

MECHANICAL IRRIGATION CONSTRUCTION DIVISION

**GOGJIBAGH
SRINAGAR**

Standard Bidding Document

For

***Procurement of DGPS for Irrigation & Flood Control
Department Kashmir***

FRESH

**NOTICE INVITING TENDER
e-NIT No. MICD/19 OF 2015-16 Dated: 21-01-2016**

Phone No. : 0194 – 2310876, Email : exenmicdsrinagar@ifckashmir.com

Government of Jammu & Kashmir
Office Of The Executive Engineer,
Mechanical Irrigation Construction Division, Gogji Bagh, Srinagar
Phone No. : 0194 – 2310876, Email: exenmicdsrinagar@ifckashmir.com

FRESH NOTICE INVITING TENDER
e-NIT No. MICD/ OF 2015-16 Dated: -2016

For and on behalf of Governor of J&K State, Executive Engineer, Mechanical Irrigation Construction Division, Srinagar, invites tenders by e-tendering mode from established and accredited original equipment manufacturer (OEM) for Procurement of DGPS for Irrigation & Flood Control Department, Kashmir. The authorized dealers / agencies of such OEM can also participate in the tender. The bidding process shall be completed online in two covers viz Cover 1st –Tender fee and Earnest Money details, fulfillment of prequalification criteria, technical specifications and acceptance to terms and conditions of the tender. Cover 2nd - Financial Bid in the prescribed BOQ.

S. No.	Particulars of the work	Name of Division	Cost of document/ tender fee (In Rs.)	Earnest money (In Rs.)	Validity of Rates
1	2	3	4	5	6
1.	Procurement of Integrated Bluetooth enabled DGPS Base Receiver, Rover with controller for both.	Mechanical Irrigation Construction Division, Srinagar	1000.00	50,000/-	180days

Position of funds: Demanded Under Permanent Restoration Works.

Key / Critical Dates:

Date of Hosting In Website/ Publish date	21-01-2016 (1230Hrs)	Document download/sale end date	10-02-2016 (1000 Hrs).
Document download/sale start date	22-01-2016 (1600Hrs)	Clarification end date	09-02-2016 (1400Hrs)
Clarification start date	22-01-2016 (1600Hrs)	Bid submission end date	11-02-2016 (1000Hrs)
Bid submission start date	23-01-2016 (1100 Hrs)	Bid opening date	15-02-2016 (1400 Hrs)
Deadline for receiving the hard copy (as specified in NIT) 12-02-2016(1600 Hrs)			

1. Bid documents can be assessed at and downloaded from the websites www.ifckashmir.com / <http://jktenders.gov.in>
2. The Bids shall be deposited on the website <http://jktenders.gov.in>
3. The complete bidding process will be online <http://jktenders.gov.in>.
4. The hard copies Technical bids received shall be opened in the office of the Chief Engineer, Kashmir I&FC Dept, Srinagar on the date given above; the bids shall be evaluated online thereafter.
5. The Financial bids of the bidders shall be opened online in the office of the Chief Engineer, Kashmir I&FC Dept, Srinagar.
6. Bids must be accompanied by bid security and cost of Tender Document as specified in column 4 & 5 of the table payable at Srinagar.
 - a. **Bid Security** to be pledged in favour of Chief Engineer, Kashmir I & F.C. department, Srinagar. **Bid Security** will have to be in form of CDR/FDR of any scheduled Bank and shall have to be valid for one year or more after last date of receipt of Bid.
 - b. The **cost of downloaded tender documents** should be in form of DD in favour of Executive Engineer MICD Srinagar payable at Srinagar.

7. The hard copies of cost of tender document in shape of DD, Earnest money in shape of CDR / FDR and other relevant documents must be delivered to the office of the Chief Engineer, Kashmir I&FC Deptt., Srinagar up to date and time specified above. Contact Person: **Mr. Tariq : Mobile No: 09419024685**
8. The tenderer should possess minimum 05 years experience in the relevant field of marketing, supply and installation of DGPS & ETS in bulk quantity, should have supplied Government of India Offices / State Government Offices / Public Sector Undertakings in the past 05 years either directly or through their authorized agents in bulk quantity.
9. The bid shall remain open for acceptance for a period of **180 days** from the date of opening of bids. If any bidder/ tenderer withdraws his bid/tender before the said period or makes any modifications in the terms and conditions of the bid, the said earnest money shall stand forfeited.
10. Other details can be seen in the bidding documents from the website <http://jktenders.gov.in>.
11. Queries by email if any should be made at exenmicdsrinagar@ifckashmir.com

