Government of Punjab

(Department of Revenue), Office of Special Secretary Revenue, III rd floor Civil Secretaraite, Chandigarh, Punjab



TENDER DOCUMENT FOR SHORT LISTING OF COMPANIES AND SURVEY OF PILOT VILLAGES

USING TOTAL STATION/PHOTOGRAMMETRY OR COMBINATION OF BOTH

TENDER NO -----

PRICE: Rs.5000/- (non-refundable)

TO BE SUBMITTED BY: 14-July - 2010 by 1000 HRS.

SECTION 1

Tender Notice

Department of Revenue

TENDER NOTICE

Mapping using Total Station/Photogrammetry and Short Listing of Companies

Punjab Land Record has a plan to resurvey all land holdings of the State in a time span of about five years. As Punjab State is mostly open therefore resurvey by photogrammetric means is considered to be more suitable and economical. State is planning to get the flying done in two phases. Flying shall be on 8cms GSD for open areas and 6cms GSD for built up areas. It is estimated that State has about 10% built up area. It is presumed that in India only 100 days flying season is available and getting the Aerial Photographs during this year will not be possible. Therefore till such time the photography is available it is planned to under take surveys of Pilot villages using Total Station. And also Punjab State has Aerial photographs on 1:10,000 for areas around 6 towns. This photography is very recent and can be used for carrying out a pilot using Aerial photographic means or combination of photogrammetry and Total Station. Therefore

On behalf of the Governor of Punjab, the Special Secretary Revenue, Room No. 7 IIIrd floor Civil Secretariat, Chandigarh Telephone 091-0172-2740173, Fax 091-01722747798, E-mail: www.punjabrevenue@nic.in invites sealed tender for preparation of Cadastral Data for pilot villages on 1:1000 scale using Total Station OR combination of both Total Station and Aerial photographs as the case may be AND also to short list the companies on the basis of successful completion of pilot for out sourcing the cadastral Mapping of whole State.

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 Cadastral Mapping of Pilot Villages" and "Commercial Bid for Cadastral Mapping of Pilot Villages" respectively. Both the documents should be sealed and kept in another sealed cover to be super scribed as "Bid for Cadastral Mapping of Pilot Villages".

All participating companies, can be given a pilot village, provided they meet the qualification criteria. Companies can apply for a pilot using purely Total Station. OR Total Station and photogrammetry (combination), OR both. Companies can be allotted two villages depending on its capacity and willingness. Any company applying for two villages,

shall be allotted one village purely using total Station and other village shall be a combination of both Total Station and Photogrammetry.

The companies are required to carry out Surveys and prepare data as per data model structure and paper records as per the procedures defined by Punjab Land Records. The data shall be prepared on WGS84 Datum and Transverse Mercator projection.

The commercial bids shall be opened only after the completion of pilot villages and shall be opened of those companies who have been declared successful in completion of Pilot villages. Each Company shall be given three months time for the completion. After three months, the commercial bids of only those companies shall be opened who have successfully completed the pilot villages and have been declared successful by the committee constituted for this purpose. The successful companies shall be declared qualified for future tenders. After opening of commercial bid, and all companies who are successful in completion of pilot shall be paid at L-1 rates. The companies who have not been able to complete the pilot village in stipulated time shall be given additional time of one month for completion, if the company is not able to complete even after the extension of time shall be given one more month for completion and if after second extension if company is not able to complete then company shall be asked to wind up and shall not be paid any cost for the survey. In case company has completed after extension shall be paid as per L1 rates but shall not qualify for future tenders of this type.

The Special Secretary Revenue, Room No 7, IIIrd floor, Civil Secretariat Chandigarh Punjab

2. PARTICULARS OF THE TENDER

The tender document can be purchased from the Office of "The Special Secretary Revenue, Room No 7, Illrd floor, Civil Secretariat, Chandigarh, with a request letter against payment of Rs. 5000/- (non-refundable) per tender by Demand Draft drawn on any Nationalised/ Scheduled Bank payable at Chandigarh in favour of "Financial Commissioner and Chair person Punjab Land Records Society" on all working days (Monday to Friday) between 0930 hrs and 1700 hrs. Tender document will be made available from 21th May 2010 to 15th June 2010. Last date for receipt for Tender is 1100 hrs 15th June 2010. The tender document can also be downloaded from <a href="www.punjabrevenue.nic.in/www.punjabreve

The offer should be made on the original specified Tender Proforma only, contained in the Schedule of Tender document. All offers should be made in English. The cover should be addressed to "The Special Secretary Revenue, Room No 7, IIIrd floor, Civil Secretariat, Chandigarh Punjab.

Tender No. :

Total No. of pages in this Tender Document : ------

Sale of Tender Document Commences : 27- 05-2010(1000hrs)
Last date for Sale of Tender Document : 14-07-2010 (1000 hrs)

Pre-bid Conference at

Punjab State Planning Board, SCO Number 70-72,

Sector-17-D Chandigarh. : 24-06-2010(1030 hrs)
Last date of submission of Technical & Price Bids : 14-07-2010(1030 hrs.)
Opening of Technical Bids at Sector 17, Chandigarh : 14-07-2010(1100 hrs.)

