

NOTICE INVITING TENDER
For
ADVERTISED TENDER ENQUIRY FOR
SUPPLY, INSTALLATION, COMMISSIONING AND MAINTENANCE OF CORS NETWORK IN THE STATE OF
KARNATAKA

ATE No. S-3186/CORS(Karnataka) dated 03/10/2018

Surveyor General of India, Survey of India, Dehradun (UK) 248001, invites e-bids from eligible bidders under two envelop single bid system for **Supply, Installation, Commissioning and Maintenance of Continuously Operating Reference System (CORS) Network in the state of Karnataka.**

SI no.	Name	Bid Security	Bid validity	Last date of Bid submission	Date of Bid opening- Technical part
1	Supply, Installation, Commissioning and Maintenance of CORS Network in the state of Karnataka	Rs 20,00,000/-	120 days	20/11/2018 1200 hrs	21/11/2018 1500 hrs at O/o Director, G&RB, Survey of India, Dehradun

Bid document can be downloaded from CPP portal (<https://eprocure.gov.in/eprocure/app>). Bids will only be accepted on above said CPP portal in electronic form. Pre bid meeting for said procurement is scheduled on 23/10/2018 at 11.00 AM, in office of Director, G&RB, Survey of India, Dehradun. For further details, bidders are requested to visit CPP portal (<https://eprocure.gov.in/eprocure/app>).

Director
G&RB, Survey of India
17 EC Road, Dehradun Pin - 248 001
0135 - 2657112(T), 2654528(F)

**DEPARTMENT OF SCIENCE AND TECHNOLOGY
SURVEY OF INDIA**

BID DOCUMENT FOR

*Supply, Installation, Commissioning, Maintenance, Training and
Operation for Establishment of Continuously Operating Reference
System Network in the State of Karnataka*

Purchaser:

Surveyor General of India, Survey of India,
Post Box: 37, Hathibarkala Estate, DehraDun-248001,
UTTARAKHAND

ATE No: S-3186/CORS(Karnataka) Dated 03, Oct, 2018

Important Dates

Call for Bid	05.10.2018 (12.00hrs.)
Pre-Bid Meeting	23.10.2018 (11.00hrs.)
Last date of receipt of Bid	20.11.2018 (12.00hrs.)
Technical Bid Opening	21.11.2018 (15.00hrs.)

GOVERNMENT OF INDIA
MINISTRY OF SCIENCE & TECHNOLOGY
SURVEY OF INDIA

BID NO: S-3186/CORS(Karnataka)

ADVERTISED TENDER ENQUIRY
for
SUPPLY OF GOODS

NAME OF PROCUREMENT : **Supply, Installation, Commissioning, Maintenance, Training and Operation for Establishment of Continuously Operating Reference System Network in the State of Karnataka**

PERIOD OF SALE OF BIDDING DOCUMENT : FROM 05.10.2018 (12:00 Hrs.)
TO 20.11.2018 (12:00 Hrs.)

LAST DATE AND TIME FOR RECEIPT OF BIDS : DATE 20.11.2018 TIME 11:00 HOURS

* TIME AND DATE OF OPENING BIDS – Technical Part : DATE 21.11.2018 TIME 15:00 HOURS OF

PLACE OF OPENING OF BIDS : Office of Director, G&RB, 17 E.C. Road
: Dehradun, 248911
: Fax 0135-2654528, Tel 0135-2657112

OFFICER INVITING BIDS : Surveyor General of India, Survey of India,
Dehradun

***Time and Date of Opening of Bids – Financial Part shall be intimated after technical evaluation of bid.**

Table of Contents

Part-I Bidding Procedure	4
Section I. Instructions to Bidders	5
Section II. Bidding Data Sheet.....	31
Section III. Bidding Forms.....	40
Part II – Supply Requirement.....	64
Section IV. Eligible Countries	64
Section V - Schedule of Requirements	65
Part III – Conditions of Contract and Contract Forms	87
Section VI. General Conditions of Contract.....	88
Section VIII. Special Conditions of Contract	112
Section VIII Appendices	113
Section IX Contract Forms.....	132

Part-I Bidding Procedure

Section I. Instructions to Bidders

Table of Contents

A. General.....	7
1. Scope of Bid.....	7
2. Source of Funds	7
3. Corrupt or Fraudulent Practices	7
4. Eligible Bidders	9
5. Qualification of the Bidder	10
6. One Bid per Bidder	13
7. Cost of Bidding	13
8. Site Visit.....	13
B. Bidding Documents	13
9. Content of Bidding Documents	13
10. Clarification of Bidding Documents	14
11. Amendment of Bidding Documents	14
C. Preparation of Bids	14
12. Language of Bid.....	14
13. Documents Comprising the Bid.....	15
14. Bid Prices	16
15. Currencies of Bid and Payment	18
16. Bid Validity.....	18
17. Bid Security	19
18. Alternative Proposals by Bidders.....	20
19. Format and Signing of Bid.....	21
D. Submission of Bids	21
20. Sealing and Marking of Bids	21
21. Deadline for Submission of Bids	22
22. Late Bids	23
23. Modification and Withdrawal of Bids	23
E. Bid Opening and Evaluation	23
24. Bid Opening.....	23
25. Process to Be Confidential.....	24
26. Clarification of Bids during Technical	24
27. Examination of Bids and Determination of Responsiveness	25
28. Technical Evaluation of Bids.....	26
29. Opening of Financial Bid.....	26
30. Correction of Errors	26
31. Currency for Bid Evaluation.....	26
32. Evaluation and Comparison of Financial Bids	27
33. Preference for Domestic Bidders	28
F. Award of Contract.....	28

34.	Award Criteria	28
35.	Purchaser's Right to Accept any Bid and to Reject any or all Bids	28
36.	Notification of Award and Signing of Agreement.....	28
37.	Performance Security	29
38.	Advance Payment and Security	29
39.	Adjudicator	30

Instructions to Bidders

A. General

1. **Scope of Bid**
 - 1.1 The Purchaser, as defined in the **Bidding Data Sheet (BDS)**, invites bids for the supply of Goods and Related Services incidental thereto, as described in the Section V Schedule of Requirement to the Contract. The name and identification number of the Contract is **provided in the BDS**.
 - 1.2 The successful Bidder will be expected to complete the Supply of Goods and Related Services incidental thereto, by the Intended Completion Date **provided in the BDS**.
2. **Source of Funds**
 - 2.1 The Purchaser, as **defined in the BDS**, intends to apply part of the funds received from Project Authority, **as defined in the BDS**, towards the cost of the Project to cover eligible payments under the Contract for the Services to be performed as per MoU signed between Survey of India (SoI) and Project Authority.
3. **Corrupt or Fraudulent Practices**
 - 3.1 It is the Government of India's (GoI) policy to require that the highest standard of ethics are observed during the procurement and execution of contracts. In pursuance of this policy, the officials of Procuring Entities and the bidders / suppliers/ contractors/ sub-contractors/consultants/ service-providers involved in procurement process must abide by the Code of Integrity for Public Procurement (CIPP).
 - 3.2 Code of Integrity for Public Procurement: Procuring authorities as well as bidders, suppliers, contractors and consultants/Suppliers should observe the highest standard of ethics and should not indulge in the following prohibited practices, either directly or indirectly, at any stage during the procurement process or during execution of resultant contracts:
 - i) "Corrupt practice": making offers, solicitation or acceptance of bribe, rewards or gifts or any material benefit, in exchange for an unfair advantage in the procurement process or to otherwise influence the procurement process or contract execution;
 - ii) "Fraudulent practice": any omission or misrepresentation that may mislead or attempt to mislead so that financial or other benefits may be obtained or an obligation avoided. This includes making false declaration or providing false information for participation in a bid process or to secure a contract or in execution of the contract;
 - iii) "Anti-competitive practice": any collusion, bid rigging or anti-competitive arrangement, or any other practice coming under the

purview of The Competition Act,2002, between two or more bidders, with or without the knowledge of the Procuring Entity, that may impair the transparency, fairness and the progress of the procurement process or to establish bid prices at artificial, non-competitive levels;

iv) “Coercive practice”: harming or threatening to harm, persons or their property to influence their participation in the procurement process or affect the execution of a contract;

v) “Conflict of interest”: participation by a bidding firm or any of its affiliates that are either involved in the consultancy contract to which this procurement is linked; or if they are part of more than one bid in the procurement; or if the bidding firm or their personnel have relationships or financial or business transactions with any official of Procuring Entity who are directly or indirectly related to bid or execution process of contract; or improper use of information obtained by the (prospective) bidder from the Procuring Entity with an intent to gain unfair advantage in the procurement process or for personal gain; in cases of agents quoting, on behalf of their principal manufacturers, one agent cannot represent two manufacturers or quote on their behalf in a particular tender enquiry. One manufacturer can also authorise only one agent/dealer. There can be only one bid from the following:

1. The principal manufacturer directly or through one Indian agent on his behalf; and
2. Indian/foreign agent on behalf of only one principal.

vi) “Obstructive practice”: materially impede the Procuring Entity’s investigation into allegations of one or more of the above mentioned prohibited practices either by deliberately destroying, falsifying, altering; or by concealing of evidence material to the investigation; or by making false statements to investigators and/or by threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or by impeding the Procuring Entity’s rights of audit or access to information;

3.3 The bidders shall submit, as part of Bidding Document, a signed declaration to the effect that they shall abide by the Code of Integrity for Public Procurement in Letter of Bid-Technical Part at Section III(Bidding Forms).

3.4 Without prejudice to and in addition to the rights of the Purchaser to other penal provisions as per the bid documents or contract, if the Purchaser comes to a conclusion that a (prospective) bidder(including members of Joint Venture/ Sub-

Contractor)/contractor/supplier/consultant/service-provider, directly or through an agent, has violated this Code of Integrity in competing for the contract or in executing a contract, the Purchaser may take appropriate measures including one or more of the following:

- i) If his bids are under consideration in any procurement,
 - a) forfeiture or encashment of bid security;
 - b) calling off of any pre-contract negotiations; and
 - c) rejection and exclusion of the bidder from the procurement process.

- ii) If a contract has already been awarded,
 - a) cancellation of the relevant contract and recovery of compensation for loss incurred by the Purchaser;
 - b) forfeiture or encashment of any other security or bond relating to the procurement;
 - c) recovery of payments made by the Procuring Entity along with interest thereon at the prevailing rate;

- iii) Provisions in addition to above,
 - a) removal from the list of registered suppliers and banning/debarment of the bidder from participation in future procurements of the Procuring Entity for a period not less than one year;
 - b) in case of anti-competitive practices, information for further processing may be filed by the Purchaser, with the Competition Commission of India;
 - c) initiation of suitable disciplinary or criminal proceedings against any individual or staff found responsible.

3.5 Furthermore, Bidders shall be aware of the provision stated in Sub-Clause 2.6.1 of the General Conditions of Contract.

4. Eligible Bidders

- 4.1 All bidders shall provide in Section III, Bidding Forms, a statement that the Bidder (including all members of a joint venture and subcontractors) is not associated, nor has been associated in the past, directly or indirectly, with the consultant or any other entity that has prepared the design, specifications, and other documents for the Project or being proposed as Project Manager for the Contract. A firm that has been engaged by the Purchaser to provide Consultant Services for the preparation or supervision of the Services, and any of its affiliates, shall not be eligible to bid.

- 4.2 Bidders shall not be under Ban/Blacklisting/Debarment for corrupt and fraudulent practices or for lack in performance by any Government/Semi-Government entity.

5. Qualification of the Bidder

- 5.1 All bidders shall provide in Section III, Bidding Forms, a preliminary description of the proposed work method and schedule, including drawings and charts, as necessary.
- 5.2 In the event that prequalification of potential bidders has been undertaken **as stated in the BDS**, only bids from prequalified bidders shall be considered for award of Contract, in which case the provisions of sub-clauses 5.3 to 5.6 hereafter shall not apply. These qualified bidders should submit with their bids any information updating their original prequalification applications or, alternatively, confirm in their bids that the originally submitted prequalification information remains essentially correct as of the date of bid submission. The update or confirmation should be provided in Section III.
- 5.3 If the Purchaser has not undertaken prequalification of potential bidders, all bidders shall include the following information and documents with their bids in Section III, unless otherwise **stated in the BDS**:
- (a) copies of original documents defining the constitution or legal status, place of registration, and principal place of business; written power of attorney of the signatory of the Bid to commit the Bidder;
 - (b) total monetary value of Goods and Related Services, supplied for each of the last five years;
 - (c) experience in Supply of Goods of a similar nature and size for each of the last five years, and details of Supplies under way or contractually committed; and names and address of clients who may be contacted for further information on those contracts;
 - (d) Write-up containing Bidder's approach & methodology, work plan, organization and staffing (for maintenance and operational support) for carrying out the Contract.
 - (e) Write-up detailing the capability of the bidder to provide operation and maintenance support and details of service centres and information on service support facilities that would be provided during/after the warranty period
 - (f) Write-up and document detailing the Training Program and hand-holding that shall be provided to SOI personnel for operational & emergency support and preventive maintenance of Essential Components of Network RTK;
 - (g) Write-up and document detailing the structure/mechanism proposed for operational & emergency support and

maintenance of all Components of CORS Network to ensure minimum downtime of CORS network;

- (h) Total Solution Document
- (i) reports on the financial standing of the Bidder, such as profit and loss statements and auditor's reports for the past five years;
- (j) evidence of adequacy of working capital for this Contract (access to line(s) of credit and availability of other financial resources);
- (k) authority to the Purchaser to seek references from the Bidder's bankers;
- (l) information regarding any litigation, current or during the last five years, in which the Bidder is involved, the parties concerned, and disputed amount; and
- (m) information regarding ban/debarment/black-listing of the bidder at present or in past

5.4 Bids submitted by a joint venture of two or more firms as partners shall comply with the following requirements, unless otherwise stated in the **BDS**:

- (a) the Bid shall include all the information listed in ITB Sub-Clause 5.3 above for each joint venture partner;
- (b) the Bid shall be signed so as to be legally binding on all partners;
- (c) the Bid shall include a copy of the agreement entered into by the joint venture partners defining the division of assignments to each partner and establishing that all partners shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms; alternatively, a Letter of Intent to execute a joint venture agreement in the event of a successful bid shall be signed by all partners and submitted with the bid, together with a copy of the proposed agreement;
- (d) one of the partners shall be nominated as being in charge, authorized to incur liabilities, and receive instructions for and on behalf of any and all partners of the joint venture; and
- (e) the execution of the entire Contract, including payment, shall be done exclusively with the partner in charge.

5.5 To qualify for award of the Contract, bidders shall meet the following minimum qualifying criteria. The documentary evidence of the Bidder's qualifications to perform the contract if its bid is accepted shall establish to the Purchaser's satisfaction:

(a) that the Bidder meets each of the qualification criterion Criteria specified in **BDS**;

(b) (i) that, if **required in the BDS**, a Bidder that does not manufacture or produce the Goods it offers to supply shall submit the Manufacturer's Authorization using the form included in Section III, Bidding Forms to demonstrate that it has been duly authorized by the manufacturer or producer of the Goods to supply these Goods in the Purchaser's Country;

(ii) Supplies for any particular item in each schedule of the bid should be from one manufacturer only. Bids from agents offering supplies from different manufacturers for the same item of the schedule in the bid will be treated as non-responsive.

(iii) that, if **required in the BDS**, the Bidder is or will be (if awarded the contract) represented by an Agent in the country equipped and able to carry out the Supplier's maintenance, repair and spare parts-stocking obligations prescribed in the Conditions of Contract and/or Technical Specifications;

(c) Bids from Joint Ventures are not acceptable.

(d) Indian manufacturers should be registered with company of Law Affairs under Company's Act.

(e) Indian Agents representing Foreign Principals should fulfill the provisions of Rule 152 of GFR, 2017.

5.6 The figures for each of the partners of a joint venture shall be added together to determine the Bidder's compliance with the minimum qualifying criteria of ITB, **stated in the BDS**.

- 6. **One Bid per Bidder** 6.1 Each Bidder shall submit only one Bid, either individually or as a partner in a joint venture. A Bidder who submits or participates in more than one Bid (other than as a subcontractor or in cases of alternatives that have been permitted or requested) will cause all the proposals with the Bidder's participation to be disqualified.
- 7. **Cost of Bidding** 7.1 The Bidder shall bear all costs associated with the preparation and submission of his Bid, and the Purchaser will in no case be responsible or liable for those costs.
- 8. **Site Visit** 8.1 The Bidder, at the Bidder's own responsibility and risk, is encouraged to visit and examine the delivery/installation Site of required supply and its surroundings and obtain all information that may be necessary for preparing the Bid and entering into a contract for the Services. The costs of visiting the Site shall be at the Bidder's own expense.

B. Bidding Documents

- 9. **Content of Bidding Documents** 9.1 The set of bidding documents comprises the documents listed in the table below and addenda issued in accordance with ITB Clause 11:

Section I	Instructions to Bidders
Section II	Bidding Data Sheet
Section III	Bidding Forms
Section IV	Eligible Countries
Section V	Schedule of Requirement
Section VI	General Conditions of Contract
Section VII	Special Conditions of Contract
Section VIII	Appendices
Section IX	Contract Forms
- 9.2 The Bidder is expected to examine all instructions, forms, terms, and specifications in the bidding documents. Failure to furnish all information required by the bidding documents or to submit a bid not substantially responsive to the bidding documents in every respect will be at the Bidder's risk and may result in the rejection of its bid. Sections III, V, and IX should be completed and submitted with the e-Bid.

9.3 Electronic –Procurement System

The Purchaser shall use the electronic-procurement system to manage this Bidding process: Government of India e-procurement system as specified **in BDS**. Detailed guidelines for viewing bids and submission of online bids are given on the website.

- 10. Clarification of Bidding Documents**
- 10.1 The electronic bidding system **specified in the BDS 9.3** provides for online clarifications. A prospective Bidder requiring any clarification on the Bidding Documents may notify the Purchaser online. Clarifications requested through any other mode shall not be considered by the Purchaser. The Purchaser will respond to any request for clarification, provided that such request is received no later than fifteen (15) days prior to the deadline for submission of bids. Description of clarification sought and the response of the Purchaser shall be uploaded for information of all Bidders without identifying the source of request for clarification. Should the Purchaser deem it necessary to amend the Bidding Documents as a result of a clarification, it shall do so following the procedure under ITB Clause 11 and ITB Sub-Clause 21.2. It is the bidder's responsibility to check on the e-procurement system, for any addendum/ amendment/ corrigendum to the bidding document.

- 11. Amendment of Bidding Documents**
- 11.1 Before the deadline for submission of bids, the Purchaser may modify the bidding documents by issuing addenda.
- 11.2 Any addendum thus issued shall be part of the bidding documents and shall be uploaded by the Purchaser for information to the bidder using the e-procurement system.
- 11.3 To give prospective bidders reasonable time in which to take an addendum into account in preparing their bids, the Purchaser shall extend, as necessary, the deadline for submission of bids, in accordance with ITB Sub-Clause 21.2 below.

C. Preparation of Bids

- 12. Language of Bid**
- 12.1 The bid prepared by the Bidder, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Purchaser shall be written in the language **specified in the BDS**. Supporting documents and printed literature furnished by the Bidder may be in another language provided they are accompanied by an accurate translation of the relevant passages in the language specified in the Bidding Data Sheet, in which

case, for purposes of interpretation of the Bid, the translation shall govern.

13. Documents Comprising the Bid

13.1 The Bid shall be in two parts.

Techno Commercial Unpriced Bid (Part I) submitted by the Bidder shall comprise the following:

- (a) The Form of Bid (in the format indicated in Section III);
- (b) Bid Security;
- (c) Qualification Information Form and Documents as in accordance with ITB 5;
- (d) Letter of Bid – Technical Part: prepared in accordance with ITB 14 and ITB 20 but **WITHOUT** any Financial Information
- (e) written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB Clause 19.2
- (f) Manufacturer’s authorization form
- (g) The Bidder shall submit the following additional documents in its Bid as part of Techno Commercial Unpriced Bid:
 - i. Information on all past similar Projects and satisfactory performance with special reference to India.
 - ii. All documents and Bidding Forms stipulated in Clause 5 of Section of ITB and Section III (Bidding Forms).
 - iii. To establish the conformity of the Goods and Related Services to the Bidding Documents, the Bidder shall furnish as part of its Bid the documentary evidence that the Goods conform to the technical specifications and standards specified in Section V, Schedule of Requirements.
 - iv. The documentary evidence may be in the form of literature, drawings or data, and shall consist of a detailed item by item description of the essential technical and performance characteristics of the Goods and Related Services, demonstrating substantial responsiveness of the Goods and Related Services to the technical specification, and if applicable, a statement of deviations and exceptions to the provisions of the Section V Schedule of Requirements.
 - v. The Bidder shall also furnish a list giving full particulars, including available sources and current prices of spare

parts, special tools, etc., necessary for the proper and continuing functioning of the Goods during the period **specified in the BDS** following commencement of the use of the goods by the Purchaser.

- vi. Standards for workmanship, process, material, and equipment, as well as references to brand names or catalogue numbers specified by the Purchaser in the Schedule of Requirements, are intended to be descriptive only and not restrictive. The Bidder may offer other standards of quality, brand names, and/or catalogue numbers, provided that it demonstrates, to the Purchaser's satisfaction, that the substitutions ensure substantial equivalence or are superior to those specified in the Section V Schedule of Requirements.
- vii. Brochures and documents in support of goods to be supplied & installed and in support of method statement— as necessary.

(h) Any other document **required in the BDS**

13.2 The Techno Commercial Unpriced Bid shall not include any financial information related to the Bid price. Where material financial information related to the Bid price is contained in the Technical Part, the Bid shall be declared non-responsive.

13.3 **The Financial Bid** (Part II) shall contain the following:

- (a) Letter of Bid – Financial Part: prepared in accordance with ITB 14 and ITB 20 containing Financial Information;
- (b) Price Schedule duly filled in strictly according to the ITB 14 and ITB 20 containing Financial Information in prescribed proforma specified in SubSection 11 (A) of Section III Bidding Forms, whichever is applicable and Sub Section 12 of Section III Bidding Forms. Any deviation will render the financial bid as unresponsive.
- (c) Deleted
- (d) Any other document **required in the BDS**.

14. Bid Prices

14.1 The Contract shall be for the Supply of Goods and related services, as described in Section V Schedule of Requirement, Sub Section 3 Specifications, within time specified in Section V Schedule of Requirement, Sub Section 1 List and Delivery Schedule and Sub Section 2 List of Related Services and Completion Schedule; based on the priced Schedule, in Section

III Bidding Forms Subsection 11 and 12 Price schedule for Goods and Related Services, submitted by the Bidder.