No: MICD/ 3010-15

Date: 20-01-2016

**Sd-
Executive Engineer
Mech. Irri. Construction Division
Srinagar**

Copy to the:-

1. Chief Engineer Kmr. I& FC Deptt. Srinagar for information please.
2. Superintending Engineer Mech. Circle I& FC Deptt. Srinagar for information please.
3. Chief Accounts Officer, Direction Office, Srinagar for information Please.
4. Joint Director Information Department Srinagar for publication of this NIT in leading Daily Newspapers of J&K and National Dailies.
5. Admin. Departmental website (tenders@ifckashmir.com) with a request for hosting of the NIT on departments website: www.ifckashmir.com
6. Notice Board /Record Keeper/ Mater File/ Stock File.

Instruction to Bidders Regarding e-tendering Process

- a. The interested bidder can download the NIT/bidding document from the website <http://jktenders.gov.in>
- b. To participate in bidding process, bidders have to get (DSC) “Digital Signature Certificate” as per Information Technology Act-2000, to participate in online bidding. This certificate will be required for digitally signing the bid. Bidders can get above mentioned digital certificate from any approved vendor. The Bidders, who already possess valid (DSC) Digital Signature Certificates, need not to procure new Digital Signature Certificate.
- c. The bidders have to submit their bids online in electronic format with Digital Signature. The bids cannot be uploaded without Digital Signature. No Proposal will be accepted in physical form.
- d. Bids will be opened online as per time schedule.
- e. Before submission of online bids, bidders must ensure that scanned copies of all the necessary documents have been attached with bid.
- f. The department will not be responsible for delay in online submission of bids whatsoever reasons may be.
- g. All the required information for bid must be filled and submitted online
- h. Bidders should get ready with the scanned copies of cost of documents & EMD as specified in the tender documents The original instruments in respect of cost of documents, EMD and relevant documents be submitted to the Tender Inviting Authority by Speed/Registered post/courier as per time schedule specified.
- i. The details of cost of documents, EMD specified in the tender documents should be the same, as submitted online (scanned copies) otherwise bid will not be accepted.
- j. Bidders can contact the undersigned for any guidance for getting DSC or any other relevant details in respect of e-tendering process.
- k. Bidders are advised to use “**My Documents**” area in their user on jktenders.gov.in, e-tendering portal to store important documents like Experience certificate, Balance sheet, VAT Certificate, Sales Tax Clearance Certificate and other related documents etc., and attach these certificates as Non Statutory documents while submitting their bids.
- l. Bidders are advised not to make any change in BOQ (Bill of Quantities) contents or its name. In no case they should attempt to create similar BOQ manually. The BOQ downloaded should be used for filling the net item rate inclusive of all taxes and it should be saved with the same as it contains.
- m. **Bidders are advised to scan their documents at 100 DPI (Dots per Inch) resolutions with Black and White, JPEG Scan properly, convert scanned images to PDF.**
- n. The guidelines for submission of bid online can be downloaded from the website <http://jktenders.gov.in>

INSTRUCTIONS FOR BIDDERS

Tenders to be submitted under two cover system

A) COVER 1st (Technical Cover)