Opening of Price Bids : will be intimated to all

the participant after the

completion of Pilot.

Tender documents will be available at 1: www.punjabrevenue.nic.in/

www.plrs.org.in

2. The Special Secretary Revenue,

Room No 7, IIIrd floor, Civil Secretariat,

Chandigarh (Punjab)

Phone: 0172-2740173

Cost of Tender : Rs. 5,000 /- (Non refundable)

Amount of EMD : Rs.50,000/- For one village

: In case any company applying for two villages the EMD shall

be Rs. 100,000

Address for submission of Tender : The Special Secretary Revenue

Room No 7, IIIrd Floor, Civil Secretaraite

Chandigarh, Punjab,

3. **ELIGIBILITY FOR PARTICIPATION IN TENDER**

- (i) Experience in handling similar type of projects (Submit documentary evidence)
- (ii) Should have carried out a project on Control point provisioning using Dual frequency GPS.(Submit documentary evidence)
- (iii) Should have a digitization facility with minimum 50 employees
- (iv) Companies applying for survey by photogrammetric means and total station as a combined method Should have photogrammetric production facility with at least
 5 photogrammetric systems and adequate photogrammetric professionals.
- (v) Should have an annual turn over of at least Rs. 2 Crores.(Submit a documentary evidence)
- (vi) Company can be individual or consortium, in case of consortium each partner company should have turn over of at least 2 Crores. (Submit documentary evidence)

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 favour of "Financial Commissioner and Chairperson PLRS" should be enclosed with the Technical bid of the tender. Otherwise the offer will be summarily rejected without assigning any reason.
- (ii) The tender bid must be submitted in two proformae: Proforma 2 of part (B) for technical bid and Proforma 3 of part (B) for commercial bid separately.
- (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 (tenderer) mentioned in the tender shall be the address to which all communication addressed to the tenderer will be sent, unless the contractor has notified a change by a separate letter containing any other information and got it acknowledged by "The Special Secretary Revenue, Room No 7, Illrd floor, Civil Secretariat, Chandigarh Punjab.
- (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 offers, attending the tender opening, meetings of the Negotiation Committee, Prospective tenderer(s) meet and arrangements for demonstration/presentation will be the responsibility of the tenderer(s). "The Special Secretary Revenue, Room No 7, IIIrd floor, Civil Secretariat, Chandigarh Punjab shall not be responsible to meet any such expenditure.

5. PROBABLE WORK SITES FOR FEATURE EXTRACTION/DATA DOWNLOADING:

Feature Extraction/Data Downloading for all the villages will be carried out at the sites mutually agreed, at the following locations.

SI.N	Location	
0		
1	Pathankot	If village near Pathankot is awarded
2	Jalandhar	If village near Jalandhar is awarded
3	Ludhiana	If village near Ludhiana is awarded
4	Patiala	If village near Patiala is awarded
5	Amritsar	If village near Amritsar is awarded
6	Bathinda	If village nearBathinda is awarded

The Punjab Land Record Society will facilitate the provision of site at each location for establishment of the data centre, however if site is not available the tenderer has to hire the site at mutually agreed place. Tenderers will install appropriate S/W and hardware as required.

The complete work shall be carried out by the Tenderers using their own HW / SW / Manpower/Instruments. No extra cost to this effect shall be paid by the Punjab Land Record Society..

Technical guidance if any can be had from the chief consultant at any time on phone No 09419725712 Email shamsher.jamwal@gmail.com. In case of any administrative difficulty Director Punjab Land Records may be contacted on Phone No 01812207018 or 01812254018, 09463108270. Fax No 0181-2254935

6 **SUBMISSION OF TENDER**

(i) The schedule of the tender document (PART 'B') contains Checklist, Application form (Performa 1), Questionnaire (Performa 2 for Technical Bid), Pricing Schedule (Commercial Bid - on Performa 3), Bid particulars (Performa 4), Format of Warranty

(Performa 5) and Data Security (Performa 6). The tender must be completed in all respects as per the check-list.

- (ii) 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'.
- (iii) In case of insufficient space in the proforma 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 paras of the tender document.
- (iv) 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 Special Secretary Revenue, Room No 7, Illrd floor, Civil Secretariat, Chandigarh Punjab. on or before the specified date and time. The Special Secretary Revenue 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 Special Secretary Revenue, Room No 7, Illrd floor, Civil Secretariat, Chandigarh Punjab

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) Registration No. of the firm, CST No., Sales/ Service Tax/ VAT

documents in their respective bid document

(iv)

(iv) Amount of EMD : Rs. 50,000/- For one village

: Rs. 100,000/- For two villages

(v) Receipt for purchase of tender document or Demand Draft for Rs.5000/- in case the tender document is down loaded from the 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**:

- (i) The rates for 100 land holdings inclusive of all taxes, if any should be quoted. The prices must be firm and no escalation in prices during the period of validity of the offer will be accepted.
- (ii) The unit for quoting should be **100 land holdings**. The villages shall be allotted after taking out a draw.

