicated via e-mail/letter must be acted upon immediately.

The unsuccessful tenderer(s) will be informed of the outcome of their tender(s) and their EMD will also be returned along with the intimation letter. In case of non-acceptance of tender, no reason thereof will be furnished to the tenderer(s). The tenderer(s) are requested NOT to make enquiries from office regarding the status/result of the Tender Documents submitted by them.

(p) **SECURITY DEPOSIT**

Before the acceptance of the job order, A Security Deposit @ of 10% (Ten percent) of the value of total job-order in the form of Bank Guarantee, valid for 6 months from the date of job-order, with a provision of further extension/revalidation till the completion of task, in terms of Indian Rupees, shall be submitted by the successful tenderer(s) on the Performa attached at Annexure - III. EMD will be returned after receipt of security deposit.

(q) **AVAILABILITY OF EQUIPMENT / ENVIRONMENT AND SECURITY MAINTENANCE**

The job of processing has to be carried out in the premises as specified at Para 5. The tenderer(s) are requested to quote their rates inclusive with hiring charges of HW/SW,

which will be removed by the tenderer after completion of the job. The space for data processing will be provided by PMIDC if available, else tenderer has to establish site at mutually agreed place. Systems installation at these sites and expenditure on other related jobs such as AMC of Equipment, Telephone, Computer Stationary, Computer Furniture, Storage Media, and UPS etc. are to be borne by tenderer(s) himself/themselves. The generator facility if available will be extended to the bidder.

(r) **PRE BID CONFERENCE**

There will be a pre bid conference in Room No 517, 5th floor PMIDC Complex on date as indicated on page 5 before the opening of tender, doubts if any can be clarified. Any contractor who wishes to get any clause added or subtracted from the tender, can ask so in writing however The General Manager (Project) PMIDC will not be bound to accept the proposal. Changes in any of the clause shall be intimated in writing to all the contractors who have purchased the tender as well as uploaded on official web site by The General Manager (Project) PMIDC

(s) **INDEMNITY**

The contractor who is awarded the contract will be deemed to have indemnified the PMIDC and its employees for any or all damages and claims arising out of damage, destruction and death caused to personnel, equipment & stores employed by the contractor.

(t) **ASSIGNING TO OTHERS**

The firm shall not, without prior written permission of The General Manager(Project) PMIDC, assign or transfer or cause to be assigned or transferred, whether actually or as the result of takeover, merger or other change of identity or character of the firm, any of its rights or obligations under the contract or any part, share or interest therein. Upon any such assignment or transfer, this engagement may forthwith be terminated by the General Manager (Project)

(u) **INTELLECTUAL PROPERTY RIGHTS**

All the data products would be the intellectual properties of PMIDC.

8. **RIGHTS TO REVISE THE JOB SPECIFICATIONS**

The General Manager (Project), reserves the right to revise and / or alter job specifications before the acceptance of any tender. After acceptance of tender, job specifications can be altered/revised with mutual agreement between the General Manager (Project) and the tenderer(s).

9. **CLARIFICATIONS ABOUT TENDER DOCUMENT:**

Further clarification, if any, about this tender document can be sought from the General Manager (Project) PMIDC.

10. **OTHER NOTES:**

a) **Exceptions:** Please describe any exceptions taken to the scope of services described later in this section.

b) **Additional information requirements:** Please list any other information required by you from PMIDC.

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The General Manager (Project)

PMIDC Room No 511, 5th Floor, Punjab
Municipal Bhawan Plot No 3, Sector 35
A, Dakshin Marg Chandigarh 160022

ANNEXURE - I

TERM OF REFERENCE

1. TASK AND DELIVERABLES

The short listed bidder will obtain the shape file of each town which is to be flown from PMIDC and submit the schedule of flying to the Project Manager PMIDC within one week of date of award of work. After flying the following data will be supplied to PMIDC aggregated in town wise.

- a) 5 cm ultra-high resolution true colour orthomosaic (terrain corrected) geospatial data product in GeoTIFF format generated with minimum 75% forward overlap and 75% side image overlap
- b) 5 cm High resolution digital surface model geospatial data product in GeoTIFF format
- c) 5 cm High resolution digital terrain model geospatial data product in GeoTIFF format
- d) Raw images (in JPEG format) along with EXIF information along with the aircraft attitude parameters (omega, phi & kappa)
- e) GCP locations, processed reports
- f) Accuracy: Horizontal ≤ 3 pixels; Vertical ≤ 5 pixels
- g) Point Cloud data in LAS and XYZ format

Note: All Data be processed and projected in Punjab Grid projection. Parameters of which can be supplied by PMIDC

2. TIME FRAME

Task has to be completed within a period of 90 days of commencement of contract.