1. Self attested Scanned copies of below mentioned documents shall be uploaded and hard copies of the same be submitted through courier/ registered/speed post/by hand, in the office Chief Engineer, Kashmir I&FC Dept., Srinagar, well before the scheduled date and time as mentioned in the clause No. 8 of page 2 of this tender document. Hard copies of the bids received after the expiry of scheduled submission date and time will not be entertained. Contact Person: **Mr. Tariq (Mobile No. 9419024685)**.
 - i. Earnest Money Deposit in the shape of CDR/FDR.
 - ii. Demand Draft towards the cost of tender document.
 - iii. Documentary evidence that the tenderer is the manufacturer or the authorized dealer / agency of the item in absence of which the tender shall not be entertained.
 - iv. Acceptance to Scope of work, technical specifications, general terms and conditions of NIT (The scanned copy of completed tender as per requirement of cover 1st accompanied with scanned copies of technical specification as well as terms and conditions of the tender, duly accepted & signed with seal on each page, must be sent by registered post or delivered personally in the office of the Chief Engineer, Kashmir I&FC Deptt., Srinagar against receipt)
 - v. Latest "Sales Tax/VAT Clearance Certificate" from the Sales Tax Authority of the State of J & K or any other State as applicable.
 - vi. Service facility with details inside the State of J&K and other States to provide technical / operational guidance and other after sales services.
 - vii. An undertaking for providing service / maintenance during the warranty period effective from the date of delivery and training / commissioning of the equipment as well as for taking annual maintenance contract (AMC) after the warranty period for three years.
 - viii. Documents in support of supplies of DGPS made during last five years to different Government and Public Sector undertaking. Copies of supply orders for similar equipment be enclosed accordingly.
 - ix. Complete Technical information and specifications of the manufacturer for the item.
 - x. Copy of TIN Registration.

Without aforementioned documents tender shall be out rightly rejected and cover 2nd shall not be opened for the firm who fail to upload or give hard copy of the same.

B) COVER 2nd: (Financial Cover) It shall contain the following:

Rates quoted by the bidders in the **BOQ (Bill of Quantities)** please note that financial bid shall be accepted only as per prescribed format, the tenderers must go through all the terms and conditions thoroughly and follow the instructions strictly.

"The quoted rate shall be for destination mentioned in the tender document inclusive of all taxes, duties, levies, charges, transportation cost and transit insurance cost. Commissioning / demonstration of equipment and training to the nominated staff at consignee's works. Rates should be firm and final and no escalation of cost shall be permissible in any case. Rates with conditionality or provision of escalation will be rejected".

Certificate of Acceptance of Terms & Conditions

**The Chief Engineer,
Kashmir, I & F.C. Department,
Srinagar.**

Subject :- Acceptance of Terms and Conditions and Technical Details.

Reference :- e-NIT NO:MICD/19 of 2015-16 Dated:21-01-2016

Sir,

We have downloaded and read all the terms and conditions and technical details contained in the SBD of the above referred e-NIT. It is hereby certified that we accept all the terms and conditions of tender and agree to supply the goods/execute the works in accordance with the details mentioned in the technical specifications.

Yours faithfully

Date: -

Name & Signature
with seal of the firm

Note: - This document should be downloaded, printed by the bidder and duly signed with seal. The signed document should be scanned and uploaded along with cover-I (prequalification/technical bid). However, the hard copy of complete terms and conditions duly accepted should be submitted along with other documents before the date & time specified for the same.

APPENDIX 'A'
TERMS AND CONDITIONS OF NOTICE INVITING TENDER
e-NIT No. MICD/ 19 OF 2015-16 Dated:21-01-2016 issued vide No: MICD/3010-15
Dated: 20-01-2016

- 1. Consignee/Paying Authority:**
Executive Engineer, Mechanical Irrigation Construction Division, Gogji Bagh, Srinagar.
The tenders are invited on Goods delivered at the specified sites i.e., at Central Stores, Gogji Bagh, MICD Srinagar inclusive of all Taxes, Duties, Carrying, Forwarding, Transit Insurance, Handling, Loading, Unloading and labour charges for accomplishing complete job as per the scope and specifications laid in the tender document.
- 2.** The offer should be valid for a period of 180 days from the date of opening of price bid. Such of the tenders which will not be valid for 180 days from the date of opening shall be rejected, even if the rates offered are lowest.
- 3.** The tenderer (s) shall have to quote separately for each item strictly in conformity with the terms and conditions of the tender notice.
- 4.** Conditional tenders shall be rejected even if the rates offered are found to be lowest. Tenders with the conditions such as 'Subject to Market Fluctuations' will also be rejected.
- 5.** The tender documents are non-transferable.
- 6. Inter-dependent Tender:**
Tender(s) which are dependent upon the quotations of other shall not be entertained.
- 7. Expenses for Tendering:**
The tenderer(s) shall not be entitled to any claim towards expenses incurred on incidental at the time of submission of the tenders or subsequent evaluation/ clarifications thereof.
- 8. Earnest Money:**
The tender(s) shall be accompanied with earnest money amounting Rs. 50,000/- in the form of CDR/FDR pledged to Chief Engineer, Kashmir Irrigation & Flood Control Department, Srinagar.