(c) TERMS OF PAYMENTS

90% of the payment shall be paid once the firm has been declared as successful and complete data is handed over and accepted by the PLRS. Balance 10 % shall be paid once the data has been published and found no errors/omission. If after publication of records, any error is reported, contractor shall be liable to correct the data else the 10% balance shall not be paid to the contractor.

- (i) In case the work allotted to a particular tenderer(s) is not completed within stipulated time he shall be given additional time of one more month to complete the task, if he is not able to complete even after the extension, The Special Secretary can consider for second extension provided he is satisfied that after allowing tenderer the second extension, village can be completed. But even after second extension if tenderer is not able to finish the allotted village it will be presumed that he has no capacity to complete the allotted job, therefore task will be withdrawn without assigning any reason thereof. In such case, the tenderer(s) should remove their systems / Hardware if any from the 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(Only if Govt premises has been provided). For termination of job order due to aforesaid reason, the Tenderer will be declared technically incompetent and shall be disqualified from the future tenders for similar work/job and also shall not be paid any amount. In case tenderer is able to complete the task after extension he shall be paid as per L1 rates but shall be declared technically disqualified for future tenders for similar tasks.
- (ii) The Special Secretary Revenue, reserves the right to deduct any amount from the bill as may be considered reasonable for unsatisfactory execution of the work.

(iii) The contract may be terminated 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.

(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 Financial Commissioner Revenue, Govt. of Punjab State. 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 reenactment 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 Revenue, Govt of Punjab.

(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 Punjab Land Record Society 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, The Special Secretary Revenue 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 Special Secretary Revenue in this matter shall be final.

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

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 Cadastral Mapping of Pilot Villages" "Commercial Bid for Cadastral Mapping of Pilot Villages, respectively. Both these covers should be sealed and kept in another sealed cover to be super scribed as "Bid for Cadastral Mapping of Pilot Villages 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 Special Secretary Revenue, Room No 7, Illrd floor, Civil Secretariat Chandigarh Punjab. on or before the specified date and time. The Special Secretary Revenue, Room No 7, Illrd floor, Civil Secretariat Chandigarh Punjab. 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 Office of The Special Secretary Revenue, Room No 7, Illrd floor, Civil Secretariat Chandigarh Punjab

(i) <u>BID SECURITY / EARNEST MONEY:</u>

Each tenderer must furnish the Earnest Money @ specified in Para 5, in the form of Demand Draft / Bankers Cheque /"Deposit at Call' Receipt from any Nationalized Bank in the name of "Financial Commissioner and Chairperson PLRS" Payable at Chandigarh.

Any bid submitted without earnest money will be rejected.

(j) LATEST HOUR FOR RECEIPT OF TENDER

The tender must reach **The Special Secretary Revenue, Room No 7, IIIrd floor, Civil Secretariat Chandigarh Punjab** not later than 1030 hrs on 14th July 2010. 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 which is not likely to be extended further.

(/) OPENING OF TENDER

Tenders will be opened in public on 14th July 2010 at 1100 hrs. in the office of **The Special Secretary Revenue**, **Room No 7**, **Illrd floor**, **Civil Secretariat Chandigarh Punjab** 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 himself 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) **PRESENTATION**

A pre-bid conference shall be held on 24th June 2010 at Punjab Planning Board conference Hall at SCO 71-72 Sector 17 Chandigarh. During a pre bid conference a presentation shall be given to all participating venders where complete procedure shall be explained and records required to be prepared shall be listed out. Doubts if any can be clarified.

(o) Visit

A team of officers of Punjab Land Records Society may visit the tenderer(s) at their site to evaluate the infrastructure and resources available with them.

(o) **RESULT OF Pilot**

The Tenderer successfully completing the pilot shall be declared technically qualified for all tenders for similar jobs originating for Punjab Land Records in future and only Tenderer successfully completing this pilot shall be allowed to compete in future. The result shall be communicated by e-mail/letter of acceptance. The Tenderers who are not able to complete the task within stipulated period shall be declared unsuccessful but shall be given two extension for one month each and if they are able to complete, the cost of their effort can be paid at L1 rates but if the tenderer is not able to complete even after extensions, it will be presumed that firm has not the capacity to complete therefore the pilot shall be withdrawn from the firm and no cost shall be paid to the firm for any of their activity.

The unsuccessful tenderer(s) will be informed of the outcome of their pilot and their EMD will also be returned along with the intimation letter. In such case no reason thereof will be furnished to the tenderer(s). The tenderer(s) are requested NOT to make any correspondence on above subject.

(p) <u>SECURITY DEPOSIT</u>

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 data produced is published and quality control job is completed in all respects in terms of Indian Rupees, shall be submitted by the successful tenderer(s) on the proforma attached at Annexure - III before the balance 10% is returned to the tenderer. EMD also will only be returned after receipt of security deposit.