3. HARDWARE / SOFTWARE/EQUIPMENT/TRANSPORTATION

The tenderer(s) will have to bring in the required hardware and software and suitable trained manpower for carrying out the work. Also he should get his drones insured for damage to public and public property in case of accidents.

4. INPUT DATA

The following input material/data will be supplied by the PMIDC to the selected tenderer(s):

- a) The list of control points supplied by SOI with position can be collected from PMIDC
- b) The list of person Coordinating the activity of flying at each town will be supplied by PMIDC
- c) Permission to fly drone at each location will be obtained on the request of bidder.

6 Evaluation of Technical Proposals

Evaluation of Technical Proposals shall be carried out by the Evaluation Committee.

Technical proposal of all the Applicants will be evaluated based on the following Evaluation Criteria. Evaluation of the proposals will be done by the evaluation committee as per the parameters mentioned below:

Sr.No.	Criteria	Weight age (marks)	Evaluation Criteria
I. Past Experience of agency			
1	Number of years in existence in UAV mapping business	10	>0 & ≤ 1 Years - 0 Marks >1 & ≤ 2 Years -05 Marks >2 Years -10 Marks
2	Area mapped in India (in Sq Km)	20	≤ 500 sq km - 05 Marks >500 & ≤1000 sq km - 10 Marks ≥ 1,000 sqkm-20 Marks
3	UAV Infrastructure (number of fixed wing mapping UAVs)	10	≤ 1 UAV - 5 Marks ≥ 2 UAVs - 10 Marks
4	UAV with RTK/ Kinematic	20	No provision- 5 Marks UAV with RTK/Kinematic 15 Marks
II. Team			
4	Qualified & experienced UAV pilot	10	< 1 UAV pilot - 05 Marks > 1 UAV pilot - 10 Marks
	Qualified & experienced UAV commander	10	< 1 UAV commander - 05 Marks > 1 UAV commander - 10 Marks
III. Financial Performance of agency			
5	Demonstration (coverage of 8 sq km in one flight with minimum 75% forward overlap and 75% side overlap image specifications)	20	>1 flight - 5 Marks ≤ 1 flight - 20 Marks
	Total Weight age	100	

Note: Bidder is required to submit all related documents regarding above criteria

If the documents asked vide Para 7 (a) are found in order and also he obtains more than 60 marks in the above criteria he will be asked to fly 10 sq. km area and prepare all deliverables (ortho mosaic, DEM, DTM and point cloud in LAS and XYZ format) and submit the same within

80hrs to the General Manager (Project) PMIDC. If data is found suitable and within the required Standards then bidder will be technically qualified. The data delivered will be taken as sample data against which data supplied by the bidder will be checked by the technical committee. The Financial bids will only be opened for those bidders who have obtained more than 60% marks and also have produced the acceptable data. The tender shall be awarded only to L1 bidder. In case of tie, bidder scoring more marks will be declared as L1.

Data Acceptance Procedure

All data mentioned in deliverable will be submitted to the technical committee who will check the data against the sample data of the bidder and will check if data belongs to the same shape file as has been supplied to the bidder for flying. If data is found as per standards and per shape file it will be accepted. If data is found for more than the area contained in shape file, payment shall be made only as per area of shape file but if data is found short of shape file bidder will be asked to make up the data. Payment can only be released once whole data of the town is received and accepted by the committee. If data is found acceptable, the recommendation for release of payment will be submitted to the General Manager (Project) within fortnight from the date of receipt of data else data will be returned to the bidder for correction and resubmission.

7. ACCEPTANCE SITES

All the activity shall be controlled from the office of the General Manager (Project) PMIDC Chandigarh.