Tenderers should carefully note that:-

- i. Tenders not accompanied with requisite amount of earnest money shall not be entertained even if the rates offered are found to be lowest.
- ii. No exemption or concession towards furnishing of earnest money will be given to the tenderers registered with DGS&D/NSIC Small Scale Units except the Small Scale Units registered with Director, Industries and Commerce Department J&K in which case guidelines framed by Industries Department shall apply.
- iii. The tenderers should bear in mind that the tender should be accompanied with fresh CDR/FDR towards the earnest money, reference or claim of the firm for consideration of CDRs/FDRs already lying in the Department, towards earnest money with this tender, will be out rightly rejected.

9. Earnest money shall be refundable to unsuccessful tender(s) only after finalization of the tender and shall be retained in case of successful tenderer(s) which shall be treated as security deposit to be refunded after the successful completion of the supply/works or warranty term as the case may be.
The earnest money of the tenderer(s) who back outs or withdraws his tender or fails to abide by its offer after the acceptance is conveyed or posted to the addressee, shall be forfeited to the Government of J&K state besides other remedies available to it under any law being enforce in the State to recover the extra cost, if involved in getting the supply executed through some other agency, at defaulters risk and cost.
10. **Opening of Tender:**
Tenders shall be opened by the Chief Engineer, Kashmir I&FC Deptt., Srinagar in his office chambers on the due date or on any other subsequent date convenient to the Tender Opening Committee in presence of tenderer(s) who may wish to remain present at the time of opening of tenders.
11. **Demonstration:-**
The technically qualifying tenderer having quoted the lowest rates will arrange demonstration of DGPS in question in the office of the Chief Engineer, Kmr. I & F.C. Department, Srinagar free of cost either directly or through their authorized agents or distributors as the case may be to verify whether the DGPS meets the technical requirement as indicated in the technical specifications in the tender document. The said tenderer will be required to demonstrate the DGPS on the prescribed date to the technical evaluation committee and formal allotment order shall be issued accordingly.
12. The Chief Engineer, Kashmir I&FC Deptt., Srinagar shall have the discretion to cancel the supply order at any time during its currency in case of default on the part of any supplier and make such arrangements as may be warranted by the situation at the risk and cost of the supplier.
13. The Chief Engineer, Kashmir I&FC Deptt., Srinagar reserves the rights to accept or reject any or all tender(s) in part or full without assigning any reason thereof.
14. The tenderer(s) should bear in mind that if it comes to the notice of the Chief Engineer, Kashmir I&FC Deptt., Srinagar that they have within the specified period offered lower rate to any other party within the territorial limits of J&K State fall clause would be applied and processing's will be started for effecting recovery of the difference for entire supply besides action initiated to black list the firm within the jurisdiction of the J&K State.
15. **Validity of Rates:-**
The rates approved shall remain valid for contract term of one year from the date of issue of job order
16. **Prices:**
The tenderer(s) are required to quote net landed rates of the material/services to be rendered at central stores, MICD, Gogji Bagh, Srinagar for the complete job inclusive of all taxes, charges and levies etc.
The tenderers should not quote/mention any item as : “as applicable at the time of supply/execution of job” and are as such advised to quote exact rate inclusive of all type of taxes, duties and charges as applicable. It is as such in the interest of the tenderers to consult for the same from the concerned Departments of Govt. of India as well as J&K Sales Tax Department before quoting / tendering the rates.