(q) AVAILABILITY OF EQUIPMENT / ENVIRONMENT AND SECURITY MAINTENANCE

The job has to be carried out at the mutually agreed 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 acquisition and processing shall be at mutually agreed location which can be made available by the Punjab Land Record Society if available else it shall be hired by the Tenderer. Systems installation at these sites and expenditure on other related jobs such as AMC of Equipment, Telephone, Computer Stationary, Computer Furniture, Storage Media, UPS etc. are to be borne by tenderer(s) himself/themselves.

(r) <u>INDEMINITY</u>

The Tenderer who is awarded the contract will be deemed to have indemnified Punjab Land Records 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.

(s) **ASSIGNING TO OTHERS**

The firm shall not, without the prior written permission of The Special Secretary Revenue, assign or transfer or cause to be assigned or transferred, whether actually or as the result of take over, 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 Special Secretary Revenue.

(t) INTELECTUAL PROPERTY RIGHTS

All the data products would be the intellectual properties of Punjab Land Record Society.

8. RIGHTS TO REVISE THE JOB SPECIFICATIONS

The Special Secretary Revenue, 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 Punjab Land Record Society and the tenderer(s).

9. **CLARIFICATIONS ABOUT TENDER DOCUMENT**:

Further clarification, if any, about this tender document can be sought from The Special Secretary Revenue, Room No 7, IIIrd floor, Civil Secretariat, Chandigarh Punjab.

Telephone 0172- 2740173

10. **OTHER NOTES:**

Exceptions:

Please describe any exceptions taken to the scope of services described later in this section.

Additional information requirements: Please list any other information required by you from Punjab Land Records Society before commencing contract negotiations.

The Special Secretary Revenue,
Room No 7, IIIrd floor, Civil Secretariat,
Chandigarh Punjab

ANNEXURE - I

TERM OF REFERENCE

1. **TASK**:

- a) Provision of control points using Dual frequency GPS.
- b) Digitization of Mussavis
- c) Geo-referencing of old Records and bringing it into co-ordinate system
- d) Preparation of field sheet.(Grid Sheet)
- e) Survey of land holdings on 1:1000 scale
- f) Preparation of data as per data model structure and Assigning unique parcel ID.
- g) Collection of Attributes
- h) Attachment of attributes and
- i) Preparation of co-relation statement between new and old records.
- j) Preparation of statement of Govt holdings separately for State and Central Govt.
 Also preparation of encroachment statement.
- k) Publication of records
- I) Preparation of Records of right
- m) Preparation of paper Records/registers

2. **TIME FRAME**

Task has to be completed within a period of 3 months of commencement of contract.

3. HARDWARE / SOFTWARE

The tenderer(s) will have to arrange the required hardware and software and suitable trained manpower for carrying out the tasks mentioned in para 1 above. Accordingly rates may be quoted by the tenderer(s).

4. **INPUT DATA**

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

- (a) Old Mussavis of the village
- (b) Aerial photographs of those villages for which Aerial photography is available.

- (c) Old Attributes in the form of paper records.
- (d) High resolution Satellite images if required(The cost have to be borne by the tenderer)
- (e) Performa's for Grid sheet, Co-ordinate Sheet ,Attribute sheet and verification sheet
- (f) Details of land acquired by Govt and shamlot land
- (g) Data model structure, symbol library.

5. **OUTPUT REQUIRED**

- A) Control Volume duly bounded
 Containing
 - a) Field sheet filled up for each station constructed /observed
 - b) Log sheet for each station
 - c) One print out giving co-ordinates of all control points
- B) Soft Copies
 - a) Raw Data on 2 DVD's and third copy on hard disc
 - **b)** Processed data in a Excel sheet
 - c) Description of each station on excel sheet

Field Volume (Duly bounded for each block of 36 Grids)

The field volume must contain the following

- i) Field Grid Sheet
- ii) Attribute sheet for each holdings
- iii) Co-ordinate sheet . The co-ordinates of each node created during field survey
- iv) A copy of verification sheet duly verified by the land holder
- v) A print out of a block of 36 Grids
- vi) Encroachment statement
- vii) Co -relation statement with new and old records

Soft Copy (One copy on DVD and second copy on hard disc)

Raw data of Total Station as well as processed data of Total
 Station for each grid

- ii) Processed and merged Data of each Block
- iii) In case of photogrammetry, the complete vector data collected along with data collected by Total Station.
- iv) In addition to theme layers, the layer of all the point node, layer of lines joining these nodes and creation of the polygons out of these line feature to create parcels must be separately maintained. While preparing the topology the integrity of these features should not be disturbed.
- viii) Complete data prepared on Arc GIS format along with Attributes attached as per data model structure.

In case photogrammetry is used, the following additional information/deliverables shall be required.

- Photographs duly scanned on 14 micron
- Block adjustments along with RMSE
- Feature extracted from photographs in a separate layer
- Features added during field verification in a separate layer.
- Features merged and corrected in a layer.
- List of Discrepancy pointed out by land holder during verification
- And updated data layers after discrepancies are reconciled.