- 14.2 The Bidder shall fill in rates and prices for all items of the Supply and related services described in the in Sub Section 3 of Specifications (or Terms of Reference), Section V and listed in, Sub Section 1 List and Delivery Schedule and Sub Section 2 List of Related Services and Completion Schedule of the Schedule of Requirement, Section V. Items for which no rate or price is entered by the Bidder will not be paid for by the Purchaser and shall be deemed covered by the other rates and prices in the Price Schedule.
- 14.3 All duties, taxes, and other levies payable by the Supplier under the Contract, or for any other cause, as of the date 28 days prior to the deadline for submission of bids, shall be included in the total Bid price submitted by the Bidder.
- 14.4 If **provided for in the BDS**, the rates and prices quoted by the bidder shall be subject to adjustment during the performance of the Contract in accordance with and the provisions of Clause 6.6 of the General Conditions of Contract and/or Special Conditions of Contract. The Bidder shall submit with the Bid all the information required under the Special Conditions of Contract and of the General Conditions of Contract.
- 14.5 The prices and discounts (including any price reduction) quoted by the Bidder in the Letter of Bid and in the price Schedule(s) shall conform to the requirements specified below.

All lots (contracts) and items must be listed and priced separately in the price Schedule(s).

The Bidder shall quote any discounts and indicate the methodology for their application in the Letter of Bid – Financial Part.

14.6 Prices shall be quoted as specified in the Price Schedule included in Section IV, Bidding Forms.

(a) For Supply of Goods, the Bidders classified in the following Groups, may submit their bid accordingly: -

(i) Bid should be supplied in Sub Section 11 (A) and 12 of Section III Bidding Forms and for payment terms clause 1 of Appendix B of Section VIII Appendices may be referred to).

Quoted rates for Insurance, Transportation, and other services required to convey the Goods to their final destination shall be inclusive of any applicable tax, duties, cess etc.

(b) for the Related Services, other than inland transportation and other services required to convey the Goods to their final destination, whenever such Related Services are specified in the Schedule of Requirements:

(i) The price of each item comprising the Related Services (inclusive of any applicable taxes) shall be quoted in Sub Section 12 of Section III Bidding Forms.

14.6 If the Tenderer desires to ask for GST, Customs etc as paid extra for input goods, the same must be specifically stated. In the absence of any such stipulation the price will be taken inclusive of such duties and taxes and no claim for the same will be entertained later.

(i) If a tenderer asks for GST to be paid extra, the rate and HSS Code, as applicable should be shown separately. The GST will be paid as per the rate at which it is liable to be assessed or has actually been assessed provided the transaction of sale is legally liable to GST and is payable as per the terms of the contract. If any refund / tax credit is received, the Supplier must pass such tax benefit forthwith to the purchaser.

(ii) Purchaser will pay the Customs duty/ GST wherever applicable. Exemption certificate as per Department of Revenue Notification no 45/2017 – Central Tax (Rate) 14/11/2017, and 51/96-customs dated 23/07/1996 will be provided to successful bidder.

(iii) The need for indication of all such price components by the bidders, as required in this clause (viz., GIB clause 13) is for the purpose of comparison of the bids by the purchaser and will no way restrict the purchaser's right to award the contract on the selected bidder on any of the terms offered.

15. Currencies of Bid and Payment

15.1 Bidder shall quote and accept payment in Indian Currency only.

15.2 Deleted

16. Bid Validity

16.1 Bids shall remain valid for the period **specified in the BDS**.

16.2 In exceptional circumstances, the Purchaser may request that the bidders extend the period of validity for a specified additional period. The request and the bidders' responses shall be made in writing or by cable ("cable" includes e-mail, telex and facsimile). A Bidder may refuse the request without forfeiting the Bid Security. A Bidder agreeing to the request will not be required or permitted to

otherwise modify the Bid, but will be required to extend the validity of Bid Security for the period of the extension, and in compliance with ITB Clause 17 in all respects.

17. Bid Security

Pursuant to Rule 170 of GFR 2017

17.1 The Bidder shall furnish, as part of the Bid, a Bid Security or a Bid-Securing Declaration, if required, as **specified in the BDS**.

17.2 The Bid Security shall be in the amount **specified in the BDS** and denominated in the currency of the Purchaser's Country or a freely convertible currency, and shall:

- (a) at the bidder's option, be in the form of either Account Payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque or Bank Guarantee from any of the Commercial Banks in India, safeguarding the Purchaser's interest in all respects.
- (b) be substantially in accordance with one of the forms of Bid Security included in Section IX, Contract Forms, or other form approved by the Purchaser prior to bid submission;
- (c) be payable promptly upon written demand by the Purchaser in case the conditions listed in ITB Sub-Clause 17.5 are invoked;
- (d) While submitting electronic bids, the bidder shall upload the scanned copy of Bid Security in form of Account Payee Demand Draft/Fixed Deposit Receipt, Banker's Cheque/Bank Guarantee and shall also send the Bid Security in original by post/courier/in person so as to reach latest by the last date of submission of bids to the Purchaser at the address mentioned above in **BDS clause 9.2**. The details of the Bid Security, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission otherwise the uploaded bid shall be rejected.
- (e) remain valid for a period of 45 days beyond the validity period of the bids, as extended, if applicable, in accordance with ITB Sub-Clause 16.2;

17.3 Any bid not accompanied by a substantially responsive Bid Security in accordance with ITB Sub-Clause 17.1, shall be rejected by the Purchaser as non-responsive.

17.4 Bid securities of the unsuccessful bidders shall be returned to them at the earliest after expiry of the final bid validity and latest on or before the 30th day after the award of the contract.

- 17.5 The Bid Security may be forfeited:
- (a) if a Bidder withdraws or modifies its bid within the validity of the bid specified in the bid document, after the deadline for submission of such documents, except as provided in ITB Sub-Clause 16.2; or
 - (b) if the successful Bidder fails to:
 - (i) sign the Contract in accordance with ITB Clause 34;
 - (ii) furnish a Performance Security in accordance with ITB Clause 37.
 - (iii) comply with any other condition precedent to signing the contract specified in the bid document
- 17.6 The Bid Security of a JV must be in the name of the JV that submits the bid. If the JV has not been legally constituted at the time of bidding, the Bid Security or Bid-Securing Declaration shall be in the names of all future partners as named in the letter of intent to constitute the JV.

18. Alternative Proposals by Bidders

- 18.1 **Unless otherwise indicated in the BDS**, alternative bids shall not be considered.
- 18.2 When alternative times for completion are explicitly invited, a statement to that effect will be **included in the BDS**, as will the method of evaluating different times for completion.
- 18.3 Except as provided under ITB Sub-Clause 18.4 below, bidders wishing to offer technical alternatives to the requirements of the bidding documents must first submit a Bid that complies with the requirements of the bidding documents, including the scope, basic technical data, graphical documents and specifications. In addition to submitting the basic Bid, the Bidder shall provide all information necessary for a complete evaluation of the alternative by the Purchaser, including calculations, technical specifications, breakdown of prices, proposed work methods and other relevant details. Only the technical alternatives, if any, of the lowest evaluated Bidder conforming to the basic technical requirements shall be considered by the Purchaser. Alternatives to the specified performance levels shall not be accepted.

- 18.4 When bidders are **permitted in the BDS** to submit alternative technical solutions for specified parts of the Services, such parts shall be described in the Technical Specifications, Sub Section 3 Section V Schedule of Requirement. In such case, the method for evaluating such alternatives will be as **indicated in the BDS**.

19. Format and Signing of Bid

- 19.1 The Bidder shall prepare bid comprising all documents as described in ITB Clause 11 of these Instructions to Bidders. Scanned copy of all the documents shall be uploaded in the e-procurement system described in **BDS 9.3**
- 19.2 The bid shall be signed by a person or persons duly authorized to sign on behalf of the Bidder, pursuant to ITB clause 5.3(a) or 5.4(b), as the case may be. The authorization shall consist of a written confirmation **as specified in the BDS** and shall be uploaded along with the bid. The authorization shall be uploaded along with the bid. All pages of the Bid where entries or amendments have been made shall be initialed by the person or persons signing the Bid.
- 19.3 Corrections if any in the bid can be carried out by editing the information before electronic submission on e-procurement portal.

D. Submission of Bids

20. Sealing and Marking of Bids

- 20.1 The Letter of Bid – Technical Part, Letter of Bid – Financial Part, and Price Schedules shall be prepared using the relevant forms furnished in Section III, Bidding Forms. The forms must be completed without any alterations to the text, and no substitutes shall be accepted except as provided under ITB 19.2. All blank spaces shall be filled in with the information requested.
- 20.2 Entire Bid including the Letter of Bid and filled-up Price Schedules shall be submitted online on e-procurement system specified in ITB 10.1. Details and process of online submission of the bid and relevant documents are given in the website mentioned above. Scanned copies of documents listed in clauses 13 and 20.3 should also be uploaded on this website.
- 20.3 The bidders are required to separately submit (i) written confirmation authorizing the signatory of the Bid to commit the Bidder as per ITB Clause 19.2;(ii) original bid security in approved form; and (iii) original affidavit regarding correctness of information furnished with bid document, with the office **specified in the BDS**, before the opening of the technical part of the Bid, either by registered/speed post/courier or by hand, failing

which the bids will be declared non-responsive and will not be opened. Hard copy of rest of the bid is not to be submitted

20.4 Bids, both Techno-Commercial Unpriced Bid (Part I) and Financial Bid (Part II), shall be submitted online on the e-procurement system specified in BDS 10.1. Physical, Email, Telex, Cable or Facsimile bids will be rejected as non-responsive Detailed guidelines for viewing bids and submission of online bids are given on the website. The Invitation for Bids under this Project is published on this website. Any citizen or prospective bidder can logon to this website and view the Invitation for Bids and can view the details of Services for which bids are invited. A prospective bidder can submit its bid online; however, the bidder is required to have enrolment/registration in the website and should have valid Digital Signature Certificate (DSC) in the form of smart card/e-token obtained from any authorised certifying agency of Government of India. (for class of DSC specified in BDS). The bidder should register in the website using the relevant option available. Then the Digital Signature registration has to be done with the e-token, after logging into the website. The bidder can then login the website through the secured login by entering the password of the e-token & the user id/ password chosen during registration. After getting the bid schedules, the Bidder should go through them carefully and submit the specified documents, along with the bid; otherwise the bid will be rejected.

20.4 The completed bid comprising of documents indicated in ITB 13, should be uploaded on the e-procurement portal along with scanned copies of requisite certificates as are mentioned in different sections in the bidding document and scanned copy of the bid security. Two envelope system shall be followed in e-bidding process.

Part I comprising Techno-Commercial Unpriced Bid, as described in ITB Clause 13, shall be submitted/uploaded in Envelope 1.

Part II comprising Financial Bid, as described in ITB Clause 13, shall be submitted/uploaded in Envelope 2.

20.5 All the documents are required to be signed digitally by the bidder. After electronic on-line bid submission, the system generates a unique bid identification number which is time stamped as per server time. This shall be treated as acknowledgement of bid submission.

21. Deadline for Submission of Bids

21.1 Bids shall be submitted to the Purchaser at the e-procurement system specified in BDS 9.3. Start and Closing time and date for submission of e-bids are as **specified in the BDS.**

21.2 The Purchaser may extend the deadline for submission of bids by issuing an amendment in accordance with ITB Clause 11, in

which case all rights and obligations of the Purchaser and the bidders previously subject to the original deadline will then be subject to the new deadline.

21.3 All the documents are required to be signed digitally by the bidder. After electronic online bid submission, the system generates a unique bid identification number which is time stamped as per server time. This shall be treated as acknowledgement of bid submission.

22. Late Bids

22.1 The electronic bidding system would not allow any late submission of bids after due date & time as per server time.

23. Modification and Withdrawal of Bids

23.1 Bidders may modify their bids by using appropriate option for bid modification on the e-procurement portal, before the deadline for submission of bids. For this the bidder need not make any additional payment towards the cost of bid document. For bid modification and consequential re-submission, the bidder is not required to withdraw his bid submitted earlier. The last modified bid submitted by the bidder within the bid submission time shall be considered as the bid. For this purpose, modification/withdrawal by other means will not be accepted. In online system of bid submission, the modification and consequential re-submission of bids is allowed any number of times. A bidder may withdraw his bid by using appropriate option for bid withdrawal, before the deadline for submission of bids, however, if the bid is withdrawn, re-submission of the bid is not allowed.

23.2 Bids requested to be withdrawn in accordance with ITB Sub-Clause 23.1 shall not be opened.

23.3 Withdrawal, substitution, or modification of bid in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Letter of Bid (Techno-Commercial Unpriced Bid Part and/or Financial Bid Part) or any extension thereof pursuant to ITB Sub-Clause 16.2 shall not be permitted. Any such action by bidder shall result in the forfeiture of the Bid Security pursuant to ITB Clause 17.

E. Bid Opening and Evaluation

24. Bid Opening

24.1 The Purchaser shall publicly open Technical Parts of all bids received by the deadline, at the date, time and place specified **in the BDS**, presence of Bidder's designated representatives and anyone who chooses to attend, and this could also be viewed by the bidders online. Authorized Bid openers of Purchaser shall download the bids and the

system generated technical & commercial scrutiny reports/statements and sign them for further processing.

The Financial Parts of the bids shall remain unopened in the e-procurement system, until the subsequent public opening, following the evaluation of the Technical Parts of the Bids. Thereafter, bidder's names, and such other details as the Purchaser may consider appropriate will be notified online as Technical Part bid opening summary.

In the event of the specified date of bid opening being declared a holiday for the Purchaser, the bids will be opened at the appointed time and location on the next working day.

Only Techno-Commercial Unpriced Parts of Bids, that are opened at Bid opening shall be considered further for evaluation.

24.2 The bidders' names, the Bid prices, the total amount of each Bid, any discounts, the presence or absence of Bid Security, and such other details as the Purchaser may consider appropriate, will be announced by the Purchaser at the opening. No bid shall be rejected at bid opening.

24.3 The electronic summary of the bid opening will be generated and uploaded online. The Purchaser will also prepare minutes of the Bid opening, including the information disclosed and upload the same for viewing online. The Purchaser will prepare minutes of the Bid opening, including the information disclosed to those present in accordance with ITB Sub-Clause 24.2.

25. Process to Be Confidential

25.1 Information relating to the examination, clarification, evaluation, and comparison of bids and recommendations for the award of a contract shall not be disclosed to bidders or any other persons not officially concerned with such process until the award to the successful Bidder is notified of the award. Any effort by a Bidder to influence the Purchaser's processing of bids or award decisions may result in the rejection of his Bid.

25.2 If, after notification of award, a bidder wishes to ascertain the grounds on which its bid was not selected, it should address its request to the Purchaser, who will provide written explanation. Any request for explanation from one bidder should relate only to its own bid; information about the bid of competitors will not be addressed.

26. Clarification of Bids during Technical

26.1 To assist in the examination, evaluation, and comparison of bids, the Purchaser may, at the Purchaser's discretion, ask any Bidder for clarification of the Bidder's Bid and other information that the Purchaser may require. The request for clarification and the response shall be in writing or by cable (telex, facsimile, e-mail). Any document not enclosed

by the bidder can be asked for, as in case of the traditional bid, by the purchaser and submitted by the bidder online, However, no change in substance/responsiveness of the Bid shall be sought, offered, or permitted except as required to confirm/clarify the information submitted by the bidder in Techno-commercial bid (Part I).

26.2 Subject to ITB Sub-Clause 26.1, no Bidder shall contact the Purchaser on any matter relating to its bid from the time of the bid opening to the time the contract is awarded. If the Bidder wishes to bring additional information to the notice of the Purchaser, he should do so in writing.

26.3 Any effort by the Bidder to influence the Purchaser in the Purchaser's bid evaluation or contract award decisions may result in the rejection of the Bidder's bid.

27. Examination of Bids and Determination of Responsiveness

27.1 Prior to the detailed evaluation of bids, the Purchaser will determine whether each Bid (a) meets the eligibility criteria defined in ITB Clause 4; (b) has been properly signed; (c) is accompanied by the required securities; and (d) is substantially responsive to the requirements of the bidding documents.

27.2 A substantially responsive Bid is one which conforms to all the terms, conditions, and specifications of the bidding documents, without material deviation or reservation. A material deviation or reservation is one (a) which affects in any substantial way the scope or quality of goods to be supplied or performance of the Services; (b) which limits in any substantial way, inconsistent with the bidding documents, the Purchaser's rights or the Bidder's obligations under the Contract; or (c) whose rectification would affect unfairly the competitive position of other bidders presenting substantially responsive bids.

27.3 If a Bid is not substantially responsive, it will be rejected by the Purchaser, and may not subsequently be made responsive by correction or withdrawal of the nonconforming deviation or reservation.

28. Technical Evaluation of Bids

Only Techno-Commercial unpriced bids, which are found substantially responsive shall be taken up for Technical Evaluation. Technical evaluation shall be carried out offline. Bidders who meet the minimum criteria specified in accordance with provisions of ITB Clause 5 shall stand technically qualified for consideration of their financial bids. List of firms found to be responsive and technically qualified and such other details that the Purchaser may consider appropriate shall be published on the e-Procurement System. During bid-evaluation, selling rates established for similar transactions by the authority **specified in the BDS** on the date **stipulated in the BDS** shall be used by the Purchaser for determining the qualification as per ITB Clause 5

29. Opening of Financial Bid

33.4 The date and time of public opening of Financial Bid shall be notified on the e-procurement System and also communicated to bidders, found successful after Technical evaluation, by e-mail. Designated representatives of such successful bidders may choose to attend the public opening of Financial Bid at the venue given in BDS. Financial Bids shall be downloaded and read out. Only Financial Part of Bids, Financial Parts of Alternative Bids and discounts that are opened and read out at Bid opening shall be considered further for evaluation.

30. Correction of Errors

30.1 Financial Bids opened/downloaded by authorized Openers of Purchaser will be checked by the Purchaser for any arithmetic errors. Arithmetical errors will be rectified by the Purchaser on the following basis: if there is a discrepancy between unit prices and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail, and the total price shall be corrected; if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; if there is a discrepancy between the amounts in figures and in words, the amount in words will prevail.

30.2 The amount stated in the Bid will be adjusted by the Purchaser in accordance with the above procedure for the correction of errors and, with the concurrence of the Bidder, shall be considered as binding upon the Bidder. If the Bidder does not accept the corrected amount, the Bid will be rejected, and the Bid Security may be forfeited in accordance with ITB Sub-Clause 17.5(b).

31. Currency for Bid Evaluation

31.1 All Prices will be evaluated in Indian RUPEES only. During bid-evaluation, if required, selling rates established for similar transactions by the authority **specified in the BDS** on the date **stipulated in the BDS** shall be used by the Purchaser.

32. Evaluation and Comparison of Financial Bids

- 32.1 The Purchaser will evaluate and compare only the bids determined to be substantially responsive and technically qualified in accordance with ITB Clauses 27 and 28.
- 32.2 In evaluating the bids, the Purchaser will determine for each Bid the evaluated Bid price by adjusting the Bid price as follows:
- (a) making any correction for errors pursuant to ITB Clause 30;
 - (b) excluding provisional sums and the provision, if any, for contingencies in the price schedule, Section V, but including Day work, when requested in the Technical Specifications in Section V;
 - (c) making an appropriate adjustment for any other acceptable variations, deviations, or alternative offers submitted in accordance with ITB Clause 18; and
 - (d) making appropriate adjustments to reflect discounts or other price modifications offered in accordance with ITB Sub-Clause 14.5.
 - (e) Conversion of all offers in Indian Rupees in accordance with ITB clause 31.
 - (f) Further to ITB Clause 32.2(a) to (e) above, the purchaser's evaluation of a bid will include and consider the following:
 - i) In the case of goods manufactured in India or goods of foreign origin already located in India, GST which will be contractually payable (to the bidder), on the goods if a contract is awarded on the bidder, and;
 - ii) in the case of goods of foreign origin offered from abroad, Custom Duty and GST which will be contractually payable (to the bidder) on the goods if the contract is awarded on the bidder.
- 32.3 The Purchaser reserves the right to accept or reject any variation, deviation, or alternative offer. Variations, deviations, and alternative offers and other factors, which are in excess of the requirements of the bidding documents or otherwise result in unsolicited benefits for the Purchaser will not be taken into account in Bid evaluation.
- 32.4 The estimated effect of any price adjustment conditions under Sub-Clause 7.6 of the General Conditions of Contract, during the period of implementation of the Contract, will not be taken into account in Bid evaluation.

- 33. Preference for Domestic Bidders** 33.1 **Domestic bidders shall not be eligible for any margin of preference in Bid evaluation.** The Bidding Process and Procurement is subject to the provisions of General Financial Rule 2017, Manual for Procurement of Goods published by Ministry of Finance, Department of Expenditure and related Guidelines issued by CVC and any other Government orders issued from time to time. Attention of interested Bidders is invited towards Rule 153(iii) of GFR 2017 and Government of India guidelines issued under this rule from time to time, wherein it is specified that: *-The Central Government may, by notification, provide for mandatory procurement of any goods or services from any category of bidders, or provide for preference to bidders on the grounds of promotion of locally manufactured goods or locally provided services.*

F. Award of Contract

- 34. Award Criteria** 34.1 Subject to ITB Clause 33, the Purchaser will award the Contract to the Bidder whose Bid has been determined to be substantially responsive to the bidding documents and who has offered the lowest evaluated Bid price, provided that such Bidder has been determined to be (a) eligible in accordance with the provisions of ITB Clause 4, and (b) qualified in accordance with the provisions of ITB Clause 5.

34.2 Pursuant to ITB Sub-Clause 1.1 & 14.5, if this contract is being let on a “slice and package” basis, the lowest evaluated Bid Price will be determined when evaluating this contract in conjunction with other contracts to be awarded concurrently, taking into account any discounts offered by the bidders for the award of more than one contract.

- 35. Purchaser’s Right to Accept any Bid and to Reject any or all Bids** 35.1 Not with standing ITB Clause 32, the Purchaser reserves the right to accept or reject any Bid, and to cancel the bidding process and reject all bids, at any time prior to the award of Contract, without thereby incurring any liability to the affected Bidder or bidders or any obligation to inform the affected Bidder or bidders of the grounds for the Purchaser’s action.

- 36. Notification of Award and Signing of Agreement** 36.1 The Bidder whose Bid has been accepted will be notified of the award by the Purchaser prior to expiration of the Bid validity period by cable, telex, or facsimile confirmed by registered letter from the Purchaser. This letter (hereinafter and in the Conditions of Contract

called the “Letter of Acceptance”) will state the sum that the Purchaser will pay the Supplier in consideration of the execution, completion, and maintenance of the Services by the Supplier as prescribed by the Contract (hereinafter and in the Contract called the “Contract Price”).

36.2 The notification of award will constitute the formation of the Contract.

36.3 The Contract, in the form provided in the bidding documents, will incorporate all agreements between the Purchaser and the successful Bidder. It will be signed by the Purchaser and sent to the successful Bidder along with the Letter of Acceptance. Within 21 days of receipt of the Contract, the successful bidder shall sign the Contract and return it to the Purchaser, together with the required performance security pursuant to Clause 35.