17. In the event of any increase ordered by Govt. of India/J&K Govt. in any of the taxes/statutory levies during currency of the rate contract, such increase in rates shall have to be borne by the successful tenderer/supplier. However in case of any decrease in such taxes/levies if any ordered during the currency of the rate contract, such benefits shall have to be passed on to the Department.
18. **Testing/Inspection:**
The product / material at site shall be inspected by Assistant Executive Engineer, Stores Transport Sub Division MICD, Sgr. or any other designated inspection authority nominated by The Chief Engineer, Kashmir I&FC Dept., Srinagar after receipt of the consignment. If any item fails to satisfy requirement of technical specifications mentioned in the tender documents, the defective supply due to latent manufacturing defects / transit damages the item shall not be accepted and the tenderer at its own cost shall replace it at the point of delivery. The firm shall as such keep the department informed about arrival of material at site.
19. **Insurance:**
It is advised that the goods prior to dispatch be insured through a Nationalized Insurance Company upto its final destination, against all transit risks. The firm shall therefore have to take appropriate insurance policy in advance for covering the dispatch the transit of the good, charges for which shall borne by the successful tenders and shall be included in his quoted rates. The department shall pay no extra charges on these accounts.
20. **Mode of Dispatch:**
The supplier shall dispatch the material through a reputed transport agency direct from dispatching station upto destination. The material shall be suitably transported for which the supplier shall take due care keeping in view the limitation for maximum size and weight.
21. **Completion period:**
Items are to be delivered within **30 days** of issuance of purchase order / Letter of Intent.
22. The supplier should provide standard service manual and operational manual with cable connectivity diagram with the instrument.
23. **Terms of Payment:**
Service tax if any and any other taxes/ charges shall be deducted at source as applicable. In no case advance payment shall be made.
80% payment along with complete taxes shall be released after receiving the goods in serviceable condition as per conditions stipulated in the tender document along with required documents and necessary verification thereof by the concerned AEE.
Balance 20% shall be kept in deposit and the same shall be released after necessary verification vis-à-vis satisfactory material check certificate, 90 days of successful running of the instrument from the completion of the training from the concerned divisional office under who's jurisdiction the equipment is to be used.
24. **Guarantee:**
The firm shall be bound for proving guarantee that during final inspection if the bags are found to be defective, the firm shall have to replace the same within a period of two days of receipt of intimation. In case of any failure on the part of the firm to replace the defective items, the Department may purchase the items from any other agency and the cost thereof shall be recovered from the firm and shall be recommended for black listing.
The EMD of the successful firm shall be retained as guarantee/ security deposit against the following:-
a) Security for the fulfillment of the contract.

- b) Satisfactory performance of the material supplied.
- c) Warranty against material and manufacturing defect.

25. Penalty:

In the event of firm's failing, declining, neglecting or delaying the supplies/works or in the event of any damage occurring or being caused by the firm or in the event of any default or failure by the firm in complying with any of the terms and conditions of the contract, the Chief Engineer Kashmir Irrigation & Flood control Department Srinagar shall with or without prejudice to any other remedies available to it under any law for the time being enforce in the State:

- a) Terminate the contract after 30 days notice
and/or
- b) Recover the amount of loss caused by damage, failure or default, as may be determined by the department.
and/or
- c) Recover the extra cost, if any, involved in allotting contract to other party.
and/or
- d) Impose of penalty in the form of liquidated damages on account of delay beyond the schedule delivery period subject to one fourth value of contract per fortnight and not exceeding 10% value of the contract.
and/or
- d) Impose a penalty not exceeding 10% (ten) on the value of contract as Chief Engineer Kashmir Irrigation & Flood control Department Srinagar may deem fit and/or forfeit the earnest money / security deposit.

The Chief Engineer, Kmr. I & F.C. Department, Srinagar will reject a proposal for award if it determines that the bidder recommended for award has directly or through an agent, engaged in corrupt, fraudulent collusive, coercive or obstructive practices in competing for the contract in question during the bidding process or in executing the contract.

26. Force Majeure:

Any failure or commission to carry out the provision of the contract shall not give rise to any claim by the department or approved supplier one against the other if such failure of commission arises from the 'ACT OF GOD' which shall include all natural calamities such as fires, floods, earthquake, hurricane, strikes, riots, embargoes or from any political or other reasons beyond the control of the parties including war, or a state of insurgency.