Note: Since photographs are Secret therefore they should not be printed and should be handled with utmost care. Tenderer must ensure that he uses only those workers who are reliable and whenever photographs have to be taken to field they must be carried by the Govt. official. The tenderer is advised to use high resolution satellite images for post pointing and details may be plotted on the computer using Aerial Photographs.

d) Finally corrected maps may be supplied, one hard copy on paper, one hard copy on transparent media and softcopy on CD / DVD media.

6. **ACCEPTANCE PROCEDURE**

The Tenderer shall have to submit at his cost and expense the output to the village officials for checking and subsequent acceptance. The Contractor before supplying the output shall ensure that:

- a) Completeness of the data: All features as appearing in the photographs should be collected as per data model structure supplied by PLRS.
- b) Accuracy: All features should agree within 20 cms in ground terms.
- c) Orthogonality: For all cultural details especially for built up areas Orthogonality is to be maintained.
- d) Edge adjustment from grid sheet to grid sheet: End node of a feature in one sheet should be the starting node of the same feature in the adjoining sheets.
- e) DTM also should be prepared using heights of each and every point. In case of photogrammetry also DTM of 0.5m accuracy should be prepared.
- f) Check plots will be taken out on transparent media and will be compared against the ortho photos generated. Wherever discrepancies are noted they will have to be corrected. A copy of final check plot should be taken, on paper. The final output should be handed over to village officials designated for this purpose and the output will be checked on ground. If in the opinion of village officials the output contains a large number of discrepancies, the material will be sent back without acceptance for re feature collection / corrections for which no extra cost will be paid.
- g) The task of resurvey will be closely monitored and coordinated by PLRS at different stages in order to ensure uniformity and to have quality control on the ultimate products to be maintained throughout and to ensure compatibility. Minimum complaints from public shall be the barometer for the quality work being produced

by the tenderer. Corrections pointed out at any stage before the acceptance of the data ,have to be corrected by the tenderer at no extra cost.

h) The Contractor shall submit the warranty certificate along with output material on the prescribed format as per proforma 5 of Part 'B'.

7. <u>ACCEPTANCE SITES</u>

All the activity shall be controlled from the office of Director Punjab Land Records, Kapurthala Road, Jalandhar.

8. <u>ACCEPTANCE TEST</u>

Since lot of field records shall be generated their indexing etc shall be a huge task. At the time of check in addition to verification by the public and village officials the indexing and maintenance of records also shall be the criteria for acceptance.

a) <u>IN HOUSE / PARIPASU EXAMINTION</u>:

In house examination will be carried out first as pari-pasu examination, and secondly by comparing the check plot on transparent media with ortho photos/high resolution satellite images for completeness of the data as per the output requirement.

b) <u>ACCEPTANCE AFTER GROUND TRUITHING:</u>

Thorough examination of the deliverables shall be carried out on ground as per Para – 6 of (Acceptance Procedure) and the final report shall be given within 6 weeks after submission of the digital data. The corrections pointed out shall be carried out by the Contractor at his own cost.

TECHNICAL SPECIFICATIONS

Feature collection by field survey or from photographs and then verification on ground using ground methods for pilot villages on 1:1,000 scale using soft copy photogrammetric techniques or total station as per procedure defined by PLRS.

1 METHOD OF FEATURE COLLECTION

- a) PLRS will supply the Co-ordinates of Survey of India control points near by the pilot villages if available and tenderer has to provide control points using dual frequency receivers for the village. The requirement of control points shall be approximately at about one km to two km apart. The requirement of control points to start survey with total station can be met by running a traverse between two GPS points. The traverse carried out for this purpose must close with in 1:5000 accuracy.
- b) The old Mussavis shall be supplied by PLRS, The tenderer has to digitize these Mussavis and Geo-reference as per control points.
- c) Field grid sheet of A3 size on good quality drawing sheet laminated from behind be used and grid shall be generated and old Mussavis duly geo-referenced shall be brought in this grid.
- d) The control points also shall be plotted on this Grid sheet.

Procedure for Total Station Survey

A known control point in the grid is occupied and parcel boundaries are picked up. The Total station observer has to record co-ordinates of each sighting on a co-ordinate sheet designed for this purpose. The code for each point has to be designed by the tenderer so that each and every point can be referenced if required. The each sighting whose co-ordinates have been recorded manually are to be plotted in pencil by the observer. At the edge of the grid the first bend of the next adjoining grid shall also be observed for edge adjustment.

The Attribute sheet designed for this purpose shall be filled in by the observer in

respect of each holding.

The building /well/tube well/transformer inside the holding also shall be

surveyed.

Procedure for Photogrammetric and total station(Combined) Survey

From para1(a) to (d) the material shall be generated.

The photogrammetric block is adjusted and ortho-rectified prints of Aerial

photographs are generated. The land holdings and other features as seen are

digitized and brought into the grid. This grid sheet alongwith satellite image print is

taken to the field where holdings are verified on ground and attribute sheets are

filled up for each holdings. The details which are not seen in the photographs are

picked up using total station or distomat. The details so collected are corrected in

the office and data is prepared as per data model structure.