36.4 Upon fulfillment of ITB Sub-Clause 36.3, the Purchaser will promptly notify the unsuccessful Bidders the name of the winning Bidder and that their bid security will be returned as promptly as possible.

36.5 If, after notification of award, a bidder wishes to ascertain the grounds on which its bid was not selected, it should address its request to the Purchaser. The Purchaser will promptly respond in writing to the unsuccessful Bidder.

37. Performance Security

37.1 Within 21 days after receipt of the Letter of Acceptance, the successful Bidder shall deliver to the Purchaser a Performance Security in the amount and in the form stipulated **in the BDS**, denominated in the type and proportions of currencies in the Letter of Acceptance and in accordance with the General Conditions of Contract.

37.2 Failure of the successful Bidder to comply with the requirements of ITB Sub-Clause 37.1 shall constitute sufficient grounds for cancellation of the award and forfeiture of the Bid Security.

37.3 Performance Security should remain valid for a period of sixty days beyond the date of completion of all contractual obligations of the supplier including warranty obligations.

38. Advance Payment and Security

38.1 The Purchaser will provide an Advance Payment on the Contract Price as stipulated in the Conditions of Contract, subject to the amount **stated in the BDS**.

39. Adjudicator

39.1 The Purchaser proposes the person **named in the BDS** to be appointed as Adjudicator under the Contract, at an hourly fee **specified in the BDS**, plus reimbursable expenses. If the Bidder disagrees with this proposal, the Bidder should so state in the Bid. If, in the Letter of Acceptance, the Purchaser has not agreed on the appointment of the Adjudicator, the Adjudicator shall be appointed by the Appointing Authority designated in the Special Conditions of Contract at the request of either party.

Section II. Bidding Data Sheet

Instructions to Bidders Clause Reference

A. General

1.1 The Purchaser is *Surveyor General of India, Survey of India, Dehra Dun*

The name and identification number of the Contract **Supply, Installation, Commissioning, Maintenance, Training and Operation for Establishment of Continuously Operating Reference System Network in the State of Karnataka**

The number and identification of lots comprising this RFB is: One (01)

Sl No	Lot	Description	Number of Reference Station	Bid Security (EMD)	Period of completion
1	I	Supply, Installation, Commissioning, Maintenance, Training and Operation for Establishment of Continuously Operating Reference System Network in the State of Karnataka	49	INR 20 Lakh	6 months

1.2 The Intended Completion Date is *Six (6) months from the date of signing of Contract for each Lot/Package.*

2.1 The Purchaser is **Surveyor General of India**

The Project is

- 5.1**
- The information related to Method proposed by the Bidder shall be provided as per Form 2(a) (Method Statement)/ Section III (Bidding Forms).
 - The information related to Work Plan & Schedule proposed by the Bidder shall be provided as per Form 2(b) (Work Plan & Schedule)/ Section III (Bidding Forms).

5.2 Prequalification not been undertaken.

5.4 Joint Ventures are not acceptable in this Bid.

5.5 The Purchaser shall assess each Bid against the following Qualification Criteria Requirements not included in the text below shall not be used in the evaluation of the Bidder's qualifications.

- (a) Financial Capability

If the bidder is a Manufacturer,

The Bidder shall furnish documentary evidence that it meets the following financial requirement(s):

The Minimum required annual turnover in any one of the last three (3) Financial Years i.e.2015-16 to 2017-18 shall be INR 8 (Eight) crore or an equivalent amount in other currency at exchange rate prevalent on date of Technical Bid opening. The bidder should also submit the concerned documents in support of the above to the satisfaction of the purchaser.

Should possess GST Registration.

Capacity to have a cash flow: The bidder must provide a letter from a reputed Nationalized / Scheduled Bank stating the availability of liquid assets and/or credit facilities exclusively for the contract only (Bidder has to submit documentary Evidence of adequacy of working capital for this contract (access to line(s) of credit and availability of other financial resources); along with concurrent works he would be involved during project period and peak cash flow requisition in each such projects) of not less than INR 4 (Four) Crore or an equivalent amount in other currency at exchange rate prevalent on date of Technical Bid opening.

If the bidder is not a Manufacturer,

If a Bidder is not a manufacturer, but is offering the Goods on behalf of the Manufacturer under Manufacturer's Authorization Form (Section IV, Bidding Forms), the Manufacturer shall demonstrate the above qualifications (a), (b), (c) of para (i) and the Bidder shall furnish documentary evidence that it meets the following financial requirement(s):

The Minimum required annual turnover in any of the last three (3) Financial Years i.e. 2015-16 to 2017-18 be INR3(Three) Crore or an equivalent amount in other currency at exchange rate prevalent on date of Technical Bid opening. The bidder should also submit the concerned documents in support of the above to the satisfaction of the purchaser.

Should possess GST Registration.

Capacity to have a cash flow: The bidder must provide a letter from a reputed Nationalized / Scheduled Bank stating the availability of liquid assets and/or credit facilities exclusively for the contract only, of not less than INR 1 (One)Crore or an equivalent amount in other currency at exchange rate prevalent on date of Technical Bid opening.

(b) Experience and Technical Capacity

The Bidder shall furnish documentary evidence to demonstrate that it meets the following experience requirement(s):

- (i) If the bidder is a Manufacturer, he must have manufactured, tested and supplied at least 40 CORS receivers (GNSS receivers with features as detailed in Technical Specifications for GNSS-Dual Frequency receivers in ‘Schedule of Requirements’) and supplied, installed & commissioned CORS network similar to the type specified in the ‘Schedule of Requirements’ consisting of at least 15 receiver stations, with all subcomponents (i.e. control center, receiver station, communication network and necessary hardwares and softwares) in any one of the last 3 Financial Years i.e. 2015-16 to 2017-18. CORS Network installed should be in satisfactory operation for 6 Months as on date of bid opening. Further, bidder should be in continuous business of manufacturing products similar to that specified in the schedule of requirements during the last five years prior to bid opening.
- (ii) If the bidder is not a Manufacturer, he must have successfully supplied, at least 40 CORS receivers (GNSS receivers with features as detailed in Technical Specifications for GNSS-Dual Frequency receivers in ‘Schedule of Requirements’) and supplied, installed and commissioned CORS network similar to the type specified in the ‘Schedule of Requirements’ consisting of at least 15 receiver station, with all subcomponents (i.e. control center, receiver station, communication network and necessary hardwares and softwares) in any one of the last 3 Financial Years i.e. 2015-16 to 2017-18, which must be in satisfactory operation for at least 6 months on the date of bid opening. However, the bid shall include the information about the Manufacturer, as mentioned above at (i), whose goods have been offered.
- (iii) The list of supplied & installed equipment shall include:
- Name and address of Purchaser with contact details as email address/ Phone No.
 - Contract No. and Date.
 - Equipment/items ordered/supplied & installed with their respective quantities.
 - Scheduled completion date and actual completion date.
 - Details of Complaint, if any, received from the purchaser about the performance of the Equipment/items.
- (iii) The bidder should provide profile of their company including its infrastructure, technical manpower and their expertise.
- (iv) The bidder may be an Indian or Foreign company but must have office and firm arrangement in India to supply, install, and commission and provide support as well as comprehensive on-site maintenance of the network.
- (v) The bidder should submit the details of agreements entered into with various manufacturers/partners for supplying the equipment and

providing services and their experience to meet the qualification & experience criterion for the turn-key solution.

- (vi) In case of subcontracting work, the bidder shall be solely responsible for the deliverables from these subcontractors and under no circumstances shall transfer the sub contractor's liabilities to the Purchaser. The subcontractor should have requisite qualification and experience to execute the job to the satisfaction of the Purchaser. The bidder is to give the name of the subcontractor / arrangement for the job in the bid in such cases.
- (vii) The equipment supplied should be from well-known manufacturer & of recent model with proven reliability in the field for at least one-year of operation. The equipment supplied must have minimum life period of 7 years. The bidder is to give undertaking that availability of spares & services will be ensured in case the equipment is obsolete in between the period.

- (a) The Bidder shall furnish documentary evidence such as Method Statement Proforma along with published data sheets of key hardwares and softwares, etc., to demonstrate that the Goods it offers meet the requirements of a CORS network component wise like GNSS Receivers, Software's, Communication system, Power supply, Safety etc.
- (b) The Bidder must furnish details of supplies made by him in the last three years in proforma attached in Section IV.
- (c) The bidder will be considered as an OEM in case the bidder is a 100% owned subsidiary of its OEM, both the Subsidiary Company and its Holding Company shall furnish a joint undertaking to execute the contract including warranty and indemnity obligations and the bidder shall also submit documents evidencing the extent of share holding by the holding company duly certified by the auditors of the bidder in addition to the document mentioned sought in tender document. Such undertaking shall be kept alive till the completion of all the warranty, indemnity obligations as per Purchase Order issued in respect of the purchase. then the bidder will be considered as an OEM.
- (d) The experience of work executed in the country other than purchaser's country will be considered while evaluating as per above Cl. (b) (i&ii)

5.5 (b)(i) In case of bidder is not manufacturer, Bid specific Manufacturer's Authorization using the form included in Section III, including Manufacturer's confirmation of extending the required warranty for that product, shall be submitted by bidder.

5.5 (b)(iii) In case of, Bidder is or will be (if awarded the contract) represented by an Agent, in the country, equipped and able to carry out the Supplier's maintenance, , repair and spare parts than stocking obligations prescribed in the Conditions of Contract and/or Technical Specifications;

5.5(d) Add as 5.5(d)

A consistent history of litigation or arbitration awards against the Applicant or any member of a Joint Venture may result in disqualification.

5.6 The figures for each of the partners of a joint venture (if allowed in ITB 5.4) shall be added together to determine the Bidder's compliance with the minimum qualifying criteria of ITB Sub-Clause 5.5(a),(b),(c); however, for a joint venture to qualify the partner in charge must meet at least 70 percent of those minimum criteria for an individual Bidder and other partner at least 40% of the criteria. Failure to comply with this requirement will result in rejection of the joint venture's Bid.

B. Bidding Data

C. Preparation of Bids

9.2 The Purchaser address is
Office of Surveyor General of India,
Survey of India
Hathibarkala Estate, Dehradun
Telephone: +91-135-2747623, +91-135-
2745566
Facsimile number: +91-135-2747623
Email: sgo.soi@gov.in

9.3 URL of e-Procurement System: <https://eprocure.gov.in/eprocure/app>
The electronic-procurement system shall be used to manage the following aspects of the Bidding process: Bid creation/ publishing and addenda/ corrigendum if any thereon; Issuing/Downloading bid documents; Submission of bids; Opening of bids.

10.2 Bidders designated representatives are invited to attend a pre-bid meeting. The purpose of the meeting will be clarify issues and to answer questions on any matter that may be raised at that stage. A Pre-Bid meeting will take place at the following date, time and at the address below: Date 23.10.2018 Time: 11:00 hours.

Additional Clause

Place: G&RB Conference hall, Office of Director, G&RB, GBO complex, 17 E.C. Road Dehradun, Pin – 248001

Information shall be also available on www.surveyofindia.gov.in

12.1 Language of the bid: **English**

- 13.1(g)(v)** 7 years following commencement of the use of the goods by the Purchaser.
- 13.1(h) & 13.3(d)** Nil
- 14.4** The Contract **is not** subject to price adjustment in accordance with Clause 6.6 of the General Conditions of Contract.
- 15.1** Nil.
- 16.1** The period of Bid validity shall be **120days** after the deadline for Bid submission specified in the BDS.
- 17.1** Bid Security shall be required. The Bidder shall provide: Bid security shall be in the form of Fixed deposit/bank guarantee from Scheduled Bank **in favour of Senior Accounts Officer, CPAO, Dehra Dun payable at Dehra Dun**. While submitting electronic bids, the bidder shall upload the scanned copy of bank Fixed deposit/bank guarantee and shall also send the original bank Fixed deposit/bank guarantee by post/courier/in person so as to reach latest by the last date of submission of bids to the Project Director at the address mentioned above in **BDS clause 9.2**. The details of the bank Fixed deposit/bank guarantee, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission otherwise the uploaded bid shall be rejected. Bid Security should be in favour of **Senior Accounts Officer, CPAO, Dehra Dun payable at Dehra Dun**. Other types of acceptable securities are as under;
- Bank Fixed deposit/bank guarantee from Scheduled Bank.
The bidders who are currently registered with MSME/NSIC for the specific goods as per Tender document specification, as defined in MSE Procurement Policy issued by the department of MSME or Startup as recognized by Department of Industrial Policy & Promotion (DIPP), shall be eligible for exemption from Bid Security. In case the bidder falls in this category, the bidder shall upload relevant certificate of registration issued by department of MSME/DIPP.
- 17.2** The amount of Bid Security shall be as follows in **Indian National Rupee** on date of Technical Bid opening.
The amount and currency of the Bid Security shall be INR 20,00,000.
- 18.1** **Alternative bids are not permitted.**
- 18.2** Alternative times for completion are not permitted.
- 18.4** **Alternative technical solutions are not permitted.**
- 19.1** Replace Clause No. 19.1 with the following:
The Bidder shall prepare the Bid as per details given in ITB 19.2.
- 19.2** Replace Clause No. 19.2 with the following:

The bid shall be signed by a person duly authorized to sign on behalf of the Bidder. The authorization shall consist of a written confirmation and shall be uploaded along with the bid.

19.3 Not used

Add Clause No. 19.4 as below:

Corrections if any in the bid can be carried out by editing the information before electronic submission on e-procurement portal.

D. Submission of Bids

20.2a For **Bid submission purposes** only, the Purchaser's address is:

Office of Surveyor General of India,
Survey Of India
Hathibarkala Estate, Dehradun
Telephone: +91-135-2747623, +91-135-2745566
Facsimile number: +91-135-2747623
Email: sgo.soi@gov.in

The bids should be submitted on the government of India e-procurement portal
<https://eprocure.gov.in/eprocure/app>

21.1 The Start & Closing Date for submission of bids shall be

Start Date:

Date:[05, Oct, 2018]

Time: [12:00 p.m.]

Closing Date:

Date:[20, Nov, 2018]

Time: [12:00 p.m.]

ITB 22.1 Replace ITB Clause 22.1 with the following: The electronic bidding system would not allow any late submission of bids after due date & time as per server time.

ITB 23.1 Replace ITB Clause 23.1 with the following: Bidders may modify their bids by using appropriate option for bid modification on the e-procurement portal, before the deadline for submission of bids. For this the bidder need not make any additional payment towards the cost of bid document. For bid modification and consequential re-submission, the bidder is not required to withdraw his bid submitted earlier. The last modified bid submitted by the bidder within the bid submission time shall be considered as the bid. For

this purpose, modification/withdrawal by other means will not be accepted. In online system of bid submission, the modification and consequential re-submission of bids is allowed any number of times. A bidder may withdraw his bid by using appropriate option for bid withdrawal, before the deadline for submission of bids, however, if the bid is withdrawn, re-submission of the bid is not allowed.

ITB 23.2

Replace ITB Clause 23.2 with the following: Bids requested to be withdrawn in accordance with ITB Sub-Clause 23.1 shall not be opened.

No bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Letter of Bid (Technical Part and/or Financial Part) or any extension thereof.

E. Bid Opening and Evaluation

24.1

The online opening of Technical Part of Bids shall take place at:

Office of Director, G&RB,
17-E.C. Road,
Dehra Dun (U.K.) -248001,
Tele: +91-135-2654528
Fax:+91-135-2656759
Email:grb.soi@gov.in

Date: *[21, Nov, 2018]*

Time: *[03:00 p.m.]*

28

Currency chosen for the purpose of converting to a common currency. **Indian National Rupee**

Source of exchange rate: **BC Selling rate of Union Bank of India**

Exchange rate date. **Date of Opening of** Technical Parts of bids.

29

Following the completion of the evaluation of the Technical Parts of the Bids, the Purchaser will notify all Bidders of the date and time of the public opening of Financial Parts.

The online opening of the Financial Parts of bids (for technically qualified bidders) shall take place at:

Office of Director, G&RB,
17-E.C. Road,
Dehra Dun (U.K.) -248001,
Tele: +91-135-2654528
Fax:+91-135-2656759
Email:grb.soi@gov.in

31 Currency chosen for the purpose of converting to a common currency. **Indian National Rupee**

Source of exchange rate: **BC Selling rate of Union Bank of India**

Exchange rate date. **Date of Opening of Financial Parts of bids.**

F. Award of Contract

32.2 Bid has to be submitted for whole quantity as specified in Schedule of requirement of Bid. The contract(s) will be awarded to the Lowest evaluated responsive bidder subject to the selected Bidder(s) meeting the required qualification criteria.

37.1 The Performance Security acceptable to the Purchaser shall be as per successful Bidder's option in the form of an Account Payee Demand Draft, Fixed Deposit Receipt from a Commercial bank in India or Bank Guarantee from a Commercial bank in India **in favour of Senior Accounts Officer, CPAO, Dehra Dun payable at Dehra Dun**
The Performance Security shall be 5% of the Contract price.

38.1 The Advance Payment shall be as per "Appendix B - Schedule of Payments and Reporting Requirements", against submission of Bank Guarantee for the amount.

39.1 The Adjudicator proposed by the Purchaser is to be nominated by the President of Institution of Engineers, New Delhi. who shall be paid TA/DR at a rate *admissible to Joint Secretary level officer in Survey of India and a fee of INR 3000/= per day.*

Section III. Bidding Forms

Table of Forms

FORMS FOR TECHNICAL	41
1.Letter of Bid– Technical Part	42
2.Bidder Information Form	44
3.Bidder’s JV Members Information Form	45
4.Qualification Information	46
5.Method Statement	48
6.Work Plan & Schedule	50
7.Letter of Acceptance	51
8.Form of Contract	52
9.Bid Security (Bank Guarantee)	54
FORMS FOR FINANCIAL BID	55
10.Letter of Bid- Financial Part	56
11. Price Schedule for Supply as per Schedule of Requirements	58
12. PRICE and Completion Schedule - Related Services	59
13. Manufacturer’s Authorization	61
14. PROFORMA FOR PERFORMANCE STATEMENT	62
15. Undertaking of Authenticity	63

FORMS FOR TECHNICAL

1. Letter of Bid– Technical Part

The Bidder must prepare the Letter of Bid on stationery with its letterhead clearly showing the Bidder's complete name and address.

Note: All italicized text is for use in preparing these forms and shall be deleted from the final products.

No alterations to the text, shall be permitted and no substitutions shall be accepted except as provided in ITB 12.]

Date: *[insert date (as day, month and year) of Bid Submission]*

ATE No.: *[insert number of bidding process]*

Invitation for Bid No.: *[insert No of IFB]*

Alternative No.: *[insert identification No if this is a Bid for an alternative]*

To: *[insert complete name of Purchaser]*

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Documents, including Addenda No. issued in accordance with ITB 11: *[insert the number and issuing date of each Addenda]*;
- (b) We meet the eligibility requirements and have no conflict of interest in accordance with ITB 4;
- (c) We have not been suspended nor declared ineligible by the Purchaser based on execution of a Bid Securing Declaration in the Purchaser's country in accordance with ITB 4;
- (d) We offer to supply in conformity with the Bidding Documents and in accordance with the Delivery Schedules specified in the Schedule of Requirements the following Goods and Related Services ***[insert a brief description of the Goods and Related Services]***;
- (e) Our bid shall be valid for the period of time specified in ITB Sub-Clause 16, from the date fixed for the bid submission deadline in accordance with ITB Sub-Clause 21, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (f) If our bid is accepted, we commit to obtain a performance security in accordance with the Bidding Documents;
- (g) We are not participating, as a Bidder, in more than one bid in this bidding process in accordance with ITB 6, other than alternative bids submitted in accordance with ITB 18;
- (h) We, along with any of our subcontractors, suppliers, consultants, manufacturers, or Suppliers for any part of the contract, are not subject to, and not controlled by any entity

or individual that is subject to, a temporary suspension or Ban or or Blacklisting or Debarment for corrupt and fraudulent practices or for lack in performance by any Government/Semi-Government entity of India.

- (i) We, along with all our sub-contractors and JV Partners, undertake to abide by the Code of Integrity in public Procurement of Government of India,
- (j) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed;
- (k) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive;
- (l) We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in any type of fraud and corruption; and
- (m) We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in India namely, "Prevention of Corruption Act 1988."

Name of the Bidder ***[insert complete name of person signing the Bid]***

Name of the person duly authorized to sign the Bid on behalf of the Bidder** ***[insert complete name of person duly authorized to sign the Bid]***

Title of the person signing the Bid ***[insert complete title of the person signing the Bid]***

Signature of the person named above ***[insert signature of person whose name and capacity are shown above]***

Date signed ***[insert date of signing]*** day of ***[insert month]***, ***[insert year]***

** : Person signing the Bid shall have the power of attorney given by the Bidder to be attached with the Bid Schedules.

2. Bidder Information Form

[The Bidder shall fill in this Form in accordance with the instructions indicated below. No alterations to its format shall be permitted and no substitutions shall be accepted.]

Date: *[insert date (as day, month and year) of Bid submission]*

ATE No.: *[insert number of Bidding process]*

Alternative No.: *[insert identification No if this is a Bid for an alternative]*

Page _____ of _____ pages

1. Bidder's Name *[insert Bidder's legal name]*
2. In case of JV, legal name of each member: *[insert legal name of each member in JV]*
3. Bidder's actual or intended country of registration: *[insert actual or intended country of registration]*
4. Bidder's year of registration: *[insert Bidder's year of registration]*
5. Bidder's Address in country of registration: *[insert Bidder's legal address in country of registration]*
6. Bidder's Authorized Representative Information
 - Name: *[insert Authorized Representative's name]*
 - Address: *[insert Authorized Representative's Address]*
 - Telephone/Fax numbers: *[insert Authorized Representative's telephone/fax numbers]*
 - Email Address: *[insert Authorized Representative's email address]*
7. Attached are copies of original documents of *[check the box(es) of the attached original documents]*
 - Articles of Incorporation (or equivalent documents of constitution or association), and/or documents of registration of the legal entity named above, in accordance with ITB 5.3
 - In case of JV, letter of intent to form JV or JV agreement, in accordance with ITB 5.5(c).
2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.

3. Bidder's JV Members Information Form

[The Bidder shall fill in this Form in accordance with the instructions indicated below. The following table shall be filled in for the Bidder and for each member of a Joint Venture]].