TECHNICAL SPECIFICATIONS

- a) 5 cm ultra-high resolution true colour ortho mosaic (terrain corrected) geospatial data product in Geo TIFF format generated with minimum 75% forward overlap and 75% side image overlap. Should be true ortho Mosaic
- b) 5 cm High resolution digital surface model geospatial data product in Geo TIFF format. DEM should be prepared for whole town.
- c) 5 cm High resolution digital terrain model geospatial data product in Geo TIFF format. DTM should be prepared for whole town.
- d) Point Cloud in LAS and XYZ format for whole town
- d) Raw images (in JPEG format) along with EXIF information along with the aircraft attitude parameters (omega, phi & kappa)
- e) GCP locations, processed reports
- f) Accuracy: Horizontal ≤ 3 pixels; Vertical ≤ 5 pixels
- g) Point Cloud data in LAS and XYZ format
- h) Separate Media to be used for separate town

- Note:
- i) Distortion of any kind at the edges of feature will attract re- processing.
 - ii) Scale has to be uniform throughout the mosaic
 - iii) Seam lines of any kind in the Mosaic will attract re-processing. Data has to be processed using Control points

PERFORMA FOR
BANK GUARANTEE

In consideration of the Governor of Punjab State, represented by the Department of Local Govt, Govt of Punjab, through Punjab Municipal Infrastructure Development Company (hereinafter called PMIDC which expression shall include his successors and assigns), having agreed to exempt M/S with its offices at (hereinafter referred as the contractor which expression shall include his successors and assigns), from the demand, under the terms and conditions of an Agreement dated made between the PMIDC and M/S hereinafter called the said agreement **Supply of True Ortho rectified Drone images and DEM**, of security deposit for the due fulfillment by the said contractor of the terms and conditions maintained in the said Agreement, on production of a Bank Guarantee for Rs..... (in words only) , (Name of the Bank) (Herein after referred to as the bank) at the request of the contractor do hereby undertake to pay to PMIDC an amount not exceeding Rs..... (.....only), against any loss or damage caused to or suffered or would be caused to suffer by PMIDC by reason of any breach by the said contractor of any of the terms or conditions contained in the said agreement.

We (Name of the bank) do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from PMIDC stating that the amount claimed is due by way of loss or damage caused to or would be caused to or suffered by PMIDC by reason of breach by the said contractor of any of the terms or conditions contained in the said Agreement or by the reason of the contractor's failure to perform the said Agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee where the decision of PMIDC in these counts shall be final and bindings on the Bank. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs..... (.....).

We (Name of the Bank) undertake to pay to PMIDC any money so demanded not withstanding any dispute or disputes raised by the contractor if any suit or proceeding pending before any court or tribunal relating thereto, liability under this guarantee being absolute and unequivocal. The payment so made by us under this guarantee

shall be valid discharge of our liability for payment hereunder and the contractor shall have no claim against us for making such payment.

We (Name of the Bank) further agree that guarantee herein contained shall remain in full force and effect during the period that should be taken for theof the said agreement and that it shall continue to be forcible till all the dues of PMIDC under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till PMIDC certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the contractor and accordingly discharges this guarantee. Unless a demand or claim under this guarantee is made on us in writing on or beforehe (tenderer(s)) shall be discharged from all liability under this guarantee thereafter.

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

This guarantee will not be discharged due to the change in the constitution of the Bank or the contractor.

We (Name of the Bank) lastly undertake not to revoke this guarantee during its currency except with the previous consent of PMIDC in writing.

Dated the Day of

For

(Indicate the Name of the Bank).

(Performa for Contract Agreement)

This Agreement is made and entered into on the.....day of....., 2018.

Between

General Manager (Projects) PMIDC

Governor of Punjab, acting through The General Manager (Project), PMIDC's office hereinafter referred to as PMIDC, (which expression shall, unless excluded by or repugnant to the context, be deemed to include his successors in office and assigns) of the First Part.

And

M/S.....
having its Registered Office at
..... hereinafter referred to as
"The Contractor", (which expression shall unless excluded by or repugnant to the context, be deemed to include its administrators, executors, liquidators, successors in interest and permitted assigns) of the Second Part.

WHEREAS Contractor is the Organization engaged in Generation of true ortho photo mosaic and DEM

AND WHEREAS PMIDC is an Organization desirous of getting the true ortho photo mosaic and DEM generated.

AND WHEREAS and where as PMIDC desires that the work be carried out as per the tender document No.....

..... And whereas the contractor is willing and has accepted to render the services to undertake the observation of control points as per schedule And whereas the contractor has submitted an offer and PMIDC has accepted the same for the observation of control points using Dual frequency GPS

NOW THESE PRESENT WITNESS and it is hereby agreed and declared by between the parties hereto as follows:

1. In this Agreement the words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract
2. The following documents shall be deemed to form and be read and construe as part of the Agreement viz:
 - i. The letter No..... of PMIDC inviting technical and financial offers:
 - ii. The Tender Documents dated..... issued to the Contractor by PMIDC;
 - iii. The Technical and Financial Offer the Contractor to carry out the works;
 - iv. The Letter of Acceptance from PMIDC;
 - v. The Conditions of Contract for Generation of true ortho rectified drone images and DEM and Allied Works included in the Tender Documents.
3. In consideration of payments be made by the Client to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Client to perform the Services in conformity in all respects with the provisions of this Agreement.
4. The Client hereby covenants to pay the contractor, in consideration of the performance of the Services in the Tender document, remuneration of Rs..... (Rupees
.....) at the times and proportion as in **Appendix 'A'** to this Agreement and in the manner prescribed by this Agreement read with Conditions of Contractor herein before referred to.