For total station data processing any machine specific S/W can be used but data

prepared should be GIS compatible.

Tenderer are required to maintain the integrity of original data.

SPECIAL INSTRUCTIONS

• Scale of Mapping: 1:1000 (Paper map)

• Scale of digital data better than 1:1000

Mapping accuracy required planimetric/XY accuracy- as per mapping standards

depending upon the triangulation results. The minimum accepted accuracy for planimetry is

15 cms and for height is 0.5 mt.

• **Projection System**-All co-ordinates are to be based on the following parameters:

Projection

Transverse Mercator

with origin as 31° Latitude and 75° as longitude

Origin Value 40,00,000 as Northing and 60,00,000 as

Easting. The Scale factor

Spheroid

WGS 84

:

Datum :Mean Sea Level

• **Grid**-The sheet grid lines shall be based on the co-ordinate system. Grid lines and control points shall be plotted and drawn to plotting accuracy of 0.2 mm. The grid lines shall be drawn parallel to the sides of the plan in fine black continuous lines at specified intervals. The value of each grid line shall be shown in black at its extremities. The grid lines shall be approximately 0. 18 mm in line width.

Lines and Lettering:

Text for description shall be in English and / Punjabi as specified.

Block letters shall be used for English text using Calibri(Body) font and or their equivalents and others like and Windows fonts.

• Marginal Information-The tenderer should take approval of a proof copy of the marginal information before final plotting of map sheets.

• Detail specification of features to be captured :

1. Buildings and Structures-

- **a.** Permanent buildings, larger than one (1) square mm at digital capture scale shall be shown by baseline. Smaller permanent buildings, which can be clearly detected at digital capture scale, shall be generalised.
- **b.** Ruins, partially demolished buildings, buildings under construction shall be shown in dashed outlines.
- **c.** Permanent buildings shall be shown by enhanced continuous outline and hatched with symbol
- d. The annotation should be carried out after proper identification of the feature examples of buildings, which are Temples, Mosque, Church, Hospital, Post office etc. Proper symbols for these buildings are essential.

2. Boundaries-

- a. Single lines representing the centre of the physical boundary as interpreted from the aerial photograph shall generally show walls, fences and similar field boundaries.
- **b.** The parcel boundaries must be shown in blue colour others should be shown in black but different boundaries should be in different layers.
- c. The each node falling on the parcel boundary along with its number should be shown. Nodes along with its ID's can be placed in different layer. Distance between nodes to define a line should also be placed in separate layer.
- **d.** Administrative boundaries set up will be provided by the PLRS.

3. Roads Tracks and Footpaths, Bridges and culverts

- a. Road shall be surveyed and shown. The land acquired for road purpose and road actually existing should be shown in different colours and in different layers. The statement of encroachment must be prepared. The centre line of each road also should be digitised. Bridges and culverts as existing as per their dimension must be surveyed and shown.
- **b.** Tracks and foot paths if wide enough to be shown on 1:1000 scale should be shown as polygons but central line of these tracks should be also digitised. Otherwise they should be shown by line feature.
- **c.** Roads to be captured such as Highways, Metalled road, Un-Metalled road, Cart tracks and Footpaths.

4. Transmission lines, Pipe lines, Masts & and Poles

- **a.** High-tension electricity pylons and masts shall be captured alongwith their attributes must be picked up
- **b.** Transformers and substations with their capacity must be picked up along with attributes

5. Water and Drainage Features

a. Perennial and seasonal rivers shall be shown by their widths. Streams, nalas and ditches also shall be picked up as per width. All canals and its distributions should be surveyed and shown. The centre lines of canals, distributaries and field channels must be digitised.

b. Tube wells, wells, springs and fords, will be surveyed and shown.

6. Terrains, Vegetation and Land Use Classification

- **a.** Prominent terrain features to be captured shall include dumping areas and marshes.
- **b.** Vegetation and land use features to be captured as attributes
- **c.** Classification of land, irrigated, non irrigated and barren

7. Names and Annotations

- **a.** Names of places, areas, extensions, streets and prominent buildings, shall be shown in English
- **b.** Land and buildings belonging to the Ministry of Defence shall not be annotated and no building inside the boundary shall be shown/picked up
- **c.** Names of Land holders
- **d.** All Survey Control Points are to be plotted and annotated

8. Additional Information to be annotated

- **a.** Names of districts, towns, villages, physical features, major roads, public buildings are to be shown in English
- **b.** Simple annotation of prominent man made features such as dams, canals, bridges, culverts, sewage treatment plant, quarries, tips, cemeteries and recreational areas etc

9. Mandis

Grain mandis whether open or covered must be picked up along with capacity.

10 Govt properties

Hospitals, dispensaries, schools, colleges and Govt offices and Govt open land like play grounds, Stadiums, open fields must be shown in separate layer

11 Private properties

Schools, colleges, Hospitals, dispensaries, testing Labs, Sarai etc must be shown in separate layer

STATISTICAL TEST

Feature extraction should be accurate with in one pixel and all data captured should be accurate with in 15 cms.