Date: *[insert date (as day, month and year) of Bid submission]*

ATENo.: *[insert number of Bidding process]*

Alternative No.: *[insert identification No if this is a Bid for an alternative]*

Page _____ of _____ pages

1. Bidder's Name: *[insert Bidder's legal name]*
2. Bidder's JV Member's name: *[insert JV's Member legal name]*
3. Bidder's JV Member's country of registration: *[insert JV's Member country of registration]*
4. Bidder's JV Member's year of registration: *[insert JV's Member year of registration]*
5. Bidder's JV Member's legal address in country of registration: *[insert JV's Member legal address in country of registration]*
6. Bidder's JV Member's authorized representative information
Name: *[insert name of JV's Member authorized representative]*
Address: *[insert address of JV's Member authorized representative]*
Telephone/Fax numbers: *[insert telephone/fax numbers of JV's Member authorized representative]*
Email Address: *[insert email address of JV's Member authorized representative]*
7. Attached are copies of original documents of *[check the box(es) of the attached original documents]*
 Articles of Incorporation (or equivalent documents of constitution or association), and/or registration documents of the legal entity named above, in accordance with ITB 5.3.

2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.

4. Qualification Information

1. Individual Bidders or Individual Members of Joint Ventures

- 1.1 Constitution or legal status of Bidder: *[attach copy]*
- Place of registration: *[insert]*
 Principal place of business: *[insert]*
 Power of attorney of signatory of Bid: *[attach]*
- 1.2 Total annual volume of supply of Goods in five years, in the internationally traded currency specified in the BDS: *[insert]*
- 1.3 Supply of Goods as prime supplier on the supply of Goods of a similar nature and volume over the last five years. The values should be indicated in the same currency used for Item 1.2 above. Also list details of work under way or committed, including expected completion date.

Project name and country	Name of Purchaser and contact person	Type of Goods provided and year of completion	Value of contract
(a)			
(b)			

- 1.4 Proposed subcontracts and firms involved. Refer to GCC Clause 7.

Sections of the Services	Value of subcontract	Subcontractor (name and address)	Experience in providing similar Goods/Services
(a)			
(b)			

- 1.5 Financial reports for the last five years: balance sheets, profit and loss statements, auditors' reports, etc. List below and attach copies.
- 1.6 Evidence of access to financial resources to meet the qualification requirements: cash in hand, lines of credit, etc. List below and attach copies of support documents. We certify/confirm that we comply with eligibility requirements as per ITB Clause 4.
- 1.7 Name, address, and telephone, telex, and facsimile numbers of banks that may provide references if contacted by the Purchaser.

1.8 Information regarding any litigation, current or within the last five years, in which the Bidder is or has been involved.

Other party(ies)	Cause of dispute	Details of litigation award	Amount involved
(a)			
(b)			

1.9 Statement of compliance with the requirements of ITB Sub-Clause 4.2.

1.10 Proposed Program (method and supply schedule). Descriptions, drawings, and charts, as necessary, to comply with the requirements of the bidding documents. Refer Form of Method statement and Work-Plan & Schedule at Section III

2. Joint Ventures

2.1 The information listed in 1.1 - 1.10 above shall be provided for each partner of the joint venture.

2.2 Attach the power of attorney of the signatory(ies) of the Bid authorizing signature of the Bid on behalf of the joint venture.

2.3 Attach the Agreement among all partners of the joint venture (and which is legally binding on all partners), which shows that

(a) all partners shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms;

(b) one of the partners will be nominated as being in charge, authorized to incur liabilities, and receive instructions for and on behalf of any and all partners of the joint venture; and

(c) the execution of the entire Contract, including payment, shall be done exclusively with the partner in charge.

3. Additional Requirements

3.1 Bidders should provide any additional information required in the BDS and to fulfill the requirements of ITB Sub-Clause 5, if applicable.

5.Method Statement

[Bidder shall provide information and write-up as per points listed below. The bidder should bring out the justification for the Technology & Methods proposed by him from the Method Statement. Sufficient details and documentary evidences should be given to bring out the justification for proposing the technology. The information & details must be provided by the bidder as per format given below. The information shall be provided in sufficient detail in respect of all headings/sub-headings.]

1. Control Center

A) Technology & its Justification:

- (i) Details of Technology for:*
 - *Software and hardware for up linking of receiver to control center, Method of data transmission and reception at receiver station from control center*
 - *Advantages & limitations of critical Technologies involved*
- (ii) References to be cited of Indian & International Projects (from bidder's own experience or information available in open domain) in which proposed Technology has been applied for similar task.*
- (iii) Brief write up based on information provided on above points justifying the adequacy of proposed Technology to meet the technical specifications stipulated in bid document for Software.***

B) Equipment & their Justification

- (i) Make, model of key equipment to be installed at each site viz., receiver center hardware & software to be used for GNSS signal reception, archival, transmission and distribution along with hardware required for power supply and backup including solar panel*
- (ii) Key specifications of above equipments*
- (iii) Brief write up based on information provided on above points justifying the adequacy of equipment to meet the technical specifications stipulated in bid document*

C) Processes for & their Justification

- (i) Workflow showing various stages of work and their inter-dependencies*
- (ii) Details of Processes at every stage viz. GNSS signal reception, processing, transmission to control center, Best Practices that will be adopted at each stage*
- (iii) Details of manual/semi-automatic/automatic QA/QC measures to be taken during/at end of each stage.*
- (iv) Brief write-up based on information provided above justifying the adequacy of methods & processes proposed to meet the specifications stipulated in the bid-document*

D) Details of Previous Work & Justification from previous Experience

- (i) Listing of similar work carried out by bidder (as quoted by them in 1.3/ Section III) and attachment of satisfactory completion certificate*
- (ii) Key Specifications of similar work executed by the bidder*

(iii) Brief write-up based on information provided above clearly bringing out how by suitable modifications (if any) to the design parameters the specifications stipulated in this bid document shall be met requirements of this Project

6. Work Plan & Schedule

[Bidder shall provide following information/details for their Supply Schedule. The information & details must be provided by the bidder as per format given below. The information shall be provided in sufficient detail in respect of all headings/sub-headings.]

1. Time Schedule

Outline the time-schedule of activities, their phasing and interrelations, milestones and delivery plan .

2.In case of JV and sub-contracting for permitted activities, the division of responsibility to each member should be clearly spelt out.

7. Letter of Acceptance

[letterhead paper of the Purchaser]

[date]

To: *[name and address of the Supplier]*

This is to notify you that your Bid dated *[date]* for execution of the *[name of the Contract and identification number, as given in the Special Conditions of Contract]* for the Contract Price of the equivalent of *[amount in numbers and words] [name of currency]*, as corrected and modified in accordance with the Instructions to Bidders is hereby accepted by our Agency.

Note: Insert one of the 3 options for the second paragraph. The first option should be used if the Bidder has not objected the name proposed for Adjudicator. The second option if the Bidder has objected the proposed Adjudicator and proposed a name for a substitute, who was accepted by the Purchaser. And the third option if the Bidder has objected the proposed Adjudicator and proposed a name for a substitute, who was not accepted by the Purchaser.

We confirm that *[insert name proposed by Purchaser in the Bidding Data]*,

or

We accept that *[name proposed by bidder]* be appointed as the Adjudicator

or

We do not accept that *[name proposed by bidder]* be appointed as Adjudicator, and by sending a copy of this letter of acceptance to *[insert the name of the Appointing Authority]*, we are hereby requesting *[name]*, the Appointing Authority, to appoint the Adjudicator in accordance with Clause 37.1 of the Instructions to Bidders

You are hereby instructed to proceed with the execution of the said contract for the provision of Services in accordance with the Contract documents.

Please return the attached Contract duly signed

Authorized Signature: _____

Name and Title of Signatory: _____

Name of Agency: _____

Attachment: Contract

8. Form of Contract

[letterhead paper of the Purchaser]

This CONTRACT (hereinafter called the “Contract”) is made the *[day]* day of the month of *[month]*, *[year]*, between, on the one hand, *[name of Purchaser]* (hereinafter called the “Purchaser”) and, on the other hand, *[name of Supplier]* (hereinafter called the “Supplier”).

*[Note: In the text below text in brackets is optional; all notes should be deleted in final text. If the Supplier consist of more than one entity, the above should be partially amended to read as follows: “...(hereinafter called the “Purchaser”) and, on the other hand, a joint venture consisting of the following entities, each of which will be jointly and severally liable to the Purchaser for all the Supplier’s obligations under this Contract, namely, *[name of Supplier]* and *[name of Supplier]* (hereinafter called the “Supplier”).]*

WHEREAS

- (a) the Purchaser has requested the Supplier to supply certain Goods and Related services as defined in the General Conditions of Contract attached to this Contract (hereinafter called the “Goods”);
- (b) the Supplier, having represented to the Purchaser that they have the required professional skills, experience and technical & financial resources, have agreed to supply the Goods on the terms and conditions set forth in this Contract at a contract price of.....;
- (c) the Purchaser has received intends to apply part of the funds received from _____ towards the cost of the Goods and intends to apply a portion of the proceeds of this fund to eligible payments under this Contract, it being understood (i) that such payments will be subject, in all respects, to the relevant Government of India rules in GFR 2017;

NOW THEREFORE the parties hereto hereby agree as follows:

1. The following documents shall be deemed to form and be read and construed as part of this Agreement, and the priority of the documents shall be as follows:

- (a) the Letter of Acceptance;
- (b) the Supplier’s Bid
- (c) the Special Conditions of Contract;
- (d) the General Conditions of Contract;
- (e) the Specifications;
- (f) the Priced Schedule; and
- (g) The following Appendices: *[Note: If any of these Appendices are not used, the words “Not Used” should be inserted below next to the title of the Appendix and on the sheet attached hereto carrying the title of that Appendix.]*

Appendix A – Details of Services required

Appendix B - Schedule of Payments and Reporting Requirements

Appendix C—Key Personnel

Appendix D—Services and Facilities Provided by the Purchaser

Appendix E—Salient Features of Labour& Environment Laws

Appendix F-Appointment of Adjudicator/Dispute Review Expert

Appendix G- Specifications & Drawings of control center

2. The mutual rights and obligations of the Purchaser and the Supplier shall be as set forth in the Contract, in particular:
- (a) the Supplier shall supply the Goods in accordance with the provisions of the Contract; and
 - (b) the Purchaser shall make payments to the Supplier in accordance with the provisions of the Contract.

IN WITNESS WHEREOF, the Parties hereto have caused this Contract to be signed in their respective names as of the day and year first above written.

For and on behalf of *[name of Purchaser]*

[Authorized Representative]

For and on behalf of *[name of Supplier]*

[Authorized Representative]

[Note: If the Supplier consists of more than one entity, all these entities should appear as signatories, e.g., in the following manner:]

For and on behalf of each of the Members of the Supplier

[name of member]

[Authorized Representative]

[name of member]

[Authorized Representative]

9. Bid Security (Bank Guarantee)

[The Bank shall fill in this Bank Guarantee Form in accordance with the instructions indicated.]

Beneficiary: _____

Date: _____

BID GUARANTEE No.: _____

We have been informed that _____ (hereinafter called "the Bidder") has submitted to you its bid dated (hereinafter called "the Bid") for the execution of _____ under Invitation for Bids No. _____ ("the IFB").

Furthermore, we understand that, according to your conditions, bids must be supported by a bid guarantee.

At the request of the Bidder, we _____ hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of _____ (_____) upon receipt by us of your first demand in writing accompanied by a written statement stating that the Bidder is in breach of its obligation(s) under the bid conditions, because the Bidder:

- (a) has withdrawn its Bid during the period of bid validity specified by the Bidder in the Form of Bid; or
- (b) having been notified of the acceptance of its Bid by the Purchaser during the period of bid validity,
 - (i) fails or refuses to execute the Contract Form; or
 - (ii) fails or refuses to furnish the performance security, if required, in accordance with the Instructions to Bidders.

This guarantee will expire: (a) if the Bidder is the successful bidder, upon our receipt of copies of the contract signed by the Bidder and the performance security issued to you upon the instruction of the Bidder; or (b) if the Bidder is not the successful bidder, upon the earlier of (i) our receipt of a copy of your notification to the Bidder of the name of the successful bidder; or (ii) twenty-eight days after the expiration of the Bidder's Bid.

Consequently, any demand for payment under this guarantee must be received by us at the office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458.

[signature(s)]

FORMS FOR FINANCIAL BID

10. Letter of Bid- Financial Part

The Bidder must prepare the Letter of Bid on stationery with its letterhead clearly showing the Bidder's complete name and address.

Note: All italicized text is for use in preparing these forms and shall be deleted from the final products.

No alterations to the text shall be permitted and no substitutions shall be accepted except as provided in ITB 12.]

Date: *[insert date (as day, month and year) of Bid Submission]*

ATE No.: *[insert number of bidding process]*

Invitation for Bid No.: *[insert No of IFB]*

Alternative No.: *[insert identification No if this is a Bid for an alternative]*

To: *[insert complete name of Purchaser]*

We, the undersigned Bidder, hereby submit the second part of our Bid, the Financial Part. In submitting our Financial Part we make the following additional declarations:

- (a) Our bid shall be valid for the period of time specified in ITB Sub-Clause 16, from the date fixed for the bid submission deadline in accordance with ITB Sub-Clause 21, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (b) The total price of our Bid, excluding any discounts offered in item (c) below, is ***[insert the total price of the bid in words and figures];***
- (c) The discounts offered and the methodology for their application are:
 - (i) The **discounts offered are: *[Specify in detail each discount offered.]***
 - (ii) The **exact method of calculations to determine the net price after application of discounts is shown below: *[Specify in detail the method that shall be used to apply the discounts]; Discounts.***
- (d) The following commissions, gratuities, or fees have been paid or are to be paid with respect to the bidding process or execution of the Contract: *[insert complete name of each Recipient, its full address, the reason for which each commission or gratuity was paid and the amount and currency of each such commission or gratuity]*

Name of Recipient	Address	Reason	Amount
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

(If none has been paid or is to be paid, indicate “none.”)

- (e) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed.

Name of the Bidder *[insert complete name of person signing the Bid]*

Name of the person duly authorized to sign the Bid on behalf of the Bidder** *[insert complete name of person duly authorized to sign the Bid]*

Title of the person signing the Bid *[insert complete title of the person signing the Bid]*

Signature of the person named above *[insert signature of person whose name and capacity are shown above]*

Date signed *[insert date of signing]* day of *[insert month]*, *[insert year]*

** : Person signing the Bid shall have the power of attorney given by the Bidder to be attached with the Bid Schedules.

11. Price Schedule for Supply as per Schedule of Requirements

A. PRICE SCHEDULE FOR SUPPLY AS PER SCHEDULE OF REQUIREMENTS

Date: _____ NCB No: _____ Alternative No: _____ Page No _____ of _____									
1	2	3	4	5	6	7	8	9	10
Line Item No	Description of Goods	Country of Origin	Delivery Date	Quantity and physical unit	Unit price EXW In INR	Total EXW price per line item (Col. 5×6) In INR	Price per line item for inland transportation, insurance and other services required to convey the Goods to their final destination(ITB 14.6 (a))In INR	GST and other taxes payable per item if Contract is awarded (in accordance with ITB 14.6(a) In INR	Total Price per line item (Col. 7+8+9) In INR
1	Equipments pertaining to Receiver Station including 5 years comprehensive warranty								
	1.a. GNSS Set as detailed in Sl. 1 of Sub-Section 3 Technical Specification of Section V Schedule of Requirements		Within 150 days from date of signing contract	49 Set					
	1.b. All other sub-component as detailed in Sl. 3 of Sub-Section 3 Technical Specification of Section V Schedule of Requirements		Within 150 days from date of signing contract	49 Set					
2	Rovers for Field Survey as detailed in Sl. 1 of Sub-Section 3 Technical Specification of Section V Schedule of Requirements including 5 years comprehensive warranty		Within 60 days from date of signing contract	15 Set					
3	Equipments pertaining to Communication Network With all sub-component as detailed in Sl. 4 of Sub-Section 3 Technical Specification of Section V Schedule of Requirements including 5 years comprehensive warranty		Within 60 days from date of signing contract	1 Set					
Total Price									

Note:-(i) Any item not explicitly defined in the Technical Specifications but implicitly required as part of the system/solution should be quote with details about its utility, quantity and prices suitably as sub-component in the above table.

12. PRICE and Completion Schedule - Related Services

							Date: _____
							NCB No: _____
							Alternative No: _____
							Page N° _____ of _____
1	2	3	4	5	6	7	8
Service N°	Description of Services (excludes inland transportation and other services required in India to convey the goods to their final destination)	Country of Origin	Delivery Date at place of Final destination	Quantity and physical unit	Unit price In INR	GST and other taxes payable per item if Contract is awarded In INR	Total Price per Service (Col. 5x6+7) In INR
1	At Control Centre, installation/upgradation of software solution and testing of whole system		At Dehradun 180 days from date of signing contract	1 control station			
2	At each receiver station, Site preparation including Civil and Electric works, establishment of communication network, installation and commissioning of All other equipments pertaining to receiver station and necessary electricity and communication line (ADSL as well as GSM/CDMA) connection, as detailed in in Sl. 1,2 3,4 and 5 of Sub-Section 3 Technical Specification of Section V "Schedule of Requirements", and testing		As per list attached in Sub-section 7 of Section V "Schedule of Requirements" 180 days from date of signing contract	49 receiver station			
3	Training (including Class room as well as Onsite) of all types (as required) to Survey of India personnel in operational support , Running and Maintenance (Preventive and Emergency) of all components of the CORS Network so as to enable SOI to under-take the transfer on completion of the contract		At Dehradun (U.K.) and for component of receiver station at one station (any) Within 30 Days from date of commissioning of CORS Network	Training of 20 person on each sub component of CORS Network.			
4	Furnishing of a detailed operations and maintenance manual with relevant SOPs for all components of Network CORS system		At Dehradun (U.K.) Within 30 Days from date of installation	4 sets			
5	Comprehensive on-site full operational and maintenance support for all components of the CORS system for a period of 5 years, including payment of monthly electricity and communication line (ADSL as well as GSM/CDMA) bills		At Control Station as well as at Each receiver Stations, Starting from date of commissioning	for a period of 5 years Starting from date of commissioning			

6	Comprehensive Insurance of Equipments installed at all receiver stations against theft, fire, vandalism as per Section VII Appendices, Appendix A – Details of Services required, point (v) from the date of installation till completion of contractual period		At Each receiver Stations, Starting from date of installation	Starting from date of installation till completion of contractual period			
Total Bid Price							

Name of Bidder *[insert complete name of Bidder]* Signature of Bidder *[signature of person signing the Bid]* Date *[insert date]*

13. Manufacturer's Authorization

*[The Bidder shall require the Manufacturer to fill in this Form in accordance with the instructions indicated. This letter of authorization should be on the letterhead of the Manufacturer and should be signed by a person with the proper authority to sign documents that are binding on the Manufacturer. The Bidder shall include it in its bid, if so indicated in the **BDS.**]*

Date: *[insert date (as day, month and year) of Bid Submission]*

IFB No.: *[insert number of bidding process]*

Alternative No.: *[insert identification No if this is a Bid for an alternative]*

To: *[insert complete name of Purchaser]*

WHEREAS

We *[insert complete name of Manufacturer]*, who are official manufacturers of *[insert type of goods manufactured]*, having factories at *[insert full address of Manufacturer's factories]*, do hereby authorize *[insert complete name of Bidder]* to submit a bid the purpose of which is to provide the following Goods, manufactured by us *[insert name and or brief description of the Goods]*, and to subsequently negotiate and sign the Contract.

We hereby extend our full guarantee and warranty in accordance with Clause 25 of the General Conditions of Contract, with respect to the Goods offered by the above firm.

No company or firm or individual other than M/s. _____ are authorized to bid, and conclude the contract for the above goods manufactured by us against this specific IFB.

Signed: *[insert signature(s) of authorized representative(s) of the Manufacturer]*

Name: *[insert complete name(s) of authorized representative(s) of the Manufacturer]*

Title: *[insert title]*

Dated on _____ day of _____, _____ *[insert date of signing]*

14. PROFORMA FOR PERFORMANCE STATEMENT

(For a period of last Five years)

[Please see ITB Clause 13.1(g)(i)]

Bid No. _____

Date of opening _____

Time _____ Hours

Name of the Firm _____

<u>Order placed by (full address of Purchaser)</u>	<u>Order No. and date</u>	<u>Description and quantity of ordered equipment</u>	<u>Value of order</u>	<u>Date of completion of delivery</u>		<u>Remarks indicating reasons for late delivery, if any</u>	<u>Has the equipment been satisfactorily functioning? (Attach documentary proof) ****</u>
				As per contract	Actual		
1	2	3	4	5	6	7	8

Signature and seal of the Bidder _____

**** The documentary proof will be a certificate from the consignee/end-user with cross-reference of order no. and date in the certificate along with a notarized certification authenticating the correctness of the information furnished. If at any time, information furnished is proved to be false or incorrect, the earnest money furnished will be forfeited**

15. Undertaking of Authenticity

To

[insert complete name of Purchaser]

Sub: Undertaking of Authenticity for Supply of IT Hardware/Software

Ref : 1. Your IFB No. -----dated-----.

2. Our Bid no. -----dated-----.

With reference to the Hardware/Software being quoted to you vide our quotation no. cited above, we hereby undertake that all the components/parts/assembly/software used in the hardware and software supplies as part of supplies to this Tender shall be original new components/parts/ assembly /software only, from respective OEMs of the products and that no refurbished/duplicate/ second hand components/parts/ assembly / software are being used or shall be used.

We also undertake that in respect of licensed operating system if asked for by you in the purchase order, the same shall be supplied along with the authorised license certificate (e.g. Product Keys on Certification of Authenticity) and also that it shall be sourced from the authorised source (e.g. Authorised Microsoft Channel in case of Microsoft Operating System).

Should you require, we hereby undertake to produce the certificate from our OEM supplier in support of above undertaking at the time of delivery/installation. It will be our responsibility to produce such letters from our OEM supplier's at the time of delivery or within a reasonable time.

In case of default and if we are unable to comply with above at the time of delivery or during installation, for the IT Hardware/Software already billed, we agree to take them back without demur, if already supplied and return the money if any paid to us by you in this regard.

We (*bidder name*) also take full responsibility of both Parts & Service SLA as per the terms and conditions of this RFP Document on behalf of all the OEMs whose hardware/software will form part of supply quoted in this tender, even if there is any defect by their respective authorized Service Centre/ Reseller/SI etc.