IN WITNESS whereof the parties hereto have hereunder set their respective hands and seals on the day, month and year first above written.

Signed by the Job allotter

With date

.....

(For and on behalf of the Governor of Punjab)

.....

1. Name of Witness with signature and address

2. Name of Witness with signature and address

.....

.....

Signed by the Said Contractor or his

Legal representative with date

.....

(For and on behalf of the Contractor)

1. Name of Witness with signature and address

.....

.....

2. Name of Witness with signature and address

.....

.....

(Performa for Appendix 'A' to the Contract Agreement)

The contract made between M/S hereinafter called the 'Contractor' which expression shall include their legal representative on the one part and The General Manager(Project), PMIDCs on behalf of the President of India hereinafter called the "Job a lotter", on the other.

Custody of Data and Records

The Contractor shall perform the contract in all respects in accordance with the terms and conditions as mentioned in Para 4.0 of Tender Document/Job Order. All Data and Records pertaining to Generate true ortho rectified photo mosaic and DEM shall remain in every respect at the safe custody of the contractor until completion of the job in the format and specifications mentioned in the Job Order and until their delivery to the PMIDC. The Contractor shall be held responsible for all loss, destruction, damage or deterioration or pilferation of data/information during the complete period of the fulfillment of the job.

Rights of Rejection of Digital Output

- (a) Notwithstanding any approval which the Purchaser may have given in contract of the Job Order or any part thereof which shall be lawful for the Government on behalf of the job allotter to reject the processed points or any part thereof within 18 weeks from the submission of the product if not found in conformity with the specifications and terms and conditions of the contract on account of accuracy, omission of details etc. as referred in the Annexure II of the Tender Document.
- (b) That if the Contractor fails to observe or perform any condition of this contract or become insolvent or he or his representative tries to unduly influence any official or offers any bribe in connection with contract then, notwithstanding any previous waiver of such default or action, the job allotter will have the power on behalf of the Government to terminate the contract forthwith and without prejudice to other rights and remedies of the Government to forfeit the said Security Deposit of Rs..... in the form of Bank Guarantee at its discretion and also recover from the contractor any loss suffered by the Government on account of the Contract being so terminated prematurely.

(c) **Time and date of completion of the work essence of the contract**

The time and date stipulated in the Job Order for the completion of the allotted work shall be deemed to be the essence of the contract. The job of fixing of pillars have to be completed within 60 days after the receipt of firm order. In case of delay the Contractor shall in agreement to other liabilities mentioned in the General conditions of Contract be liable for losses which may be incurred after the date on which the work ought to have been completed and in the event of the Contractor's failure to complete the work within the period prescribed for such completion, the job allotter shall be entitled to withhold any payments until the whole of the work has been completed and to recover from the Contractor a sum equal to 2 percent of the contract price of no. of points involved in such delay for each and every month or part thereof which ought to have been free from any cause, except causes such as strikes, lockouts, fire, accident, riot, etc. laid down in clause 4.6 of the Tender Document, which the Job allotter may admit as a reasonable ground for delay. The Job allotter will allow such additional time, as he may prefer to have been required by the circumstances of the case.

(d) That in case of any dispute or difference, that may arise in connection with contract the settlement of which is not hereinbefore provided for, the same shall be referred for the Arbitration to the Secretary, ----- or if he is willing or unwilling to act as an Arbitrator, to any other person nominated by him and the decision of such arbitrator shall be final and legally binding on the parties to this contract.

1. Name of Witness with signature

Signed by the Said Contractor or his

Legal representative with date

.....

.....

2. Name of Witness with signature

Signed by the Job allotter

.....

(For and on behalf of the Governor of Punjab)

NO DEMAND CERTIFICATE BY THE TENDERER

I, (Full Name and Address of the Contractor)
..... do hereby acknowledge
to have received payment in full from
..... for all the services rendered by me in
connection with..... (The number and
date of contract agreement)

This is to certify that I have no further claimed whatsoever against the Government in
connection with or arising out of the said contract which remains unadjusted.