SOFT COPY EXAMINATION / PARIPASU EXAMINATION IN 3 – D MODE

In this test the following points are checked: -

- Positional accuracy
- Registration of various details
- Layering of details as per data model structure

VISUAL INSPECTION / EXAMINATION OF HARD COPY

Hard copy on transparent media of database will be generated to compare it against the ortho photo generated by the contractor(s), by overlaying one over the other. This process shall help in checking of the following points, off line:

- Proper registration of details
- Any missing details.

PROFORMA FOR

BANK GUARANTEE

In consideration of the Governor of Punjab represented by Government of Punjab,
Department of Revenue, through Punjab Land Record Society(hereinafter called PLRS 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 PLRS and M/S hereinafter called the said agreement
of survey of Land holdings and data preparation for(Name of village) on
1:1,000 scale using total Station/ digital photogrammetric techniques, 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
(herein after
referred to as the bank) at the request of the contractor do hereby undertake to pay to PLRS
an amount not exceeding Rs ((
loss or damage caused to or suffered or would be caused to suffer byPLRS by reason of any
breach by the said contractor of any of the terms or conditions contained in the said
agreement.

().							
this	guarantee	shall	be	restricted	to	an	amount	not	exceeding	Rs
of PL	RS in these c	ounts s	shall l	be final and	bind	ings (on the Ban	k. Ho	wever, our li	ability under
regai	ds the amou	ınt due	and	payable by	the I	Bank	under this	guara	ntee where	the decision
perfo	orm the said	Agreer	nent	. Any such	dem	and i	made on t	he Ba	nk shall be c	onclusive as

which	under	the	law	relating	to	sureties	would,	but	for	this	provision,	have	effect	of	so
relievi	ng us.														

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

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

Annexure 'IV'

AGREEMENT

Ar	n agreement made this	day of				
BETWEEN	l		•••••			
	(he	ereinafter ca	alled the contr	actor which	expression s	shall
include hi	is legal representatives) o	f the one pa	irt and the Gov	vernor of Pun	jab (hereina	after

the	•	cord Society(hereinaft	the contractor agrees to supply to ter calledPLRS) the
Name	of Articles	Rate	Total Cost
and on	the terms and conditions her	reinafter mentioned:-	
a)	That all stores shall be delive	red free at	by
b)	that all stores supplied shal with the sample submitted.	l be new and of good	d quality and in exact accordance
c)	Gazetted Officer deputed by the stores rejected must be of rejection. All stores not removed within the period	him at the place mented the control of the control	at by thehimself or by a ntioned in para (a) above and that actor within a week from the date the risk of the contractor. If notshall have the right to the contractor and on his account cupied by same.
d)	should the contractor fail to period specified in clause (a) to forfeit the deposit mention which the contractor has for contractor and the contract sufficient to meet the differ	o deliver the whole/a and as per the samp oned in clause (f) and failed to deliver as a tor will be liable to per eence of cost betweer ctually made should	f the essence of the contract and any part of the stores within the le the shall have the right to purchase the stores elsewhere aforesaid at the expenses of the pay such further sum as will be a the rates tendered and those at they be higher. This is without ereof.
e)		tent and meaning is	ject the whole or any part of the not in exact accordance with the al.
f)	that the contractor will depo		as security for compliance with
g)	that the contractor will be e	entirely responsible fo	r the execution of this contract in nis contract and shall not assign or
h)	If the contractor becomes in	solvent or he or his Ag	gent offers any bribe in connection

with the contract or the contractor fails to observe or perform any condition of this contract, then notwithstanding any previous waiver of such default or action being taken under any other clause hereof the, may on behalf of the Government

terminate the contract and forfeit the said deposit and recover from the contractor any loss suffered by the Government on account of the contract being terminated.

i) If any dispute or difference shall arise including this contract the settlement of which is not hereinbefore provided for the same shall be referred to the arbitration of the Financial Commissioner Revenue of Punjab State and if he is unable or unwilling to act as arbitrator to the arbitration, of any person nominated by him in writing and the decision of such arbitrator shall be final and binding on the parties to this contract.

In Witness whereof the parties have hereunto set their hands the day and year first above written.