Authorised Signatory
Name and
Designation

Place:

Date:

Part II – Supply Requirement

Section IV. Eligible Countries

**Eligibility for the Provision of Goods, Works and Services in
GoI Procurement**

All Countries that have Diplomatic Relation with India

Section V - Schedule of Requirements

1. List of Goods and Delivery Schedule	66
2. List of Related Services [ITB Clause 14.6(b)] and Completion Schedule.....	67
3. TECHNICAL SPECIFICATIONS	68
4. Drawings	79
5. Inspections and Tests	80
6. PROFORMA OF CERTIFICATE FOR ISSUE BY THE PURCHASER AFTER SUCCESSFUL INSTALLATION AND STARTUP OF THE SUPPLIED GOODS	82
7. Locations of the RECEIVER stations	85

1. List of Goods and Delivery Schedule

Line Item N°	Description of Goods		Quantity	Physical unit	Final (Site) Destination as specified in BDS	Delivery (as per Incoterms) Date			Bid Security in Indian Rupees
						Earliest Delivery Date	Latest Delivery Date	Bidder's offered Delivery date [to be provided by the bidder]	
1	Equipments pertaining to Receiver Station								INR 5.0 Lakhs
	1.a.	GNSS Set as detailed in Sl. 1 of Sub-Section 3 Technical Specification of Section V Schedule of Requirements	49	Nos	As per list attached in Sub-section 7 of Section V "Schedule of Requirements"	150 Days	150 Days		
	1.b.	All other sub-component as detailed in Sl. 3 of Sub-Section 3 Technical Specification of Section V Schedule of Requirements	49	Nos	As per list attached in Sub-section 7 of Section V "Schedule of Requirements"	150 Days	150 Days		
2	Rovers for Field Survey as detailed in Sl. 1 of Sub-Section 3 Technical Specification of Section V Schedule of Requirements		15	Nos.	At Dehradun	60 Days	60 Days		
3	Equipments pertaining to Communication Network With all sub-component as detailed in Sl. 4 of Sub-Section 3 Technical Specification of Section V Schedule of Requirements		01	Nos.	At Dehradun	150 Days	150 Days		

[The Purchaser shall fill in this table, with the exception of the column "Bidder's offered Delivery date" to be filled by the Bidder]

1. The Bidder should furnish a detailed operations and maintenance manual for each appropriate unit of the supplied goods and equipment
2. The Supplier is responsible for Performance of on-site assembly and start-up of the supplied instrument units.
3. The Supplier is responsible for all unpacking, assemblies, wiring, installations, cabling between instrument units, connecting it to the computer (wherever applicable) and connecting to power supplies. The Supplier will test all operations of the instruments, measurements and data production, storage & output and accomplish all adjustments necessary for successful and continuous operation of the instrument at all installation sites.
4. Warranty for 5 years

2.List of Related Services [ITB Clause 14.6(b)] and Completion Schedule

Service	Description of Service	Quantity ¹	Physical Unit	Place where Services shall be performed	Final Completion Date(s) of Services
1	At Control Centre, Upgradation/ installation of software solution and testing of whole system	1	Nos	at Dehradun	180 days from date of signing contract
2	At each receiver station, Site preparation including Civil and Electric works, establishment of communication network, installation and commissioning of All other equipments pertaining to receiver station, and Electricity and communication line (ADSL as well as GSM/CDMA) connection, as detailed in in Sl. 1,2 3,4 and 5 of Sub-Section 3 Technical Specification of Section V “Schedule of Requirements”, and testing	49	Nos	As per list attached in Sub-section 7 of Section V “Schedule of Requirements”	180 days from date of signing contract
3	Training (including Class room as well as Onsite) of all types (as required) to Survey of India personnel in operational support , Running and Maintenance (Preventive and Emergency) of all components of the CORS Network so as to enable SOI to undertake the transfer on completion of the contract	Training of 20 person on each sub component of CORS Network.	Nos	at Dehradun (U.K.) and for component of receiver station at Roorkee (U.K.)	Within 30 Days from date of commissioning
4	Furnishing of a detailed operations and maintenance manual with relevant SOPs for all components of Network CORS system	4	Set	at Dehradun (U.K.)	Within 30 Days from date of commissioning
5	Comprehensive on-site full operational and maintenance support for all components of the network CORS system for a period of 5 years including payment of monthly electricity and communication line (ADSL as well as GSM/CDMA) bills	1 control Station and 77 receiver station for period of 5 years	Nos	At Control Station as well as at Each receiver Stations,	Starting from date of commissioning
6	Comprehensive Insurance of Equipments installed at all receiver stations against theft, fire, vandalism from the date of installation till completion of contractual period as per Section VII Appendices, Appendix A – Details of Services required, point (v)	49 receiver station	Nos	At Each receiver Stations,	Starting from date of installation till completion of contractual period

3. TECHNICAL SPECIFICATIONS

1. GNSS-Dual Frequency

The Bidder to prepare a comparison sheet as below: -

Sl. No.	Name of the Item	Required Specification	Bidder's Offered Specifications / Compliance /Deviation Statement (to be filled up by BIDDER)
1	GNSS receiver	The offered receiver shall have 400+ physical channels	
		Multiple frequency and supporting the following simultaneous signal tracking: <ul style="list-style-type: none"> - GPS: L1 C/A; L2E/L2P; L2C; L5 - GLONASS: L1 C/A; L1P; L2 C/A; L2P; L3 CDMA - GALILEO: L1 CBOC; E5A; E5B; E5AltBoc - BEIDOU: B1; B2; B3 - QZSS: L1 C/A; L1C; L1 SAIF; L2C; L5; LEX - SBAS: L1 C/A (EGNOS/MSAS/WAAS); L5 (WAAS) - L-Band - NavIC (IRNSS) signals tracking shall be provided as and when available 	
		Receiver must be capable of tracking all satellites in view, even if unhealthy, to an elevation angle of 0°.	
		The receiver shall support real time kinematic positioning using industry standard formats	
		The receiver shall support onboard worldwide, real-time positioning via both Internet Protocol (IP) and L-Band satellite delivery.	
		The offered receiver shall offer a minimum of two power inputs supporting both AC and DC operation with a minimum input power range of 10-28VDC.	
		The offered receiver shall contain an internal battery (Li-Ion) and with battery charger. The internal battery shall be capable of operating the unit standalone for up to 12 hours. The offered receiver shall contain capability to Automatic swapping between power sources without affecting data recorded.	
		Internal battery must be capable of operating as an internal battery backup system (UPS) with user configurability to enable/disable this functionality.	
		Charger must be capable of charging from PoE input.	
		The receiver must automatically restart after loss of power and must power up in the same configuration when powered down (or loss of power).	
The receiver must have a front panel display and a physical keyboard to allow the basic receiver configuration on site without the need of any other device (i.e.: IP configuration, data logging, coordinates set-up).			

	The receiver shall offer an automatic shutdown and wakeup routine to allow the receiver to power down when not needed and wake up at a predetermined time and continue the configured activity.	
	Support of logging rates from 50Hz to 600 seconds	
	Must contain internal memory with 8GB or more of logging space. The internal memory should not dislodge from its socket during high motion events such as earthquakes should be able to maintain operation and logging during said events.	
	In addition to the internal memory, the receiver must have a port for removable media.	
	Must support a minimum of 12 independent and concurrent logging sessions.	
	Internally logged data shall have a file size of less than 6MB (unzipped) for a 24 hour, 15 second file to maximize storage capacity	
	Must be capable of producing both RINEX and BINEX file formats internal to the receiver without the need for external tools/converters.	
	Must be capable of pushing logged and converted data files to three separate FTP servers.	
	Receiver must support both a configurable ring buffer style memory deletion scheme as well as session specific "pools" with similar functionality.	
	Receiver must support the configurable input, output and logging of Met/Tilt measurements.	
	The receiver must have an integrated RJ45 or equivalent connector (supporting both TCP/IP/upgradable to UDP), two serial ports, USB, and an external frequency input. RJ45 or equivalent connector should be enabled for server feature.	
	A minimum of 10 unique TCP/IP ports. Unique meaning one multicast TCP/IP port (allows multiple connections) only counts as 1 TCP/IP port. Each port must be fully configurable independent of the other ports and outputs.	
	In addition to the 10 TCP/IP ports, the receiver shall support a minimum of 1 NTRIP Caster, 3 NTRIP Client, and 3 NTRIP Server ports	
	NTP Client and NTP Server functionality.	
	Receiver must support IP filtering restricting IP packet access to and from the receiver for enhanced access control security based on individual IP addresses or subnets based on a user specified netmask.	
	The receiver must support two Bluetooth connections or greater.	
	The receiver must support FTP downloads as well as the FTP REST command.	
	The receiver must support the following streaming data types: CMR, CMR+, RTCM v2.x, RTCM v3.x (including MSM 1 through 7 messages), BINEX, and NMEA. Proprietary message types will be considered in addition to (not in replace of) the before mentioned formats.	
	The offered receiver shall be capable of monitoring its own absolute position to centimeter level accuracy and alerting via both graphical and email mean of any detected change in antenna position. The tolerance at which to send alerts shall be user configurable depending upon the solution type in use. When this tolerance is exceeded, the receiver must be able to automatically stop sending correction data until the antenna moves back within tolerance	
	The receiver shall support email alerts for various functions such as tracking, power, reboots, logging, status, etc.	
	The receiver shall support dynamic domain name system (DDNS).	
	Receiver must implement a secure network connection (secure means via an encrypted, authenticated session) as well as provide various access levels to the receiver controls.	

		Receiver must meet the following environmental specification: Operating temperature: -40° C - + 65° C, Humidity: 100%, fully sealed with IP67 certification, Shock: 1m drop to hard surface.	
		Geodetic antenna/ Chock Ring tracking GPS, Glonass, Galileo, Beidou, SBAS, L-Band,	
2	GNSS Antenna	Technology that minimizes multi-path interference.	
		Phase center stability better than 2 mm and repeatability less than 1 mm	
		Antenna gain 29 dB or better	
		Supply current 125 mA maximum	
		Minimum tracking elevation = 0 degrees	
		Absolute calibration file from IGS must be available. For antenna calibrations to be valid the GNSS antenna must be orientated to within ±5° of True North while installation at site.	
		Powered by receiver (supply voltage 3.5 to 20VDC)	
		Antenna shall operate in humidity, high winds, sand storm and blowing rain	
		Temperature range is -40°C to +65°C	
		Humidity up to 100, fully sealed	
		Shock rating 1m drop	
		The antenna should be delivered with an external radome. Antenna + radome combination must have a valid antenna calibration.	
		All CORS cabling is vulnerable to vandalism, weather, pests and fire. External cabling should be protected by secured conduits. Cable connectors are potential points of failure when stressed, corroded, or infiltrated by water, dust and pests. Self-amalgamating ultra-violet stabilized tape shall be used to protect cable connections. A short loop of excess cable at the antenna and receiver connections should be provided to avoid tension in cable. A grounded lightning protector in the antenna cable should be provided, especially in lightning prone areas. In lightning prone areas, the horizontal cable-run length should be as less as possible to minimize the risk of signal induction from nearby lightning strikes. If this is not possible, lightning arrestor should be fitted toward the receiver end of the cable. The Supplied cables and components should have a total signal loss of less than 9 dB over the length of the cable run.	
3	Antenna cable	Static Real Time Kinematic (RTK)	
4	Rovers for Field Work	Consistent accuracy of 2 cm or better within 5 minutes (in RTK) mode	
		Consistent accuracy of 5 cm or better within 5 minutes (in RTK) mode	
		The offered receiver shall have 240 or more physical channels. Calibration Certificate to be submitted.	
		Multiple frequency and supporting the following simultaneous signal tracking: a. GPS: L1 C/A; L2E/L2P; L2C; L5 b. GLONASS: L1 C/A; L1P; L2 C/A; L2P; L3 c. GALILEO: L1 CBOC; E5A; E5B; E5 d. BEIDOU: B1; B2; B3	

		e. IRNSS: L5	
		Receiver must be capable of receiving/transmitting the messages from base receiver through GSM/GPRS/TCIP network.	
		Receiver should support scalable accuracy without changing the hardware.	
		Receiver must be capable of tracking all satellites in view, even if unhealthy, to an elevation angle of 0°.	
		Receiver shall support real time kinematic positioning using industry standard formats.	
		Receiver shall have a minimum of one power inputs.	
		Receiver should contain an internal battery, capable of operating for up to 8 hours with internal/external battery charger. Provision for connection to external battery should also be provided.	
		Receiver must have 7" or better size screen/display with Window OS to allow the basic receiver configuration on site without the need of any other device.	
		Receiver must support of logging rates from 20Hz to 600 seconds.	
		Receiver/Smart Device must contain internal memory with minimum of 1GB of space or more.	
		The Receiver/smart Device must be provided with a heavy-duty protective case or container for the main unit and the ancillary items.	
		In addition to the internal memory, the Receiver/smart Device must have a source of removable media of at least 8 GB memory.	
		Receiver must have at least one serial and one USB port.	
		Receiver must support Bluetooth connections.	
		Receiver must meet the following environmental specification: Operating temperature: -40° C - + 65° C, Humidity: 100%, Shock: 1m drop to hard surface.	
		The antenna must support tracking of GPS, Glonass, Galileo, Beidou, IRNSS, SBAS signals.	
		Receiver should adopt technology that minimize multi-path interference.	
		Receiver antenna gain should be 29 dB or more.	
		Minimum tracking elevation = 0 degrees	
		The Receiver must be supplied with mounting kit having optical/laser plummet.	
		The Receiver/smart Device must have a robust adjustable (telescopic) range pole (minimum of 3.0m long) with quick release operation and robust bipod, heavy duty bag with reinforced solid base and reinforced opening is to be provided along with the range pole. Along with Receiver/smart Device, standard OEM accessories to be provided.	

2 TECHNICAL DETAIL FORMS: Control Centre (All components) at DEHRADUN (U.K.)

Sl. No.	Requirement at each location	Specifications	Bidder's Offered Specifications / Compliance/Deviation Statement (to be filled up by BIDDER)
1	Compatibility	<ul style="list-style-type: none"> • CORS network established should be fully compatible with existing/Proposed Control Center at Dehardun, technical specification of existing/Proposed Control Center are as given in Appendix G of Section VII Appendices • Receiver station should be able to transmit collected data to Control center with less than 200 milisecond latency. • Receiver station should be able to be monitored, controlled remotely from control center; including periodic up gradation of firmware/software's installed at receiver stations. • Rovers should be able to receive real time corrected data from control center via mode as specified in Appendix G of Section VII Appendices 	

3 TECHNICAL DETAIL FORM: Receiver Stations (All components)

SI No.	Requirement at each location	Specifications	Bidder's Offered Specifications / Compliance/Deviation Statement (to be filled up by BIDDER)
CORS stations should be as per UNAVCO specifications for size, design, operation and quality to house GNSS receiver system and other peripherals (including power back-up systems).			
1	Civil and Electrical Works (Monumentation):	<p>Design, quality and specifications of reference pillars should generally meet UNAVCO guidelines for Ground Mount or Roof Mount on suitability at a particular station as decided by the SOI</p> <p>(a) Ground Mount pillar pedestal of 1.2 m X 1.2 m should be 2 to 3 m below ground level depending on soil type. Dimension of pillar above pedestal will be 55 cm X 55 cm. Height of pillar of reference station should be 3 m above ground level. Diameter of reinforcement should be 8 bars of 20 mm dia with standard spacing and tie bars of diameter 8 mm at a spacing of 25 cm c/c. Dimension of pillar above pedestal should be 55 cm X 55 cm Reference station platform should be a RCC structure with M40 grade concrete and reinforcement grade Fe500.</p> <p>(b) Roof Mount pillar pedestal should be 1.2 m X 1.2 m with thickness 25 cm. Dimension of pillar above pedestal will be 25 cm X 25 cm. Height of pillar of reference station should be 1.2 to 1.7 m above pedestal top. Diameter of reinforcement should be 4 bars of 20 mm dia with standard spacing and tie bars of diameter 8 mm at a spacing of 25 cm c/c. Reference station platform should be a RCC structure with M40 grade concrete and reinforcement grade Fe500.</p> <p>(c) The ground mounted reference pillar and equipment housing should be fenced with a hot dip galvanized iron fencing with one door, lock and key.</p> <p>(d) A twin-axis tilt sensor should be installed at pillar, to capture deformation of pillar and foundation/building. Data captured by tilt sensor should be recorded in RINEX file along with meteorological data</p> <p>All equipment except antenna, antenna radom, and solar panels should be encased in antistatic, weather proof, temper proof steel housing of NEMA 4 type enclosure. Housing shall have door on front to accesses equipment for maintenance etc. Access through Door shall be restricted by bolt secured by lock. Enclosure shall be installed on a separate Pedestal. The design with detail drawings of pillar and pedestal (designed to support the enclosure) should be submitted by vendor for approval by the purchaser.</p> <p>All Electrical works (incl. Earthing) at reference station site for installing all components including power back-up</p>	
2	Lightening Conductor & Surge protection	Lightening Conductor and Surge protector of reputed brand as per the UNAVCO specs	
3	Power Back-up	Seven (07) days 24X7 Un-interrupted power back-up arrangement with N+1 redundancy (Detailed power calculation sheet is to be submitted	

		with the bid) Power connection at each reference station is to be taken by bidder on behalf of purchaser.	
4	Solar Panel	Number of industry grade solar panels with wattage & solar charge controller should be proposed for approval by the purchaser based on the power calculation sheet for minimum 10 days uninterrupted power supply for reference station. Approved number of solar panels to be installed at Reference station. The solar charge controller should be part of supply	
5	Interoperability	With all Industry standard RTK Rovers	
6	Accessories	AC, DC power cables, Batteries, Connectors, Rack mounting kit, Antenna adaptor (as per UNAVCO specs), Industry grade flash and SD cards, battery chargers (one extra), Fuses etc.	
7	Memory	Internal Memory of GNSS receiver should be 16 GB or more and 1 Terabyte auxiliary USB supported storage device.	
8	Data Logging	Maximum logging rate 50 Hz.	
9	Meteorological Sensor	<p>Measurement of temperature, pressure and humidity to be integrated with binary file in GNSS receiver with following specification</p> <ol style="list-style-type: none"> 1. Accuracy – Temp: 0.2 deg. C, pressure: 0.15 hPa humidity: 2% 2. Stability - Temp: 0.5 deg. C/year, pressure: 0.1 hPa/year humidity: 2%/year 3. Operating range - Temp: + 60 to -40 deg. C, pressure: 650 to 1100 hPa humidity: 0 to 100% 4. Power +6 to +16V DC, typical current drain 3 mA in sleep mode, and 38mA maximum 5. Port: RS232/USB should be adaptable with GNSS receiver <p>Install meteorological sensors separately from the CORS monument to minimize any increase in the multipath environment. RINEX shall be used to record and transmit meteorological data. Survey the position of all auxiliary sensors for inclusion in the site logs and metadata. The height difference between the pressure measurement reference mark of the meteorological sensor and the CORS reference point should be determined to better than 10 millimeters.</p>	
10	Communication line:	<p>Between Receiver Stations and Control Centre:</p> <ol style="list-style-type: none"> a) Primary: ADSL/Broadband or equivalent b) Secondary: Wireless cellular i.e. GSM/CDMA (2G/3G/4G), <p>Provision for Dual SIM shall be provided, with at least one SIM should be internal, to increase reliability.</p> <p>ADSL/Broadband or equivalent and Wireless cellular connection at each reference station is to be taken by bidder on behalf of purchaser. Each receiver station shall be equipped with 2 GSM/CDMA SIMs to increase reliability. Both SIMs shall not be from same Network/Service provider. Irrespective of the communications method used, the data latency between the CORS site and the network control centre should be designed to be less than half a second.</p>	
11	Warranty	Five years on-site comprehensive warranty support	
12	Comprehensive Insurance	Comprehensive insurance of equipments against theft, fire and vandalism from date of installation till end of contractual period of shall be taken by supplier on behalf of purchaser	

4 TECHNICAL DETAIL FORM: Communication Network (All components)

Sl. No.	Requirement at each location	Specifications	Bidder's Offered Specifications / Compliance/Deviation Statement (to be filled up by BIDDER)
<p>Communication system should be secure (with end to end encryption) and should have N+1 redundancy. For this communication between Reference station and control centre should be provided primarily through ADSL/BroadBand or equivalent and secondary communication through GSM/CDMA/GPRS/3G/4G etc. with auto switch facility. End to end encryption should be ensured by creating a VPN between reference station (remote station) and Site sever at the control centre for data transfer. Irrespective of the communications method used, the data latency between the CORS site and the network control centre should be designed to be less than half a second.</p>			
1	Hardware components	<p>Compatible components with receiver stations and control centre hardware should be provided supporting secure end to end communication Communication hardware source power requirements and un-interrupted operation should be ensured while offering the solution and power back-up calculation sheet for receiver stations and Control centre</p>	
2	Communication line:	<ol style="list-style-type: none"> 1. Between Receiver Stations and Control Centre communication shall be made through: <ol style="list-style-type: none"> i. Primary: ADSL/Broadband or equivalent ii. Secondary: Wireless cellular i.e. GSM/CDMA (2G/3G/4G) 2. Between Control Centre and Data Reception node of ADSL service provider at Dehradun for 100% active configuration shall be through optical fiber or lease line connection of sufficient capacity to handle data volume received to be on data center. 3. For secondary mode of reception alternate arrangement through wireless cellular (e.g. 2G/3G/4G) of sufficient capacity shall be provided to connect Control Centre and Data Reception node of wireless service provider. <p>Lease line/optical fiber/ADSL and Wireless cellular connection at each reference station and control centre is to be taken by bidder on behalf of purchaser.</p>	
2	Warranty Support	5 Years comprehensive on-site warranty	

**5 SERVICE SUPPORT DETAILS FOR HONOURING WARRANTY AND OPERATIONAL AND MAINTENANCE SUPPORT
– Control Centre (All Components)**

Sl. No.	Destination	NEAREST SERVICE CENTRE *					
		Location (Address)	Phone No. Fax No. e-mail	Status of Office Working Days and Hours	Number of Engineers	Number Of Staff	Value of Min. Stock Available at all times
1	Control Centre (Separate details of support for each Sub component specified in the Un-Priced and priced Bid are to be provided here)	Dehradun (U.K.)					