27. Arbitration:

If at any time, any question, dispute or difference whatsoever shall arise between the parties upon or in relation to or in connection with the contract, either of the parties may give the other notice in writing of the existence of such a question, dispute or difference and the same shall be referred for award to two Arbitrators, one to be nominated by the Department and the other by the approved supplier. In case of such arbitrators not agreeing then award of an Umpire to be appointed by the Arbitrators in writing before proceedings with the reference and the decision of the Arbitrators or in the event of their not agreeing of the Umpire appointed by them shall be final and binding on the parties, such a notice of the existence of any question or dispute or difference in connection with the contract shall be served by either

party within 45 days (forty five days) of difference failing which all rights and claims under this contract shall be deemed to have been forfeited and absolutely barred upon every or any such reference the cost of incidentals of the reference and award respectively shall be at the discretion of the arbitrator and in the event of their not agreeing of the Umpire appointed by them who may determine the amount thereof or direct the same to be fixed as between party and party shall direct by whom to whom and in what manner the same shall be formed and paid. The revision of the J&K Arbitration Act Samvat 2002 and of the rules there under the statutory modification whereof shall be deemed to apply to the arbitration, disputes, if any regarding reference to Courts shall be subject to the jurisdiction of the J&K Courts only.

28. Specifications of Material/job:

Tenderers must quote for exact specifications and scope as given in Appendix “B” and there shall be no deviation from the approved parameters.

While having submitted the tender by e-tendering method, it is understood that the tenderer is well versed with the conditions under which the equipment is to be used.

29. Clarifications:

In respect of any clarification of the conditions/technical provisions set forth in the tender documents the tenderer(s) shall address this office in person/ writing/email as per the time schedule envisaged in the instructions to bidders.

- a) The prospective bidder /s or their designated representative, who have downloaded the bid document is invited to attend a pre-bid meeting which will take place as per date and venue given in e-tender notice.
- b) The purpose of meeting will be to clarify issues and to answer queries on any matter that may be raised by the due date.
- c) The bidder is requested, as far as possible, to submit queries (if any) by courier or by fax/e-mail to reach the Department well in time before clarification end date.
- d) Any modifications of the bidding documents that may become necessary as a result of the clarifications shall be made by department exclusively through the issue of an Amendment /Corrigendum / Addendum / Clarifications / etc. which shall be hosted on the concerned website.
- e) Any failure by Bidder to comply with the aforesaid requirement shall not excuse the bidder, after subsequent award of contract, from performing the work in accordance with the scope of contract/agreement.
- f) Bidders are requested to resolve all their clarifications/queries to the Bidding Document before due date of submission of bid. Thereafter bidders are requested to submit their bid in total compliance to Bidding Document without any deviation / stipulation / clarification /assumption.

30. Indemnity Bond:

The firm shall furnish an indemnity bond on non-judicial stamped paper for the total value of the order valid for 18 calendar months from the date of receipt of last consignment towards the following:-

- a) Satisfactory completion of the order.
- b) Satisfactory working/performance of the supply and
- c) To undertake to refund on demand whatsoever amount that may become refundable to the Government in respect of the said order on account of payment made in advance for supply of the stores, not being in accordance with the specifications, terms and conditions of the order.

31. Agreement:

As soon as supply order is communicated to the firm, the contract shall be complete and binding upon them, the firm shall also be required to execute an agreement with the department within seven days from the date of issue of supply order which has to be returned to this office duly filled up, signed and sealed (Pagewise) by the prop. or any other authorized officer of the firm witnessed by two persons and attested by the Notary. Three copies of the

supply order duly signed by the Prop. Or any other authorized officer of the firm in token of acceptance of supply order should also accompany the agreement. Failure to execute such an agreement in time shall not however, prevent this contract from being enforced against the firm and the date of delivery of the material/completion of works shall be reckoned from the date of issue of the Allotment order in favour of successful firm.

The contract shall be deemed to have been entered into at Srinagar within ordinary civil jurisdiction of J&K Court only.

All other terms and conditions as laid down in form No.25 of P.W.D. shall remain in force and binding on successful tenderer.

32. **Warranty:**

All items/ products supplied shall be warranted for a period of minimum 03 years from the date of delivery or as per the prescribed warranty period of Original Equipment Manufacturer whichever is longer.