Signed by the said contractor
In the presence of:-
1 st Witness Address

2nd Witness Address

Signed by the said for and on behalf of the Governor of Punjab In the Presence of:-

1st Witness Address

2nd Witness Address

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 claim 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 stamn)

SALE COPY NO	
--------------	--

PUNJAB LAND RECORDS (DEPARTMENT OF REVENUE)

PART B

SCHEDULE OF TENDER DOCUMENT

FOR

SHORT LISTING OF COMPANIES
AND
SURVEY OF PILOT VILLAGES

USING TOTAL STATION/PHOTOGRAMMETRY OR COMBINATION OF BOTH

(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		
Proforma	1	-	Cover letter 3		
Proforma	2	-	Questionnaire for Technical Bid	4	
Proforma	3	-	Pricing schedule for Commercial Bid	5	
Proforma	4	-	Bid particulars	6	
Proforma	5	-	Warranty	7	
Proforma	6	_	Data Security	8	

To

The Special Secretary Revenue Room No 7,IIIrd floor, Civil Secretaraite,Punjab Chandigarh

SUB: Your Tender Document No. dated

Sir,

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

QUESTIONNAIRE

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

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

- 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. Bidders responses must clearly address each technical requirement detailed in Scope of Services and include a detailed description of specific capabilities to be used to meet each requirement
- 4. Number of technical employees, category and average technical qualification and their present employment. (Enclose brief resume of the key managerial staff)
- 5. Please identify three clients for whom you have carried out same type of work. Please give their complete address and specify the services provided to each of them.
- 6. Previous experience in soft copy photogrammetry jobs (if photogrammetric and total station method is selected) giving details like content, size and nature of job and time taken and man days employed etc. (Attach sample of work done).
- 7. Computer equipments being used by the firm at present.
 - (a) Hardware(b) SoftwareGive details.
 - (b) Software
 - (c) Instruments held

Total Stations (Give make and how many numbers held)
GPS Dual frequency(Give make and how many held)
GPS Single frequency (Give make and how many held)

- 8. Subcontracting of pilot is not allowed.
- 9. 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 three years
- 10. Expected minimum number of land holdings proposed to be surveyed by the firm per week.
- 11. Number of employees proposed to be employed for the job (Technical & Supervisory/Team leader)

- 12. Hardware configuration with number of workstations (include Plotter with their resolution /accuracy) proposed to be used for the job (**Refer Para 7** * **of Part 'A'** of Tender Document).
- 13. Complete Software proposed to be used for the job (giving version, release etc.) (Refer Para 7 ® of Part 'A' of Tender Document).
- 14. In case specified Hardware & Software are not available, how the job is proposed to be done?
- 15. Time required in taking up the job after firm order.
- 16. Whether willing to work in two shifts, if yes, give timings preferred.

17. Time assessment, in man-hours, 100 land holdings.

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

18. Technical Alternatives

The PLRS is willing to accept the new approach for the next tender if all the deliverables as per specification can be generated.

- 19. Prepare a detailed time schedule that describes the tasks included within the technical plan of operations.
- 20. The financial turnover of the firm..(Please enclose IT returns of last three years)

Signature of Tenderer(s))
With Office Seal	1

COMMERCIAL BID

TENDER DOCUMENT FOR SHORT LISTING OF COMPANIES AND SURVEY OF PIOLET VILLAGES USING TOTAL STATION/PHOTOGRAMMETRY OR COMBINATION OF BOTH

PRICING SCHEDULE

- 1. Name of the Bidder
- 2. Address
- 3. Phone No.
- 4. Fax No.
- 5. E mail Address
- 6. Web site address if any
- 7. Rate quoted

Sl.No.	Description of work	Rates (100 holdings.)
1	Cadastral survey of pilot villages as per technical specification and required deliverables as defined	

NOTE:

- (i) The Price bid of only successful tenderer shall be opened. After the completion of pilot and all the successful tenderer shall be paid at L1 rates.
- (ii) Output material as referred in <u>Annexure I</u> should be as per technical specifications given in <u>Annexure II</u>
- (iii) Only the finished product as per specifications will be accepted. No cost, full or part, will be borne by PLRS in case of rejection leading to repetition of any sheet(s) (on 1:1,000 scale or models Full or part thereof).
- (iv) 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.

Signature of the tenderer(s)

Name of the Firm with Seal

- Notes: 1. Rates quoted should be in the above format, failing which the bid may be rejected.
 - 2. Tenderers must quote the cost in Indian Rupees. The conversion rates of US \$ to INR advertised in Economic Times on the date of opening of price bids will be considered for comparison of cost bids.
 - 3. Rate should be quoted for supply of all the deliverables confirming the required specifications.
 - 4. Rate should be inclusive of all Sales Tax, Central Sales Tax, Service Tax etc.
 - 5. 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 office to whom all reference shall be made regarding this tender enquiry including Fax/Telex/Telephone/E-mail.			
<u>Witne</u>	ss:			
Signat	ure			
Name			Signature of the Tenderer(s)	
Addre	ss		Name	_
			Designation	
			Company	
	_			
Date:	С	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 PLRS 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 PLRS for each map sheet.

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

Signature of the witness

Signature of the Tenderer

Office Seal

DATA SECURITY

I/We hereby certify that the PLRS 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 field survey, feature collection/ Data processing. I/We also certify that the aerial photographs (hard copy), scanned aerial photographs and/or 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 PLRS building premises/premises mutually agreed to 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.

Name of the firm with Seal

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
- 8. Proposed timeline (Production schedule)
- 9. Technical Alternatives
- 10. Cost Bid (Appendix B)
- 11. Signature Page
- 12. Registration of the Company
- 13. Authourisation 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)