**6 SERVICE SUPPORT DETAILS FOR HONOURING WARRANTY AND OPERATIONAL AND MAINTENANCE SUPPORT
– Receiver Stations (All Components)**

Sl. No.	Destination	NEAREST SERVICE CENTRE *					
		Location (Address)	Phone No. Fax No. e-mail	Status of Office Working Days and Hours	Number of Engineers	Number Of Staff	Value of Min. Stock Available at all times
1	Control Centre (Separate details of support for each Sub component specified in the Un-Priced and priced Bid are to be provided here)	Dehradun (U.K.)					
2	Sites (Separate details of support for each Sub component specified in the Un-Priced and priced Bid are to be provided here)	As indicated in Part7 of Section V					

7 SERVICE SUPPORT DETAILS FOR HONOURING WARRANTY AND OPERATIONAL AND MAINTENANCE SUPPORT

–Communication Network (All Components)

Sl. No.	Destination	NEAREST SERVICE CENTRE *					Value of Min. Stock Available at all times
		Location (Address)	Phone No. Fax No. e-mail	Status of Office Working Days and Hours	Number of Engineers	Number Of Staff	
1	Control Centre (Separate details of support for each Sub component specified in the Un-Priced and priced Bid are to be provided here)	Dehradun (U.K.)					
2	Sites (Separate details of support for each Sub component specified in the Un-Priced and priced Bid are to be provided here)	As indicated in Part7 of Section V					

8 SERVICE SUPPORT DETAILS FOR HONOURING WARRANTY AND OPERATIONAL AND MAINTENANCE SUPPORT

– Software Solution (All Components)

Sl. No.	Destination	NEAREST SERVICE CENTRE *					Value of Min. Stock Available at all times
		Location (Address)	Phone No. Fax No. e-mail	Status of Office Working Days and Hours	Number of Engineers	Number Of Staff	
1	Control Centre (Separate details of support for each Sub component specified in the Un-Priced and priced Bid are to be provided here)	Dehradun (U.K.)					
2	Sites (Separate details of support for each Sub component specified in the Un-Priced and priced Bid are to be provided here)	As indicated in Part7 of Section V					

4. Drawings

Deleted

5. Inspections and Tests

The following inspections and tests shall be performed:

- (i) The inspection of the goods shall be carried out to check whether the goods are in conformity with the technical specifications attached to the purchase/work order form and shall be in line with the inspection/test procedures laid down in the technical specifications and the manufacturer's warranty certificate. The purchaser will test the equipment after completion of the installation and commissioning at the site of the installation. For site preparation, the supplier should furnish all details to the purchaser sufficiently in advance so as to get the works completed before receipt of the equipment. Complete hardware and software as specified under Technical Specifications should be supplied, installed and commissioned properly by the supplier prior to commencement of performance tests.
- (ii) The acceptance test will be conducted by the committee constituted by the purchaser, where the final delivery is to be made. The committee shall inspect and make recommendations for acceptance of goods & related services offered by the supplier for Final Acceptance by the Purchaser. The acceptance will involve successful installation, commissioning, performance by the way of trouble-free operation during the acceptance exercise at site. The acceptance exercise shall be combined with the Training exercise to be imparted by the supplier to SoI personnel. There shall not be any additional charges for carrying out acceptance tests. No malfunction, partial or complete failure of any part of hardware or bugs in the software should occur. All the software should be complete and no missing modules/sections will be allowed. The softwares should be correctly configured to the requirements of SoI. The outputs generated during the acceptance exercise and/or training exercises to demonstrate the successful performance of the equipment/software, shall be taken into account by the Committee before issuing the Acceptance Certificate.
- (iii) In the event of the equipment and/or on-board software failing to pass the acceptance test, a period not exceeding 15 days will be given to rectify the defects and clear the acceptance test, failing which the purchaser reserves the rights to get the equipment replaced by the supplier at no extra cost to the purchaser.
- (iv) Acceptance Test Procedure (ATP) document for supply and installation of equipments at Control Centre, Site Server and Reference Stations should be provided by the bidder. Acceptance test on the supplied equipment must be conducted as per the ATP document by the bidder.
- (v) Manufacturer's test and inspection certificate to be provided along with the supply and installation
- (vi) Initial Acceptance Test for CORS network: The Test shall be carried out in the closed polygonal area bounded by the 1st five Reference Stations at adjoining locations 40-50 km apart, to which the Control Centre & corresponding Site Server have been integrated. If the results of the test do not meet the Technical specifications, it shall be responsibility of the Bidder to identify the extent and cause of error and carry out corrective steps accordingly.

- (vii) Incremental Acceptance Test for CORS Network: Whenever, an additional Reference Station is commissioned, performance of CORS network shall be checked against the performance indicators specified in the Technical specifications. The Test shall be carried out in the additional triangular area due to integration of the Reference Station to the CORS Network. If the results of the test do not meet the specifications laid down in the Technical specifications, it shall be responsibility of the Bidder to identify the extent and cause of error and carry out corrective steps accordingly.
- (viii) Manuals and Drawings:
 - (a) Before the goods and equipments are taken over by the Purchaser, the Supplier shall supply operation and maintenance manuals to get her with drawings of the goods and equipment. These shall be in such detail as will enable the Purchaser to operate, maintain, adjust and repair all parts of the works as stated in the specifications.
 - (b) The manuals and drawings shall be in the ruling language (English) and in such form and numbers as stated in the contract.
 - (c) Unless and otherwise agreed, the goods and equipment shall not be considered to be completed for the purpose of taking over until such manuals and drawings have been supplied to the Purchaser.
- (ix) For the System and Other Software, the following will apply:

The Supplier shall provide complete and legal documentation of hardware, all sub systems, operating systems, compiler, system software and the other software. The Supplier shall also provide licensed software for all software products, whether developed by it or acquired from others. The supplier shall also indemnify the purchaser against any levies/penalties on account of any default in this regard.
- (x) Acceptance Certificate:

On successful completion of acceptability test and training exercise, receipt of deliverables etc, and after the Purchaser is satisfied with the working of the system, the acceptance certificate signed by the supplier and the Committee constituted by the purchaser will be issued. The date on which such certificate is signed shall be deemed to be the date of successful commissioning of the systems.

**6. PROFORMA OF CERTIFICATE FOR ISSUE BY THE PURCHASER AFTER
SUCCESSFUL INSTALLATION AND STARTUP OF THE SUPPLIED GOODS**

[This is to be attached for supply, erection, supervision of erection and startup contracts only]

No.

Date:

M/s.

Sub: Certificate of startup of the supplied Goods

1. This is to certify that the plant/s as detailed below has/have been received in good condition along with all the standard and special accessories (subject to remarks in Para No. 2) and a set of spares in accordance with the Contract/Specifications. The same has been installed and commissioned.

(a) Contract No. _____ dated _____

(b) Description of the plant _____

(c) Plant Nos. _____

(d) Quantity _____

s

(e) Rail/Roadways Receipt No. _____ dated _____

(f) Name of the consignee _____

(g) Date of startup and proving test _____

2. Details of accessories/spares not yet supplied and recoveries to be made on that account.

<u>S. No.</u>	<u>Description</u>	<u>Amount to be recovered</u>
---------------	--------------------	-------------------------------

3. The proving test has been done to our entire satisfaction and operators have been trained to operate the plant.

4. The supplier has fulfilled his contractual obligations satisfactorily. *

or

The supplier has failed to fulfill his contractual obligations with regard to the following:

(a)

(b)

(c)

(d)

5. The amount of recovery on account of non-supply of accessories and spares is given under Para No. 2.

6. The amount of recovery on account of failure of the supplier to meet his contractual obligations is as indicated in endorsement of the letter.

Signature _____

Name _____

Designation with Stamp _____

* Explanatory notes for filling up the certificates:

- (a) He has adhered to the time schedule specified in the contract in dispatching the documents/drawings pursuant to Technical Specifications.
- (b) He has supervised the startup of the plan in time i.e., within the period specified in the contract from the date of intimation by the Purchaser in respect of the installation of the plant.
- (c) Training of personnel has been done by the supplier as specified in the contract
- (d) In the event of documents/drawings having not been supplied or installation and startup of the plant have been delayed on account of the supplier, the extent of delay should always be mentioned.

7. Locations of the RECEIVER stations

Sl. No.	Name	Y	X	State	District	Tashil_tal	Brief_desc
1	Raichur	16.188109	77.363652	Karnataka	Raichur	Raichur	Forest guest house, raichur
2	Shiradi	12.830274	75.529938	Karnataka	Dakshin kannad	Puttur	Govt. Higher primary school
3	Bidar	17.871819	77.550374	Karnataka	Bidar	Bidar	Forest information centre shahpur
4	Ganagapur	17.181628	76.528057	Karnataka	Gulbarga	Afzalpur	Govt. Higher primary school
5	Gudibanda	13.673134	77.710168	Karnataka	Chikballapur	Gudibanda	Tb building premises gudibanda
6	Jawalgeri	15.858182	76.806743	Karnataka	Raichur	Sindhur	Office of the aee, water research department (wrđ)
7	Mangalore	12.917259	74.801501	Karnataka	Dakshin kannad	Mangalore	New mangalore port
8	Swamihalli(swamiolli)	15.153611	76.909278	Karnataka	Uttar kannada	Ballari	Sanjay gandhi polytechnic college, ballari
9	Challakere	14.307796	76.641261	Karnataka	Chitradurga	Challakere	Hpc govt.first grade college
10	Harappanahalli	14.795125	76.070897	Karnataka	Davangere	Harappanahalli	Forest ib, chitlegere
11	Kumta	14.422123	74.414247	Karnataka	Uttar kannada	Kumta	The assitant commissioner & sub divisional magistrate office, kumta
12	Badami h.s	15.915167	75.677556	Karnataka	Bagalkot	Badami	Svp ayurvedic college
13	Byndoor(kundapur)	13.87525	74.639139	Karnataka	Udupi	Kundapura	Govt first grade college
14	Chikmanglur	13.335071	75.76951	Karnataka	Chikmanglur	Chikmanglur	District institute of education & training
15	Chikodi	16.42395	74.572939	Karnataka	Belgaum	Chikodi	Office of the panchayat raj executive engineer
16	Dharwad	15.413503	75.055851	Karnataka	Dharwad	Dharwad	Sanjeevini nursary, sattur village
17	Gadag	15.421626	75.610996	Karnataka	Gadag	Gadag	District commissioner office
18	Haranhalli	13.202056	76.240361	Karnataka	Hassan	Arisikere	Govt high school
19	Honnali	14.234326	75.654285	Karnataka	Davangere	Honnali	Govt. Higher primary school
20	Horti	17.111951	75.785593	Karnataka	Bijapur	Indi	Inspection bungalow, horti
21	Hosdurga	13.800349	76.276828	Karnataka	Chitradurga	Hosdurga	Junior high school & junior college
22	Humchadakatte(humcha)	13.864348	75.213082	Karnataka	Shimoga	Hosanagara	Primary health centre
23	Karwar	14.800308	74.101441	Karnataka	Uttar kannada	Karwar	Karwar port

24	Kurugodu	15.344156	76.841599	Karnataka	Bellary	Bellary	Aee/ib board no-i sub divison llc colony
25	Mulwad	16.617314	75.744057	Karnataka	Bijapur	Basavana bagewadi	Railway station, mulwad
26	Ramana guli	14.795823	74.581849	Karnataka	Uttar kannada	Ankola	Govt. Higher primary school
27	Saidapur	16.561679	77.26252	Karnataka	Gulbarga	Sedam	Sarakari smyuktha prouda shale
28	Sedam	17.181199	77.266084	Karnataka	Gulbarga	Sedam	Executive engineer's office
29	Sira	13.746852	76.89806	Karnataka	Uttar kannada	Tumkur	Govt. Junior college
30	Tinaighat	15.421676	74.493034	Karnataka	Belgaum	Khanpur	Govt high school, ramnagar
31	Togarshi	14.449519	75.20989	Karnataka	Shimoga	Khanpur	Govt. Higher primary school
32	Tumbagi	16.575824	76.287189	Karnataka	Bijapur	Muddebihal	Sri ram lingeswara high school
33	Virajpet	12.200997	75.795392	Karnataka	Kodagu	Virajpet	Govt. Junior college, chikpet
34	Hebri	13.457618	74.98229	Karnataka	Udupi	Karkal	Govt. Junior college, hebri town
35	Hulgur	14.998139	75.208722	Karnataka	Haveri	Shiggaon	Sri rambhapuri jagadgum veeragandhar arts and science college
36	Kusthagi	15.762897	76.191669	Karnataka	Koppal	Kustagi	Govt. Lower primary school, gandhi nagar
37	Shahapur	16.70825	76.823278	Karnataka	Gulbarga	Shahapur	Govt first grade degree college
38	Yaragatti	15.966908	75.022191	Karnataka	Belgaum	Parasgad	Basaveswara high school
39	Amrutur	12.922666	76.932958	Karnataka	Tamkur	Kunigal	Higher urdu primary school
40	Banglore	12.925349	77.62315	Karnataka	Banglore urban	Bangaloresouth	Survey of india campus
41	Chamaraj nagar	11.929344	76.945791	Karnataka	Chamrajnagar	Chamrajnagar	District commissioner's office
42	Chikballapur	13.402806	77.731028	Karnataka	Kolar	Chikballapur	Kvt polytechnic
43	Kolar	13.127953	78.133341	Karnataka	Kolar	Kolar	On rock near rain gauge
44	Kollegal	12.149443	77.11289	Karnataka	Chamarajanagar	Kollegal	Dfo office, kollegal
45	Mandya	12.525927	76.881542	Karnataka	Mandya	Mandya	Govt. College, mandaya
46	Mysore (muda campus)	12.30741	76.64362	Karnataka	Mysore	Mysore	Muda office,mysore
47	Ramanagara	12.68729	77.315023	Karnataka	Ramanagara	Ramanagara	Govt. College
48	Tumkur	13.336896	77.123136	Karnataka	Tumkur	Tumkur	Water treatment plant
49	Turuvekere	13.160136	76.671825	Karnataka	Tumkur	Turuvekere	Govt. Pu college

Part III – Conditions of Contract and Contract Forms

Section VI. General Conditions of Contract

Table of Clauses

1. Definitions	90
2. Contract Documents	92
3. Fraud and Corruption	92
4. Interpretation	93
5. Language.....	94
6. Joint Venture, Consortium or Association	94
7. Country of Origin	94
8. Notices	94
9. Governing Law/ Applicable Rules & Guidelines	95
10. Settlement of Disputes/ Arbitration Clause:.....	95
11. Scope of Contract	95
12. Distribution of Dispatch Documents for Clearance/Receipt of Goods	95
13. Supplier's Responsibilities	97
14. Contract Price	97
15. Terms of Payment	97
16. Taxes, Duties & Grand Landed Cost	98
17. Performance Security	98
18. Subcontracting	99
19. Specifications and Standards	99
20. Packing and Marking/ Documents	99
21. Insurance	100
22. Transportation	101

23. Inspections and Tests	102
24. Liquidated Damages	103
25. Warranty	103
26. Patent Rights.....	104
27. Force Majeure	105
28. Modification of contract	105
29. Delay in the supplier's performance	105
30. Termination	107
31. Assignment.....	107
32. General/ Miscellaneous Clauses.....	108
33. Completion.....	110
34. Taking Over	110
35. Final Account	111
36. Operating and Maintenance Manuals.....	111

Section VII. General Conditions of Contract

1. Definitions

- 1.1 The following words and expressions shall have the meanings hereby assigned to them:
- (a) The Adjudicator is the person appointed jointly by the Purchaser and the Contractor to resolve disputes in the first instance, as provided for in Sub-Clause 10.2 hereunder.
 - (b) “Contract” means the Contract Agreement entered into between the Purchaser and the Supplier, to supply, execute, complete and maintain the assets generated during the works, together with the Contract Documents referred to therein, including all attachments, appendices, and all documents incorporated by reference therein.
 - (c) “Contract Documents” means the documents listed in the Contract Agreement, including any amendments thereto.
 - (d) “Contract Price” means the price payable to the Supplier as specified in the Contract Agreement, subject to such additions and adjustments thereto or deductions therefrom, as may be made pursuant to the Contract.
 - (e) “Day” means calendar day.
 - (f) “Completion” means the fulfillment of all the supplies/works as stipulated in the Contract by the Supplier in accordance with the terms and conditions set forth in the Contract.
 - (g) “Foreign Currency” means any currency other than the currency of the country of the Purchaser;
 - (h) “GCC” means the General Conditions of Contract.
 - (i) “Goods” means all of the commodities, raw material, machinery and equipment, and/or other materials that the Supplier is required to supply to the Purchaser under the Contract.
 - (j) “Government” means the Government of the India;
 - (k) “Local Currency” means the currency of India;
 - (l) “Member,” in case the Supplier consist of a joint venture of more than one entity, means any of these entities; “Members” means all these entities, and “Member in Charge” means the entity specified in the SC to act on their behalf in exercising all the Supplier’ rights and obligations towards the Purchaser under this Contract;
 - (m) “Party” means the Purchaser or the Supplier, as the case may be, and “Parties” means both of them;

- (n) "Personnel" means persons hired by the Supplier or by any Subcontractor as employees and assigned to the supply of Goods or performance of the related Services or any part thereof;
- (o) "Purchaser's Country" is INDIA
- (p) "Purchaser" means the entity purchasing the Goods and Related Services, as specified in the SCC.
- (q) "Related Services" means the services incidental to the supply of the goods, such as insurance, installation, training, initial maintenance and other such obligations of the Supplier under the Contract.
- (r) "SCC" means the Special Conditions of Contract.
- (s) "Subcontractor" means any natural person, private or government entity, or a combination of the above, to whom any part of the Goods to be supplied or execution of any part of the Related Services is subcontracted by the Supplier.
- (t) "Supplier" means the natural person, private or government entity, or a combination of the above, whose bid to perform the Contract has been accepted by the Purchaser and is named as such in the Contract Agreement.
- (u) "The Project Site," where applicable, means the place named in the SCC.
- (v) The Intended Completion Date is the date on which it is intended that the Supplier shall complete all the Works. The Intended Completion Date for this Project is 3 months. It may be revised only by the Purchaser by issuing an extension of time.
- (w) A Defect is any part of the Works not completed in accordance with the Contract.
- (x) The Defects Liability Period is the period 2 years, calculated from the Completion Date
- (y) "Supplier's Bid" means the completed bidding document submitted by the Supplier to the Purchaser
- (z) "SCC" means the Special Conditions of Contract by which the GCC may be amended or supplemented;
- (aa) "Specifications" means the specifications of the service included in the bidding document submitted by the Supplier to the Purchaser
- (bb) "Services" means the work to be performed by the Supplier pursuant to this Contract, as described in Appendix A; and in the Specifications and Schedule of Activities included in the Supplier's Bid.
- (cc) Specification means the Specification of the Works included in the Contract and any modification or addition made or approved by the Purchaser.

- (dd) “Supply” means the supply of Goods to be made by the Supplier and related services incidental to supply, pursuant to this Contract, as described in Appendix A; and in the Specifications and List of Supply included in the Supplier’s Bid.
- (ee) A Subcontractor is a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract which includes work on the Site.
- (ff) Equipment is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.
- (gg) Materials are all supplies, including consumables, used by the contractor for incorporation in the Works.
- (hh) Plant is any integral part of the Works which is to have a mechanical, electrical, electronic or chemical function.
- (ii) The Start Date is the date when the site of Control Centre is handed over to the Supplier
- (jj) The Works are what the Contract requires the Contractor to construct, install, and turn over to the Employer, as stipulated in the Contract.

2. Contract Documents

- 2.1 Subject to the order of precedence set forth in the Contract Agreement, all documents forming the Contract (and all parts thereof) are intended to be correlative, complementary, and mutually explanatory. The Contract Agreement shall be read as a whole.

3. Fraud and Corruption

- 3.1 It is required by all concerned namely the Consignee/Bidders/Suppliers etc. to observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the Purchaser: -

- (a) defines, for the purposes of this provision, the terms set forth below as follows:
 - (i) “corrupt practice” means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution; and
 - (ii) “fraudulent practice” means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Purchaser, and includes collusive practice among Bidders (prior to or after Bid submission) designed to establish Bid prices at artificial non-competitive levels and to deprive the Purchaser of the benefits of free and open competition;
- (b) will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question;

- (c) will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a contract by the purchaser if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing the contract.

4. Interpretation

4.1 If the context so requires it, singular means plural and vice versa.

4.2 Incoterms

- (a) Unless inconsistent with any provision of the Contract, the meaning of any trade term, the rights and obligations of parties, thereunder shall be as prescribed by Incoterms.
- (b) The terms EXW, CIP, FCA, CFR, DDP and other similar terms, when used, shall be governed by the rules prescribed in the current edition of Incoterms 2010 published by the International Chamber of Commerce in Paris, France.

4.3 Entire Agreement

The Contract constitutes the entire agreement between the Purchaser and the Supplier and supersedes all communications, negotiations and agreements (whether written or oral) of the parties with respect thereto made prior to the date of Contract.

4.4 Amendment

No amendment or other variation of the Contract shall be valid unless it is in writing, is dated, expressly refers to the Contract, and is signed by a duly authorized representative of each party thereto.

4.5 Non-waiver

- (a) **Subject to GCC Sub-Clause 4.5(b) below, no relaxation, forbearance, delay, or indulgence by either party in enforcing any of the terms and conditions of the Contract or the granting of time by either party to the other shall prejudice, affect, or restrict the rights of that party under the Contract, neither shall any waiver by either party of any breach of Contract operate as waiver of any subsequent or continuing breach of Contract.**
- (b) **Any waiver of a party's rights, powers, or remedies under the Contract must be in writing, dated, and signed by an authorized representative of the party granting such waiver, and must specify the right and the extent to which it is being waived.**

4.6 Severability

If any provision or condition of the Contract is prohibited or rendered invalid or unenforceable, such prohibition, invalidity or unenforceability shall not affect the validity or enforceability of any other provisions and conditions of the Contract.

5. Language

- 5.1 The Contract as well as all correspondence and documents relating to the Contract exchanged by the Supplier and the Purchaser, shall be written in the English. Supporting documents and printed literature that are part of the Contract may be in another language provided they are accompanied by an accurate translation of the relevant passages in English, in which case, for purposes of interpretation of the Contract, this translation shall govern.
- 5.2 The bid submitted by the bidder and all subsequent correspondence and documents relating to the bid exchanged between the bidder and the purchaser, may also be written in the Hindi language, provided that the same are accompanied by English translation, in which case, for purpose of interpretation of the bid etc, the English translations shall prevail.
- 5.3 The Supplier shall bear all costs of translation to the governing language and all risks of the accuracy of such translation, for documents provided by the Supplier.

6. Joint Venture, Consortium or Association

- 6.1 Joint Venture, Consortium or Association not permitted in this Bid

7. Country of Origin

- 7.1 The Supplier and its Subcontractors shall have the nationality of an eligible country. A Supplier or Subcontractor shall be deemed to have the nationality of a country if it is a citizen or constituted, incorporated, or registered, and operates in conformity with the provisions of the laws of that country.
- 7.2 All goods and related services to be supplied under the contract shall have their origin in India or any other country with which India has not banned trade relations. The term “origin” used in this clause means the place where the goods are mined, grown, produced, or manufactured or from where the related services are arranged and supplied. The bidder shall declare the Origin of Goods in the price schedules attached at Section IV.
- 7.3 For purposes of this Clause, the term “goods” includes commodities, raw material, machinery, equipment, and industrial plants; and “related services” includes services such as insurance, installation/system Integration, Commissioning, training, and initial maintenance and operation support.
- 7.4 The term “origin” means the country where the goods have been mined, grown, cultivated, produced, manufactured or processed; or, through manufacture, processing, or assembly, another commercially recognized article results that differs substantially in its basic characteristics from its components

8. Notices

- 8.1 Notice, if any, relating to the contract given by one party to the other, shall be sent in writing or by cable or telex or facsimile and confirmed in writing. The procedure will also provide the sender of the notice, the proof of receipt of the notice by the receiver. The addresses of the parties for exchanging such notices will be the addresses as incorporated in the contract.
- 8.2 The effective date of a notice shall be either the date when delivered to the recipient or the effective date specifically mentioned in the notice, whichever is later.