Signature of the Contractor with date

(Defacing a revenue stamp)

SALE COPY NO -----

PMIDC

(DEPARTMENT OF LOCAL GOVERNMENT, GOVT OF PUNJAB)

PART B

SCHEDULE OF TENDER DOCUMENT

FOR

Supply of True Ortho rectified Drone images and DEM

(To be detached by the Tenderer and Submitted duly completed)

(Separate tender for each city)

TENDER NO -

Name of the Tenderer (s) :-----

Firm's Reference No. : -----

Date of submission : -----

Additional No. of pages (if any) : -----

CHECK LIST

CONTENTS

Page

Performa	1	-	Cover letter	29
Performa	2	-	Questionnaire for Technical Bid	31
Performa	3	-	Pricing schedule for Commercial Bid	33
Performa	4	-	Bid particulars	35
Performa	5	-	Warranty	36

To

The General Manager (Project), PMIDC
Room No 511, 5th floor,
Punjab Municipal Bhawan
Plot No 3, Sector 35 A
Chandigarh

SUB: Tender Document No.

Dated:

Sir,

I/We hereby offer to take up the task of supply of True orthorectified image Mosaic and DEM as given in Annexure I and II respectively, as detailed in Part 'A' of the tender document stated above. We agree to hold this offer open till I/We shall be bound by a communication of acceptance or rejection dispatched within the prescribed time.

I/We have understood the instruction to Tenderer(s) and conditions of contract attached to the invitation of tender and have thoroughly examined applications quoted in the schedules of the tender document and I/We am/are aware of the nature of the job required to be done and my/our offer is strictly in accordance with the requirements and conditions in the tender document.

The pages attached herewith form part of this tender.

Yours faithfully,

Name of Tenderer:

Address:

City:

State:

Pin

Telephone

Fax:

(Office):

E-mail:

(Residence):

Website:

Authorized signature:

Name (please print):

(seal of the Company)

Title:

Date:

(Signature of Witness)

Address:

Dated: -----

TECHNICAL BID

(Attach separate sheets for any item where space is inadequate)

Tenderer must give the comprehensive answer to each of the following questions:

1. Name of the firm and particulars (Indicate registration No., Business license No., location of firm, ISO Certificate copy if available, and date established etc. Enclose copies of the said documents.)
2. Full address of the firm including Fax and E-mail address.
3. Please identify three clients for whom you have provided this type of services. Please give their complete address and specify the services provided to each of them.
4. Previous experience giving details like content, size and nature of job and time taken and man days employed etc. (Attach sample of work done).
5. Computer equipment being used by the firm at present.

(a) Hardware }

Give details.

(b) Software

6. Potential impact of current work load on the proposed project. Cite specifically all major projects undertaken involving significant commitments of equipment and staff in last two years
7. Expected minimum number of Sq km proposed to be completed by the firm per week.
8. Number of employees proposed to be employed for the job (Technical & Supervisory/Team leader)
9. Complete Software proposed to be used for the job
10. In case specified Hardware & Software are not available, how the job is proposed to be done?
11. Time required in taking up the job after firm order.
12. Whether willing to work as per schedule

13. Time assessment, in man-hours, per sq km

Based on your technical plan of operations, and previous project experience, explain when and where you will require support from PMIDC Provide an indication of the number and duration of consultation and you will require support from PMIDC.

Technical Alternatives

Contractors may elect to propose alternative approaches if they can demonstrate, or cost advantages to PMIDC keeping in mind the task. The Contractor should cite the applicability of alternative approaches/ procedures to the achievement of project objectives and the projected advantages to be gained through their use.

14. Prepare a detailed time schedule that describes the tasks included within the technical plan of operations.

15. The financial turnover of the firm.(Please enclose IT returns of last three years)

Signature of Tenderer(s)

With Office Seal

Dated: -----

COMMERCIAL BID

TENDER FOR

DETAILS OF THE PRICE TO BE QUOTED BY INDIVIDUAL VENDORS

Supply of True Ortho rectified Drone images and DEM

Name of the Bidder

1. **Address**
2. **Phone No.**
3. **Fax No.**
4. **Email Address**
5. **Web site address if any**
6. **Rate quoted**

Sl.No	Description of work	Rates/Sq Km	Taxes	Total Cost
1	Ultra-high resolution ortho-mosaic in Geo tiff format, digital surface model, digital terrain model in Geo tiff format & Point Cloud in LAS and XYZ format along with Raw images in JPEG format with			

Signature of the tenderer(s)

Name of the Firm with Seal

Notes: 1.