**Sd/-
Executive Engineer
Mechanical Irrigation Construction Division
Srinagar**

NOTICE INVITING TENDER
e-NIT No. MICD/ 19 OF 2015-16 Dated:21-01-2015 issued vide No:3010-15Dated 20-01-2015

APPENDIX “A”

SCOPE OF WORK AND TECHNICAL SPECIFICATIONS FOR DGPS

TECHNICAL SPECIFICATIONS FOR DGPS
For Both BASE STATION & ROVER

CHARACTERSTICS & SPECIFICATIONS:

1. Measurements Specification

Should be Capable of tracking **GPS (L1, L1C, L2, L2C, L5) GLONASS (L1, L2), Galileo (E1, E5a, E5b), Beidou (Compass) (B1, B2), SBAS**, with **120 or more channels** & with Static, Real-time Kinematic, Stop and Go as measuring modes.

2. Accuracy

<i>High Precision Static</i>	Horizontal as 3 mm ± 0.1 ppm;	Vertical as 3.5 mm ± 0.4 ppm
<i>Real Time Kinematic</i>	Horizontal as 8 mm ± 1 ppm ;	Vertical as 15 mm ± 1 ppm

3. Position update rate

Position Update Rate should be upto **20 Hz**.

4. GNSS Antenna

Multi frequency, High gain integrated antenna with Sub-mm Phase Center repeatability.

5. Controller Specification

Controller should be provided with both Base and Rover. Controller should have latest Windows Operating System with coloured display & back light illumination, touch screen with full Alphanumeric Hard & Touch QWERTY keyboard along with 2 MP or more camera. Controller should be able to configure the base and rover.

6. General Specification

- a. Should have Integrated Bluetooth to communicate between GPS and Controller with RS 232 ports, 1 no for Power/Data and other port dedicated to data Communication.
- b. GNSS receiver should be operable with internal batteries long enough to last at least 6 hours in RTK mode.
- c. Should be protected against temporary immersion in water.
- d. Should withstand pole drop onto concrete up to a minimum of 1m.
- e. Initialization Time should be typically less than 8 seconds.
- f. External chargers one for each battery should be supplied.
- g. Memory of 10 MB though internal memory or through industrial grade compact flash card in receiver or controller.
- h. Initialization Reliability should be better than 99.99%.

7. Controller On Board Software

- a. The Software should allow configurable survey style for RTK, PPK, Static / Fast Static, RTK & PPK etc.
- b. The software should be capable of multitasking so that multiple operations can be opened at a time e.g Stakeout, int Manager, COGO in which should be able to key in Lines, Sub-divide lines and creating parallel lines for staking out purpose etc.
- c. Should be able to e-mail data collected in the field incase facility is available. Should be able to import and export DXF files for effective GIS support.
- d. Should be able to accept background maps in CAD format & Google image.
- e. Should have datum and projection support. Should support Grid coordinates.
- f. Should support Feature Coding with attributes for GIS data collection. Control coding should be possible for automatic plot creation.

7. Radio Modem

Should have preferably in-built Radio Modem with free License.

8. Office Post Processing Software

- a. Software should be Windows based & be able to import Raw data from the GPS/GLONASS receiver as well as RINEX data. Also should be able to import raw data as well as precise ephemeris data via internet IGS data from met.
- b. The software should be a capable of Surface Modelling, 3D visualization and quick contouring, COGO & should support feature coding & Google earth.
- c. Should be capable of generating reports directly for the surveyed data & should be able to export the data in RINEX format as well in CAD format.
- d. Should be capable of transferring the data from one datum to another for given set of common points with or without the knowledge of datum.
- e. Should be able to perform Network Adjustment using Least Square adjustment principle.

9. Internal & External Battery Connectivity

- a. External 12V battery with necessary original battery cables with crocodile clips and charging cable/ instrument be provided **or** external battery which can be attached on tripod, for which required facility should be available.
- b. Internal battery should be of 2.6 Ah & 7.2 V

Warranty = Minimum for 03 years.

Training = To be imparted at least two weeks by the vender to four persons at Consignee's place in J&K free of cost in a one month from the date of purchase.

Makes = 1. Leica 2. Trimble 3. Topcon

Important:

Tenderers are advised to read carefully the complete tender document and are instructed to follow instruction for bidders given at Page No. 5 of the tender document in letter and spirit before quoting their rates. Any clarifications regarding detail of work/specifications as envisaged above should be sought before submission of tenders by e-tendering mode as provided in clause 29 of the terms and conditions of the e- NIT.

**Sd/-
Executive Engineer
Mechanical Irrigation Construction Division
Srinagar**