9. Governing Law/ Applicable Rules & Guidelines

9.1 The Contract shall be governed by and interpreted in accordance with the laws of the Union of India

9.2 **The bidding process and procurement is subject to the provision of General Financial Rule 2017, Manual of Procurement of Goods published by Min of Fin, Deptt of Expenditure and related Guidelines issued by CVC from time to time.**

10. Settlement of Disputes/ Arbitration Clause:

10.1 In the event of any dispute arising out of or relating to this bid, it should be referred to sole arbitrator appointed by the President of Institution of Engineers, New Delhi or any other person nominated by him whose decision will be final binding.

10.2 Venue of Arbitration: The venue of arbitration shall be New Delhi, India

11. Scope of Contract

The Scope of this Contract includes all supply of Goods and Related Services incidental there to as well as all Civil and Electrical works that shall be required for 'Establishment of **Continuously operated Reference Station Network**'.

Supply is an essential component of this Contract and includes all hardwares, softwares, instruments, peripherals and accessories that will be required for commissioning of Control Centre, Site Server and Reference Stations for establishing RTK Network.

The bidder is also required to carry out all civil and electrical work for monumentation of Reference Stations, mounting the antenna, housing the receivers and peripherals in Secure Boxes, installation of requisite hardwares, softwares, communication systems, instruments and associated peripherals at the Control Centres, Site Servers and Reference Stations –for commissioning of Control Centre and Reference Stations that form part of the CORS Network.

The bidder shall also provide maintenance and operational support and other incidental services stipulated in the bid document.

Training and hand-holding to SOI personnels for operational and emergency support and preventive maintenance of essential components of CORS network is also an essential component of this contract.

12. Distribution of Dispatch Documents for Clearance/Receipt of Goods

The supplier shall send all the relevant dispatch documents well in time to the Purchaser/Consignee to enable the Purchaser/Consignee clear or receive (as the case may be) the goods in terms of the contract.

Unless otherwise specified in the SCC, the usual documents involved and the drill to be followed in general for this purpose are as follows.

A) For Domestic Goods, including goods already imported by the supplier under its own arrangement: Within 24 hours of dispatch, the supplier shall notify the purchaser, consignee, and others concerned if mentioned in the contract, the complete details of dispatch and also supply the following documents to them by registered post / speed post (or as instructed in the contract):

- (i) Four copies of supplier's invoice showing contract number, goods description, quantity, unit price and total amount;
- (ii) Consignee Receipt Certificate as per Section VI/6b in original, with details duly filled up, for receipt of consignment by the authorized representative of the consignee;
- (iii) Two copies of packing list identifying contents of each package;
- (iv) Inspection certificate issued by the nominated Inspection agency, if any.
- (v) Certificate of origin;
- (vi) Insurance Certificate as per GCC Clause 21.
- (vii) Manufacturers/Supplier's warranty certificate & In-house inspection certificate.

B) For goods imported from abroad:

Within 24 hours of dispatch, the supplier shall notify the purchaser, consignee, and others concerned if mentioned in the contract, the complete details of dispatch and also supply the following documents to them by registered post / speed post (or as instructed in the contract). Any delay or demurrage occurred during the customs clearance on account of the non-availability of technical support/ clarifications /documents from the supplier shall be borne by the supplier. Custom clearance is to be done by the Indian Agent:

- (i) Four copies of supplier's invoice showing contract number, goods description, quantity, unit price and total amount;
- (ii) Original and four copies of the negotiable clean, on-board Bill of Lading/Airway bill, marked freight pre paid and four copies of non-negotiable Bill of Lading/Airway bill;
- (iii) Four Copies of packing list identifying contents of each package;
- (iv) Insurance Certificate as per GCC Clause 21.
- (v) Manufacturer's/Supplier's warranty certificate;
- (vi) Inspection Certificate for the dispatched equipments issued by recognized/ reputed agency like SGS, Lloyd or equivalent (acceptable to the purchaser) prior to dispatch
- (vii) Manufacturer's own factory inspection report;
- (viii) Certificate of origin
- (ix) Port of Loading;
- (x) Port of Discharge and

(xi) Expected date of arrival.

13. Supplier's Responsibilities

13.1 The Supplier shall supply all the Goods and Related Services included in the Scope of Supply in accordance with GCC Clause 12, and the Delivery and Completion Schedule, as per GCC Clause 13.

14. Contract Price

14.1 Prices charged by the Supplier for the Goods supplied and the Related Services performed under the Contract shall not vary from the prices quoted by the Supplier in its bid.

15. Terms of Payment

15.1 Payment shall be made subject to recoveries, if any, by way of liquidated damages or any other charges as per terms & conditions of contract in the following manner.

Payment shall be made as specified in Appendix B - Schedule of Payments and Reporting Requirements of Section VIII – Appendices.

15.2 The supplier shall not claim any interest on payments under the contract.

15.3 Where there is a statutory requirement for tax deduction at source, such deduction towards income tax and other tax as applicable will be made from the bills payable to the Supplier at rates as notified from time to time.

15.4 Irrevocable & non – transferable LC shall be opened by the respective consignees. However, if the supplier requests specifically to open confirmed LC, the extra charges would be borne by the supplier. If LC is required to be extended and/or amended for reasons not attributable to the purchaser/consignee, the charges thereof shall be borne by the supplier.

15.5 The payment shall be made in Currency of Quoted price; however agency commission and Services which are to be undertaken in India are to be paid in Indian currency.

15.6 The supplier shall send its claim for payment in writing, when contractually due, along with relevant documents etc., duly signed with date, to respective consignees.

15.7 While claiming payment, the supplier is also to certify in the bill that the payment being claimed is strictly in terms of the contract and all the obligations on the part of the supplier for claiming that payment has been fulfilled as required under the contract.

15.8 The Contractor shall submit to the Purchaser monthly statements of the estimated value of the work completed ie. the number of Reference Stations, site server station, control station commissioned, with full justification from the price quoted in Price Schedule.

15.9 The Purchaser shall check the details given in the Contractor's monthly statement and certify the amounts to be paid to the Contractor after carrying out the Acceptance Test as specified in Section V/5. The value of work executed shall be determined after due check measurement of the quantities claimed as executed by the contractor, in accordance with the Price quoted in the Price schedule.

16. Taxes, Duties & Grand Landed Cost

- 16.1 (i) For goods manufactured outside the Purchaser's Country, the Supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the Purchaser's Country.
- (ii) If applicable, SOI may provide Custom Duty exemption certificate under custom circular No. 51/96.
- (iii) Custom duty rates applicable will be verified by the vendors only.
- (iv) The bidder is required to submit OEM Proforma Invoice along with the price bid.
- (iv) If applicable, SOI may provide Central Tax exemption certificate as per Department of Revenue Notification no 45/2017 – Central Tax (Rate).
- 16.2 For goods Manufactured within the Purchaser's country, the Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Goods to the Purchaser.
- 16.3 If any tax exemptions, reductions, allowances or privileges may be available to the Supplier in the Purchaser's Country, the Purchaser shall use its best efforts to enable the Supplier to benefit from any such tax savings to the maximum allowable extent.
- 16.4 While claiming reimbursement of duties, taxes etc. (like sales tax, excise duty, custom duty) from the Purchaser/Consignee, as and if permitted under the contract, the supplier shall also certify that, in case it gets any refund out of such taxes and duties from the concerned authorities at a later date, it (the supplier) shall refund to the Purchaser/Consignee forthwith.
- 16.5 (i) Financial quotes must be strictly as per proforma/ providing information under each category separately and clearly, failing of which the financial bid will be treated as 'Unresponsive'.
- (ii) Irrespective of detail break up of various costs/taxes, L1 vendor will be decided based on the Grand landed total cost at the consignee's place.
- (iii) Rates offered by the firm to be LAST and FINAL and payment of any other latent charges/taxes not specified/mentioned in the cost quoted by the firm would solely be the liability of the firm.

17. Performance Security

- 17.1 Within twenty one (21) days from date of the issue of notification of award by the Purchaser/Consignee, the supplier, shall furnish performance security to the Purchaser/Consignee for an amount equal to ten percent (10%) of the total value of the contract, valid up to sixty **(60) days** after the date of completion of all contractual obligations by the supplier, including the warranty obligations - initially valid for a period of minimum **65 months** from the date of Notification of Award

- 17.2 a) The Performance security should be in the same currency as the contract. Performance Security in foreign currency must conform to Uniform Rules for Demand Guarantees (URDG 758) – an international convention regulating international securities:
- b) It shall be in any one of the forms namely Fixed Deposit Receipt drawn from any Scheduled bank in India or Bank Guarantee issued by a Scheduled bank in India, in the prescribed form as provided in section IX of this document in favour of the Purchaser/Consignee. The validity of the Fixed Deposit receipt or Bank Guarantee will be for a period up to sixty (60) days beyond Warranty Period.
- 17.3 In the event of any failure /default of the supplier with or without any quantifiable loss to the government, the amount of the performance security is liable to be forfeited.
- 17.4 In the event of any amendment issued to the contract, the supplier shall, within twenty-one (21) days of issue of the amendment, furnish the corresponding amendment to the Performance Security (as necessary), rendering the same valid in all respects in terms of the contract, as amended.
- 17.5 Deleted
- 17.6 Subject to GCC sub – clause 17.3 above, the Purchaser/Consignee will release the Performance Security without any interest to the supplier on completion of the supplier’s all contractual obligations including the warranty obligations.

18. Subcontracting

- 18.1 If allowed in contract, the Contractor may subcontract with the approval of the Purchaser but may not assign the Contract without the approval of the Employer in writing. Subcontracting does not alter the Contractor's obligations. The Supplier shall notify the Purchaser in writing of all subcontracts awarded under the Contract if not already specified in the bid. Such notification, in the original bid or later shall not relieve the Supplier from any of its obligations, duties, responsibilities, or liability under the Contract.
- 18.2 Subcontracts shall comply with the provisions of GCC Clauses 3 and 7.

19. Specifications and Standards

- 19.1 Technical Specifications and Drawings

The Goods and Related Services supplied under this Contract shall conform to the technical specifications and standards mentioned in Section V, Schedule of Requirements and, when no applicable standard is mentioned, the standard shall be equivalent or superior to the official standards whose application is appropriate to the Goods’ country of origin.

20. Packing and Marking/ Documents

- 20.1** The packing for the goods to be provided by the supplier should be strong and durable enough to withstand, without limitation, the entire journey during transit including

rough handling, open storage etc. without any damage, deterioration etc. As and if necessary, the size, weights and volumes of the packing cases shall also take into consideration, the remoteness of the final destination of the goods and availability or otherwise of transport and handling facilities at all points during transit up to final destination as per the contract.

20.2 Packing instructions: The supplier shall make separate packages for each consignee and mark each package on three sides with the following with indelible paint of proper quality:

- a. name of the Project
- b. contract number and date
- c. brief description of goods including quantity
- d. packing list reference number with country of origin of goods
- e. consignee's name and full address and
- f. supplier's name and address
- g. Net weight and warning '**HANDLE WITH CARE**',**USE NO HOOKS**'

21. Insurance

21.1 Insurance:

The supplier shall make arrangements for insuring the goods against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the following manner:

- (i) In case of supply of domestic goods on Project/Consignee site(s) basis, the supplier shall be responsible till the entire stores contracted for arrival in good condition at destination(s). The transit risk in this respect shall be covered by the Supplier by getting the goods duly insured. The insurance cover shall be obtained by the Supplier and should be valid till 3 months after the receipt of goods by the Purchaser/Consignee.
- (ii) In case of supply of the imported goods by sea on FOB (Named port of Loading) Basis, the additional extended Insurance for Ocean Freight to the Indian Destination port and local transportation and storage from the port of entry to the consignee site shall be borne by the Supplier for a period including 3 months beyond date of delivery.
- (iii) In case of supply of the imported goods on FOB Named airport of Destination Basis, the additional extended Insurance (local transportation and storage) shall be borne by the Supplier from the port of entry to the consignee site for a period including 3 months beyond date of delivery.
- (iv) If the equipment is not commissioned and handed over to the consignee within 3 months, the insurance will be got extended by the supplier at their cost till the successful installation, testing, commissioning and handing over of the goods to the consignee. In case the delay in the installation and commissioning is due to handing over of the site to the supplier by the consignee, such

extensions of the insurance will still be done by the supplier, but the insurance extension charge sat actual will be reimbursed.

- (v) Comprehensive insurance of equipments installed at each receiver station against fire, theft, vandalism etc from the date of installation till completion of contractual period. Insurance will be taken by Supplier in the name of purchaser and to be included in Price schedule.

21.2 The Supplier shall provide, in the joint names of the Purchaser and the Supplier, insurance cover from the Start Date to the end of the Defects Liability Period, in the amounts and deductibles stated in the Contract Data for the following events which are due to the Supplier's risks:

- (a) loss of or damage to the Works, Plant and Materials;
- (b) loss of or damage to Equipment;
- (c) loss of or damage of property (except the Works, Plant, Materials and Equipment) in connection with the Contract; and
- (d) personal injury or death.

21.3 Policies and certificates for insurance shall be delivered by the Supplier to the Purchaser for the Purchaser's approval before the Start Date. All such insurance shall provide for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred.

21.4 If the Supplier does not provide any of the policies and certificates required, the Purchaser may affect the insurance which the Contractor should have provided and recover the premiums the Employer has paid from payments otherwise due to the Purchaser or, if no payment is due, the payment of the premiums shall be a debt due.

21.5 Alterations to the terms of insurance shall not be made without the approval of the Purchaser.

21.6 Both parties shall comply with any conditions of the insurance policies.

22. Transportation

22.1 Instructions for transportation of imported goods offered from abroad:

22.1.1 The supplier shall not arrange part-shipments and/or trans shipment.

22.1.2 Supply made by sea

(a) The supplier is required under the contract to deliver the goods under FOB (Named port of Loading) terms;

(b) The shipment to named port of Destination in India shall be made by Indian flag vessel or by vessels belonging to the conference lines in which India is a member country through India's forwarding agents/coordinators.

(c) In case the forwarding agent/coordinators are unable to provide timely adequate space in Indian flag vessel or by vessels belonging to the conference lines, the supplier shall arrange shipment through any available vessel to adhere to the delivery schedule given in the contract.

(d) The relevant rules etc. for shipping of imported goods are contained in the notifications dated 27.02.1996 and 11.02.1998 issued by Ministry of Surface Transport (chartered wing), which may be referred to by the bidder for further information in this regard.

22.1.3 Supply made by air

(a) The supplier is required under the contract to deliver the goods under CIP(Named airport of Destination)terms;

(b)In case of airlifting of imported goods offered from abroad, the same will be done only through the National Carrier i.e. Air India wherever applicable.

22.2 Instructions for local transportation of goods:

(a) The Supplier is required under the Contract to transport domestic goods (including goods already imported by the supplier under its own arrangement) from the factory/warehouse etc to the specified places of final destination defined as the Project Site.

(b) The Supplier offering goods from abroad is also required under the Contract to transport goods imported (as per sub-clause 25.1 above) from named port/airport of destination to the Project Site in the Purchaser's country.

(c)The Supplier is also required under the Contract for insurance, storage and all related costs for local transportation of goods to final destination within the Purchaser's country, defined as the Project Site.

(d) The Supplier and/or its Indian Agent (in case of foreign supplier) shall also be under Contract for Import Customs clearance/tax/duty.

(e) All related costs pertaining to local transportation of goods shall be included by the bidders in their Bid Price and shall form part of the Contract Price .

(f) The Project Site(s) in Purchaser's country is as specified in SCC clause pertaining to GCC clause 1.1(n)

23. Inspections and Tests

23.1 The Supplier shall at its own expense and at no cost to the Purchaser carry out all such tests and/or inspections of the Goods and Related Services as are specified in the **SCC**.

23.2 The inspections and tests may be conducted on the premises of the Supplier or its Subcontractor, at point of delivery, and/or at the Goods' final destination, or in another place in the Purchaser's Country as specified in the **SCC**. Subject to GCC Sub-Clause 23.3, if conducted on the premises of the Supplier or its Subcontractor, all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to the Purchaser.

23.3 The Purchaser or its designated representative shall be entitled to attend the tests and/or inspections referred to in GCC Sub-Clause 23.2, provided that the Purchaser bear all of its own costs and expenses incurred in connection with such attendance including, but not limited to, all traveling and board and lodging expenses.

23.4 Whenever the Supplier is ready to carry out any such test and inspection, it shall give a reasonable advance notice, including the place and time, to the Purchaser. The Supplier

shall obtain from any relevant third party or manufacturer any necessary permission or consent to enable the Purchaser or its designated representative to attend the test and/or inspection.

23.5 The Purchaser may require the Supplier to carry out any test and/or inspection not required by the Contract but deemed necessary to verify that the characteristics and performance of the Goods comply with the technical specifications codes and standards under the Contract, provided that the Supplier's reasonable costs and expenses incurred in the carrying out of such test and/or inspection shall be added to the Contract Price. Further, if such test and/or inspection impedes the progress of manufacturing and/or the Supplier's performance of its other obligations under the Contract, due allowance will be made in respect of the Delivery Dates and Completion Dates and the other obligations so affected.

23.6 The Supplier shall provide the Purchaser with a report of the results of any such test and/or inspection.

23.7 The Purchaser may reject any Goods or any part thereof that fail to pass any test and/or inspection or do not conform to the specifications. The Supplier shall either rectify or replace such rejected Goods or parts thereof or make alterations necessary to meet the specifications at no cost to the Purchaser, and shall repeat the test and/or inspection, at no cost to the Purchaser, upon giving a notice pursuant to GCC Sub-Clause 23.4.

23.8 The Supplier agrees that neither the execution of a test and/or inspection of the Goods or any part thereof, nor the attendance by the Purchaser or its representative, nor the issue of any report pursuant to GCC Sub-Clause 23.6, shall release the Supplier from any warranties or other obligations under the Contract.

24. Liquidated Damages

24.1 Except as provided under GCC Clause 32, if the Supplier fails to deliver any or all of the Goods by the Date(s) of delivery or perform the Related Services within the period specified in the Contract, the Purchaser may without prejudice to all its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to 0.5% per week of delay or part thereof of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of 10%. Once the maximum is reached, the Purchaser may terminate the Contract pursuant to GCC Clause 30.

24.2 During the above-mentioned delayed period of supply and/or performance, the conditions incorporated under GCC sub-clause 29.4 above shall also apply.

25. Warranty

25.1 The supplier warrants comprehensively that the goods supplied under the contract is new, unused and incorporate all recent improvements in design and materials unless prescribed otherwise by the purchaser in the contract. The supplier further warrants that the goods supplied under the contract shall have no defect arising from design, materials (except when the design adopted and / or the material used are as per the Purchaser's/Consignee's specifications) or workmanship or from any act or omission of the supplier, that may develop under normal use of the supplied goods under the conditions prevailing in India.

25.2 The warranty shall remain valid for 60 months from the date of installation & commissioning with a regular up-dation of newer technology as and when evolved, for all the equipments after the goods or any portion thereof as the case may be, have been delivered to the final destination and installed and commissioned at the final destination and accepted by the purchaser/CONSIGNEE in terms of the contract, unless specified otherwise in the SCC. No conditional warranty like manufacturing defects etc. will be acceptable. Warranty as well as Comprehensive Maintenance contract will be inclusive of all accessories and Turnkey work.

25.3 In case of any claim arising out of this warranty, the Purchaser/Consignee shall promptly notify the same in writing to the supplier. The period of the warranty will be as per G.C.C clause number 25.2 above irrespective of any other period mentioned elsewhere in the bidding documents.

25.4 Upon receipt of such notice, the supplier shall, within 48 hours on a 24(hrs) X 7 (days) X 365 (days) basis respond to take action to repair or replace the defective goods or parts thereof, free of cost, at the ultimate destination. The supplier shall take over the replaced parts/goods after providing their replacements and no claim, whatsoever shall lie on the purchaser for such replaced parts/goods thereafter. The penalty clause for non rectification will be applicable as per bid conditions

25.5 deleted

25.6 If the supplier, having been notified, fails to respond to take action to repair or replace the defect(s) within 48 hours on a 24(hrs) X 7 (days) X 365 (days) basis, the purchaser may proceed to take such remedial action(s) as deemed fit by the purchaser, at the risk and expense of the supplier and without prejudice to other contractual rights and remedies, which the purchaser may have against the supplier.

25.7 During Warranty period, the supplier is required to visit at each consignee's site at least once every month commencing from the date of the installation for preventive maintenance of the goods

25.8 The Purchaser/Consignee reserve the rights to enter into Annual Comprehensive Maintenance Contract between Consignee and the Supplier for the period as mentioned in Section IX, Technical Specifications after the completion of warranty period.

25.9 The supplier along with its Indian Agent and the Service Support provider shall ensure continued supply of the spare parts for the machines and equipments supplied by them to the purchaser for 10 years from the date of installation and handing over.

25.10 The Supplier along with its Indian Agent and the Service Support provider shall always accord most favored client status to the Purchaser vis-à-vis its other Clients/Purchasers of its equipments/machines/goods etc. and shall always give the most competitive price for its machines/equipments supplied to the Purchaser/Consignee.

26. Patent Rights

26.1 The supplier shall, at all times, indemnify and keep indemnified the purchaser, free of cost, against all claims which may arise in respect of goods & services to be provided by the supplier under the contract for infringement of any intellectual

property rights or any other right protected by patent, registration of designs or trademarks. In the event of any such claim in respect of alleged breach of patent, registered designs, trademarks etc. being made against the purchaser, the purchaser shall notify the supplier of the same and the supplier shall, at his own expenses take care of the same for settlement without any liability to the purchaser.

27. Force Majeure

27.1 The Supplier shall not be liable for forfeiture of its Performance Security, liquidated damages, or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

27.2 For purposes of this Clause, "Force Majeure" means an event or situation beyond the control of the Supplier that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Supplier. Such events may include, but not be limited to, acts of the Purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.

27.3 If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

28. Modification of contract

28.1 If necessary, the purchaser may, by a written order given to the supplier at any time during the currency of the contract, amend the contract by making alterations and modifications within the general scope of contract in any one or more of the following:

- a) Specifications, drawings, designs etc. where goods to be supplied under the contract are to be specially manufactured for the purchaser,
- b) Mode of packing,
- c) Incidental services to be provided the supplier
- d) Mode of dispatch,
- e) Place of delivery, and
- f) Any other area(s) of the contract, as felt necessary by the purchaser depending on the merits of the case.

28.2 In the event of any such modification/alteration causing increase or decrease in the cost of goods and services to be supplied and provided, or in the time required by the supplier to perform any obligation under the contract, and quit able adjustment shall be made in the contract price and/or contract delivery schedule, as the case may be, and the contract amended accordingly. If the supplier doesn't agree to the adjustment made by the Purchaser/Consignee, the supplier shall convey its views to the Purchaser/Consignee within twenty-one days from the date of the supplier's receipt of the Purchaser's/Consignee's amendment/modification of the contract.