- i. Only the finished product as per specifications will be accepted. No cost, full or part, will be borne by PMIDC in case of rejection leading to repetition of any point(s) or traverse.**
- ii. The above cost figures will not be subject to escalation and the price shall remain valid for the period for which the work is allotted to a vendor.**

Rates quoted should be in the above format, failing which the bid may be rejected.

- iii. Tenderer must quote the cost in Indian Rupees only.**
- iv. Rate should be quoted for supply of all the deliverables confirming the required specifications.**
- v. Rate should be inclusive of all Sales Tax, Central Sales Tax, Service Tax etc.**
- vi. If any other charges are applicable, it should be clearly specified.**

PARTICULARS OF BIDDER

1. Name of the Tenderer :
2. Address of the Tenderer :
3. Tenderer's proposal number and date :
4. Name & postal address of the officer :

To whom all reference shall be made

Regarding this tender enquiry including

Fax/Telex/Telephone/E-mail. :

Witness:

Signature

Name

Signature of the Tenderer(s)

Address

Name _____

Designation _____

Company _____

Date:

Date: _____

Name of the firm with Company Seal

WARRANTY

I/We warrant that the output supplied by us shall be in full conformity of the specification/output required by PMIDC **as detailed in Annexure I& Annexure II of PART A.** This warranty shall remain enforced/valid during inspection/acceptance of the output and shall expire 6 months after the final acceptance of the output by Punjab Land Record PMIDC for each point

I/We also warrant that I/We shall handover all the data/records within 15 days of formal acceptance to PMIDC.

Signature of the witness

Signature of the Tenderer

Office Seal

DATA SECURITY

I/We hereby certify that the General Manager (Project) PMIDC shall have absolute right on the digital data and output products produced by me/us. I/We shall be responsible for security/safe custody of data during observation/ Data processing. I/We also certify that control point's coordinates and/or digital topographical data given to me/us or generated by me/us in full or part will not be taken out of the PMIDC building premises on any media, and will not be produced by me/us in any form. I understand that violation of above clause shall attract criminal prosecution under Government copy right act 1957 and the Official Secrets Act 1923.

Signature of the witness with date

Signature of the tenderer with date

1.

2.

Name of the firm with Seal

Technical Compliance sheet

Sr. No.	Technical Requirements	Complied (Yes / No)	Details of supporting documents	Remarks (if any)
1	Proper registration No., PAN, TAN, GST registration under appropriate Act / Law.			
2	Annual turnover of at least Rs. 2 Crore for flying UAV images in each year of last 3 years (FY 2015-16, 2016-17, 2017-18). This claim should be supported by self-attested annual audited financial statements.			
3	At least 02 years of experience in providing UAV based mapping services in India.			
4	Experience of having mapped Minimum 1,000 sq km of UAV based mapping experience in India.			
5	Minimum two fixed wing UAVs so that work is completed on time.			
6	Minimum one experienced and skilled pilot and commander with minimum 750 hours of UAV based mapping experience along with supporting staff and vehicle to conduct UAV survey			
7	Adequate infrastructure to store and process such ultra-high resolution data using latest GPU based hardware and software			
8	Live demonstration: Demonstrate minimum Eight (8) sq km area mapping in one day with 75% forward overlap and 75% side overlap imaging specifications, including acquisition, processing and submission of ortho mosaic to PMIDC for quality assessment. The demo area, date & time for the evaluation would be decided by PMIDC			
9	Process the data using Post Processing Kinematics or Real Time Kinematics in order to ensure better accuracy of the ortho mosaic with minimum GCPs to achieve the desired accuracy levels of Horizontal ≤ 3 pixels; Vertical ≤ 5 pixels			

RESPONSE SHEET (Return this page along with the bid)

Please check boxes to verify inclusion in response:

- 1. Executive Summary**
- 2. Company Profile, Structure**
- 3. Employee resumes**
- 4. Experience**
- 5. References**
- 6. Response to Commercial Questions**
- 7. Response to Technical Specifications and Compliance**
- 8. Proposed timeline (Production schedule)**
- 9. Technical Alternatives**
- 10. Cost Bid (Appendix – B)**
- 11. Signature Page**
- 12. Registration of the Company**
- 13. Authorization for signatory**
- 14. IT Returns for last three years**
- 15. Receipt / Demand Draft for Rs.5000/- towards cost of tender document**
- 16. EMD**
- 17. Response Sheet (this page)**