29. Delay in the supplier's performance

29.1 The supplier shall deliver of the goods and perform the services under the contract within the time schedule specified by the Purchaser/Consignee in the List of Requirements and as incorporated in the contract.

29.2 Subject to the provision under GCC clause 32, any unexcused delay by the supplier in maintaining its contractual obligations towards delivery of goods and performance of services shall render the supplier liable to any or all of the following sanctions:

- (i) imposition of liquidated damages,
- (ii) forfeiture of its performance security and
- (iii) termination of the contract for default.

29.3 If at any time during the currency of the contract, the supplier encounters conditions hindering timely delivery of the goods and performance of services, the supplier shall promptly inform the Purchaser/Consignee in writing about the same and its likely duration and make a request to the Purchaser/Consignee for extension of the delivery schedule accordingly. On receiving the supplier's communication, the Purchaser/Consignee shall examine the situation as soon as possible and, at its discretion, may agree to extend the delivery schedule, with or without liquidated damages for completion of supplier's contractual obligations by issuing an amendment to the contract.

29.4 When the period of delivery is extended due to unexcused delay by the supplier, the amendment letter extending the delivery period shall, inter alia contain the following conditions:

(a) The Purchaser/Consignee shall recover from the supplier, under the provisions of the clause 24 of the General Conditions of Contract, liquidated damages on the goods and services, which the Supplier has failed to deliver within the delivery period stipulated in the contract.

(b) That no increase in price on account of any ground, whatsoever, including any stipulation in the contract for increase in price on any other ground and, also including statutory increase in or fresh imposition of customs duty, excise duty, sales tax/ VAT/GST, Service Tax and Works Contract Tax or on account of any other tax or duty which may be levied in respect of the goods and services specified in the contract, which takes place after the date of delivery stipulated in the contract, shall be admissible on such of the said goods and services as are delivered and performed after the date of the delivery stipulated in the contract.

(c) But nevertheless, the Purchaser/Consignee shall be entitled to the benefit of any decrease in price on account of reduction in or remission of customs duty, excise duty, sales tax/ VAT/GST, Service Tax and Works Contract Tax or any other duty or tax or levy or on account of any other grounds, which takes place after the expiry of the date of delivery stipulated in the contract.

29.5 The supplier shall not dispatch the goods after expiry of the delivery period. The supplier is required to apply to the Purchaser/Consignee for extension of delivery period and obtain the same before dispatch. In case the supplier dispatches the goods without obtaining an extension, it would be doing so at its own risk and no claim for payment for such supply and/or any other expense related to such supply shall lie against the purchaser.

30. Termination

30.1. Termination for default

(a) The Purchaser/Consignee, without prejudice to any other contractual rights and remedies available to it (the Purchaser/Consignee), may, by written notice of default sent to the supplier, terminate the contract in whole or in part, if the supplier fails to deliver any or all of the goods or fails to perform any other contractual obligation(s) within the time period specified in the contract, or within any extension thereof granted by the Purchaser/Consignee pursuant to GCC sub-clauses 34.3 and 34.4.

(b) In the event of the Purchaser/Consignee terminating the contract in whole or in part, pursuant to GCC sub-clause 35.1 above, the Purchaser/Consignee may procure goods and/or services similar to those cancelled, with such terms and conditions and in such manner as it deems fit and the supplier shall be liable to the Purchaser/Consignee for the extra expenditure, if any, incurred by the Purchaser/Consignee for arranging such procurement.

(c) Unless otherwise instructed by the Purchaser/Consignee, the supplier shall continue to perform the contract to the extent not terminated.

30.2 Termination for insolvency

If the supplier becomes bankrupt or otherwise insolvent, the purchaser reserves the right to terminate the contract at any time, by serving written notice to the supplier without any compensation, whatsoever, to the supplier, subject to further condition that such termination will not prejudice or affect the rights and remedies which have accrued and / or will accrue thereafter to the Purchaser/Consignee.

30.3 Termination for Convenience.

(a) The Purchaser, by notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.

(b) The Goods that are complete and ready for shipment within twenty-eight (28) days after the Supplier's receipt of notice of termination shall be accepted by the Purchaser at the Contract terms and prices. For the remaining Goods, the Purchaser may elect:

(i) to have any portion completed and delivered at the Contract terms and prices; and/or

(ii) to cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and Related Services and for materials and parts previously procured by the Supplier.

31. Assignment

31.1 The Supplier shall assign, in whole or in part, their obligations under this Contract, except with prior written consent of the other party.

32. General/ Miscellaneous Clauses

32.1 Nothing contained in this Contract shall be constructed as establishing or creating between the parties, i.e. the Supplier/its Indian Agent/Service Support provider on the one side and the Purchaser on the other side, a relationship of master and servant or principal and agent.

32.2 Any failure on the part of any Party to exercise right or power under this Contract shall not operate as waiver thereof.

32.3 The Supplier shall notify the Purchaser/Consignee /the Government of India of any material change would impact on performance of its obligations under this Contract.

32.4 The Supplier/its Indian Agent/Service Support provider shall be responsible for all obligations towards the Purchaser/Consignee/Government for performance of contract/services including that of its Associates/Sub Contractors under the Contract.

32.5 The Supplier/its Indian Agent/service support Provider shall at all times, indemnify and keep indemnified the Purchaser/Government of India against all claims/damages etc. for any infringement of any Intellectual Property Rights (IPR) while providing its services under the Contract.

32.6 The Supplier/its Agent/Service Support provider shall, at all times, indemnify and keep indemnified the Purchaser/Consignee/Government of India against any claims in respect of any damages or compensation payable in consequences of any accident or injury sustained or suffered by its employees or agents or by any other third party resulting from or by any action, omission or operation conducted by or on behalf of the supplier/its associate/affiliate etc.

32.7 All claims regarding indemnity shall survive the termination or expiry of the contract.

32.8 The Contractor shall employ the key personnel named in the Schedule of Key Personnel as referred to in the Contract Data to carry out the functions stated in the Schedule or other personnel approved by the Purchaser. The Purchaser will approve any proposed replacement of key personnel only if their qualifications, abilities, and relevant experience are substantially equal to or better than those of the personnel listed in the Schedule.

32.9 Contractor's Risks

All risks of loss of or damage to physical property and of personal injury and death which arise during and in consequence of the performance of the Contract other than the excepted risks are the responsibility of the Contractor.

32.10 The Contractor shall construct and install the Works in accordance with the Specification and Drawings, and as per instructions of Purchaser.

32.11 The Contractor shall be responsible for the safety of all activities on the Site.

32.12 Anything of historical or other interest or of significant value unexpectedly discovered on the Site is the property of the Purchaser. The Contractor is to notify the

Purchaser of such discoveries and carry out the Purchaser's instructions for dealing with them.

32.13 The Purchaser shall give possession of all parts of the Site to the Contractor. If possession of a part is not given by the Start Date stated in the Contract Agreement the Employer is deemed to have delayed the start of the relevant activities and this will be Compensation Event.

32.14 The Contractor shall allow the Purchaser and any person authorized by the Purchaser access to the Site, to any place where work in connection with the Contract is being carried out or is intended to be carried out and to any place where materials or plant are being manufactured / fabricated / assembled for the works.

32.15 The Contractor shall carry out all instructions of the Purchaser which comply with the applicable laws where the Site is located.

32.16 Program

a) Within 7 days of signing the Contract, The Contractor shall submit to the Purchaser for approval a Program showing the general methods, arrangements, order, and timing for all the activities in the Works along with monthly cash flow forecast.

b) An update, at the end of every month, showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work including any changes to the sequence of the activities.

c) The Contractor shall submit to the Purchaser, for approval, an updated Program at the end of every month. If the Contractor does not submit an updated Program, the Purchaser may withhold the amount stated in the Contract Data from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program has been submitted.

d) The Purchaser's approval of the Program shall not alter the Contractor's obligations. The Contractor may revise the Program and submit it to the Purchaser again at any time. A revised Program is to show the effect of Compensation Events(if any).

32.16 Extension of the Intended Completion Date

a) The Purchaser shall extend the Intended Completion Date if a Compensation Event occurs which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining work and which would cause the Contractor to incur additional cost.

b) The Purchaser shall decide whether and by how much to extend the Intended Completion Date within 21 days of the Contractor asking the Purchaser for a decision upon the effect of a Compensation Event and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.

32.17. Management Meetings

- a) Either the Purchaser or the Contractor may require the other to attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.
- b) The Purchaser shall record the business of management meetings and is to provide copies of his record to those attending the meeting and to the Employer. The responsibility of the parties for actions to be taken is to be decided by the Purchaser either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.

32.18. Identifying Defects

- a) The Purchaser shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Purchaser may instruct the Contractor to search for a Defect and to uncover and test any work that the Purchaser considers may have a Defect.
- b) The contractor shall permit the Employer's Technical auditor to check the contractor's work and notify the Purchaser and Contractor of any defects that are found. Such a check shall not affect the Contractor's or the Purchaser's responsibility as defined in the Contract Agreement.

32.19 Tests

If the Purchaser instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no Defect the test shall be a Compensation Event.

32.20 Correction of Defects

- a) The Purchaser shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion and is defined in the Contract Data. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.
- b) Every time notice of a Defect is given, the Contractor shall correct the notified Defect within the length of time specified by the Purchaser's notice.

32.21 Uncorrected Defects

If the Contractor has not corrected a Defect within the time specified in the Purchaser's notice, the Purchaser will assess the cost of having the Defect corrected, and the Contractor will pay this amount.

33. Completion

33.1 The Contractor shall request the Purchaser to issue a Certificate of Completion of the Works and the Purchaser will do so upon deciding that the Work is completed.

34. Taking Over

34.1 The Purchaser shall take over the Site and the Works within seven days of issuing a certificate of Completion.

35. Final Account

35.1 The Contractor shall supply to the Purchaser a detailed account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Purchaser shall issue a Defect Liability Certificate and certify any final payment that is due to the Contractor within 56 days of receiving the Contractor's account if it is correct and complete. If it is not, the Purchaser shall issue within 56 days a schedule that states the scope of the corrections or additions that are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the Purchaser shall decide on the amount payable to the Contractor and issue a payment certificate, within 56 days of receiving the Contractor's revised account.

36. Operating and Maintenance Manuals

36.1 If "as built" Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them as stipulated in the bid document.

36.2 If the Contractor does not supply the Drawings and/or manuals by the dates stated in the Contract Data, or they do not receive the Purchaser's approval, the Purchaser shall withhold an amount of 5 lakhs from the payments due to the Contractor.

Section VIII. Special Conditions of Contract

The following Special Conditions of Contract (SCC) shall supplement and / or amend the General Conditions of Contract (GCC). Whenever there is a conflict, the provisions herein shall prevail over those in the GCC.

GCC 1.1(h)	The Purchaser's country is: India
GCC 1.1(i)	The Purchaser is: Surveyor General of India, Survey of India, Post Box: 37, Hathibarkala Estate, DehraDun-248001, UTTARAKHAND
GCC 1.1 (n)	Final destination: Control Centre Geodetic & Research Branch, (Survey of India), 17-E.C. Road, Dehradun-248001, Uttarakhand Final destination: Reference Station 49 Sites as identified in the State Karnataka.
GCC 8.1	For Notices , the Purchaser's address shall be: Director, Geodetic & Research Branch, (Survey of India), 17-E.C. Road, Dehradun-248001, Uttarakhand Ph No: 0135-2654528. Fax No.:0135-2656759 Email: grb.soi@gov.in
GCC 21.1	The insurance shall be paid in an amount equal to 110 percent of the DDP (Project Site)) value of the Goods on "All Risks" basis including War Risks and Strikes.
GCC 22.1	The Supplier is required under the Contract to transport the Goods to the specified places of final destination within the Purchaser's country, defined as the Project Site. Transport to such place of destination in the Purchaser's country, including insurance and storage, as shall be specified in the Contract, shall be arranged by the Supplier, and related costs shall be included in the Contract Price.
GCC 23.1	The inspections and tests shall be: Acceptance test procedure (ATP) document should be provided by the bidder. Acceptance test on the supplied equipment must be conducted as per the ATP document. <i>Manufacture's test certificate should be enclosed along with the supply.</i>
GCC 23.2	The Inspections and tests shall be conducted at: Final destination as defined in GCC 1.1(n)
GCC 25	For purposes of the Warranty, the place(s) of final destination(s) shall be: Please refer BDS corresponding to GCC 1.1(n)

Section VIII Appendices

Appendix A – Details of Services required	114
Appendix B - Schedule of Payments and Reporting Requirements.....	115
Appendix C—Key Personnel	116
Appendix D - Services and Facilities Provided by the Purchaser	118
Appendix E - Salient Features of Labour & Environment Laws	119
Appendix F-Appointment of Adjudicator/Dispute Review Expert.....	123
Appendix G- Specifications & Drawings of control center	127

Appendix A – Details of Services required

Following Services will be required for performance of contract:

- (i) Transportation and insurance (from Suppliers ware house to final destination including from port/airport of loading to port/airport of entry and inland transportation in purchaser's country) and other services required to convey the Goods to their final destination such as custom clearance, cargo handling, intermediate storage, packing etc.
- (ii) Site preparation and installation & commissioning of hardware and software at control center and incidental services required to make control center fully functional as detailed in schedule of requirement, such as all civil and electric work, air conditioning, setting up communication network etc. Necessary arrangement shall be done by contractor for data reception at control center through primary (ADSL/Broadband) as well as secondary (GSM/CDMA) mode of communication. Sufficient capacity arrangement (such as fiber optic connection or lease line etc) shall be provided to connect Control Centre and Data Reception node of ADSL/Broadband/wireless service provider at Dehradun.
- (iii) Site preparation and installation & commissioning of hardware and software at all receiver stations, as per list attached in Sub-section 7 of Section VII "Schedule of Requirements", and incidental services required to make receiver stations fully functional as detailed in schedule of requirement, such as Monumentation of reference point, Fencing, housing of receiver and other equipments, installation of meteorological sensors and accelerometer as defined in schedule of requirement and communication network setup etc. Electricity connection and connection for ADSL/Broadband and GSM/CDMA (3G/4G/5G) shall be taken by contractor on behalf of purchaser at each receiver station with purchaser providing the required documents for taking a new connection in the name of purchaser.
- (iv) Comprehensive on-site full operational and maintenance support for all components of the CORS system for a period of 5 years, including payment of monthly electricity and communication line (ADSL as well as GSM/CDMA) bills
- (v) Comprehensive insurance of equipments installed at each receiver station against fire, theft, vandalism etc from the date of installation till completion of contractual period. Insurance will be taken by Supplier in the name of purchaser and to be included in Price schedule.
- (vi) Rectification of any fault in Electricity/Communication line connection through appropriate authority shall be responsibility of contractor for complete duration of contract period. Any expenditure necessary for it shall be borne by contractor. Acceptable downtime for carrying out necessary rectification/ maintenance shall be as per GCC 28.5.

Appendix B - Schedule of Payments and Reporting Requirements

Payments shall be made according to the following schedule:

- (i) Advance payment of 25 (twenty-five) % of total contract price shall be paid to supplier on submission of irrevocable Bank Guarantee valid for 1year from date of signing contract, of an equivalent amount from a nationalized bank or all Commercial scheduled bank in the prescribed format. Full amount of advance payment will be adjusted at the payment stage (ii) given below
- (ii) *On Delivery of goods and installation and commissioning of Control Centre and at least 50 receiver Stations,:* 50(Fifty) % of the total contract price including total GST amount charged in Invoice against *above said works* shall be paid within thirty (30) days on completion of above said Work against a acceptance report from purchaser or another form acceptable to the Purchaser; advance payment made in accordance with point (i), shall be fully adjusted while releasing payment at this stage
- (iii) *On Final Acceptance:* 30 (Thirty) % of the Contract Price including total GST amount charged in Invoice against *above said works* shall be paid within thirty (30) days on submission of the documents specified in Clause 13 of SCC after delivery of all the equipment's, its successful installation and Acceptance Certificate issued by the Purchaser's representative in the proforma given in Section VII - item 6. The above includes first year warranty support.
- (iv) On completion of each year of comprehensive operational and maintenance support period: 20 (Twenty) % of the Contract Price including total GST amount charged in Invoice against operation and Maintenance shall be paid on pro rata basis annually @ 5 (five) % per year for 4 years, following the first year, within thirty (30 days) on submission of certificate of successful completion of respective operation and Maintenance year wise issued by purchaser.

Progress Reports

The Supplier shall submit monthly progress report indicating sub-lot wise progress of various activities/sub-activities as Horizontal-Bar chart. Status of submission of various deliverables shall also be submitted sub-lot wise every month.

Any delay in activity / submission of deliverables from approved Program shall be clearly flagged in the progress reports.

Appendix C—Key Personnel

Refer Section III(Bidding Forms)/1.5

1	Title of Position: Project Manager
	Name:
2	Title of Position: Civil Engineer (For monumentation and Installation of Reference Stations and peripherals)
	Name : (i) (ii) (iii) (iv)
3	Title of Position : Electrical Engineer (For Installation of Reference Stations and peripherals)
	Name : (i) (ii) (iii) (iv)
	Title of Position : Electrical Engineer (Control Station server, AC and other peripherals
	Name : (i) (ii) (iii) (iv)
4	Title of Position : Communication Engineer (For Communication between Reference Station and Control Center)
	Name : (i) (ii) (iii) (iv)
5	Title of Position: System Administrator/IT manager (For Hosting of Data and maintenance of Server and IT infrastructure and Control Station)
	Name : (i) (ii) (iii) (iv)
6	Title of Position: Maintenance Engineer (For maintenance of GNSS receiver and peripherals)

	Name : (i) (ii) (iii) (iv)
	Title of Position : Maintenance Engineer (For maintenance of Server and other hardware's/electronics installed at Control Station)
	Name : (i) (ii) (iii) (iv)

Appendix D - Services and Facilities Provided by the Purchaser

Following Facilities will provided to the Supplier after award of Contract:

- (i) Complete Description and co-ordinates of GCP in and around the Project area on WGS 84 datum
- (ii) Control Center: Proposed CORS network should be compatible with proposed/existing control center for CORS network located in **G&RB, GBO complex of Survey of India, Dehradun**. Detail specification and drawing of said control station is given in Annexure G. The bidder is advised to go through said specifications and visit the site for estimating the cost for installation/upgradation for software solution (if needed) before submission of bid.

The Contractor will be responsible for synchronizing CORS network with existing/proposed Control Centre at GBO Complex of Survey of India (SoI) at Dehra Dun and testing of whole system. This would include setting up additional power and electrification requirement, communication setup, software, peripherals etc to process and compute data, store data (raw data, intermediate data, and data under process) and communication network required for reception of data from receiver station and further transmission to rovers/ hosting at web. The use-rate of equipment and other costs associated with Preparation of site at the control Centre shall be deemed to be included as part of installation cost.

- (iii) Reference Stations: Installation site for reference station shall be arranged by purchaser. The Contractor will be responsible for monumentation of reference station and any other civil work incidental to it, installation of GNSS equipment and other peripherals including solar panel, associated electric work and setup of communication network. Contractor shall be responsible for arrangements of power supply connection, ADSL/Broadband connection and GSM/CDMA (3G/4G/5G) SIM on behalf of purchaser and payment of monthly payment for power, ADSL/Broadband, GSM/CDMA connection costs associated to it shall be Centre shall be deemed to be included as part of installation/operational support cost.

Appendix E - Salient Features of Labour & Environment Laws

SALIENT FEATURES OF SOME MAJOR LABOUR LAWS

APPLICABLE (The law as current on the date of bid opening will apply)

Labour Laws

- (a) Workman Compensation Act 1923: The Act provides for compensation in case of injury by accident arising out of and during the course of employment.
- (b) Payment of Gratuity Act 1972: gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed 5 years' service or more or on death the rate of 15 days wages for every completed year of service. The Act is applicable to all establishments employing 10 or more employees.
- (c) Employees P.F. and Miscellaneous Provision Act 1952 (since amended): The act Provides for monthly contribution by the Purchaser plus workers @ 10% or 8.33%. The benefits payable under the Act are:
 - (i) Pension or family pension on retirement or death, as the case may be.
 - (ii) Deposit linked insurance on the death in harness of the worker.
 - (iii) Payment of P.F. accumulation on retirement/death etc.
- (d) Maternity Benefit Act 1951: The Act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.
- (e) Contract Labour (Regulation & Abolition) Act 1970: The Act provides for certain welfare measures to be provided by the Supplier to contract labour and in case the Supplier fails to provide, the same are required to be provided, by the Principal Purchaser by Law. The Principal Purchaser is required to take Certificate of Registration and the Supplier is required to take license from the designated Officer. The Act is applicable to the establishments or Supplier of Principal Purchaser if they employ 20 or more contract labour.
- (f) Minimum Wage Act 1948: The Purchaser is supposed to pay not less than the Minimum Wages fixed by appropriate Government as per provisions of the Act if the employment is a schedule employment. Construction of Buildings, Roads, Runways are schedule employments.

- (g) Payment of Wages Act 1936: It lays down as to by what date the wages are to be paid, when it will be paid and what deductions can be made from the wages of the workers.
- (h) Equal Remuneration Act 1979: The Act provides for payment of equal wages for work of equal nature to Male and Female workers and for not making discrimination against Female employees in the matters of transfers, training and promotions etc.
- (i) Payment of Bonus Act 1965: The Act is applicable to all establishments employing 20 or more employees. The Act provides for payments of annual bonus subject to a minimum of 8.33% of wages and maximum of 20% of wages to employees drawing Rs.3500/- per month or less. The bonus to be paid to employees getting Rs.2500/- per month or above upto Rs.3500/- per month shall be worked out by taking wages as Rs.2500/- per month only. The Act does not apply to certain establishments. The newly set-up establishments are exempted for five years in certain circumstances. Some of the State Governments have reduced the employment size from 20 to 10 for the purpose of applicability of this Act.
- (j) Industrial Disputes act 1947: the Act lays down the machinery and procedure for resolution of Industrial disputes, in what situations, a strike or lock-out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.
- (k) Industrial Employment (Standing Order) Act 1946: It is applicable to all establishments employing 100 or more workmen (employment size reduced by some of the States and Central Government to 50). The Act provides for laying down rules governing the conditions of employment by the Purchaser on matters provided in the Act and get the same certified by the designated Authority.
- (l) Trade Unions Act 1926: The Act lays down the procedure for registration of trade unions of workmen and Purchasers. The Trade Unions registered under the Act have been given certain immunities from civil and criminal liabilities.
- (m) Child Labour (Prohibition & Regulation) Act 1986: The Act prohibits employment of children below 14 years of age

in certain occupations and processes and provides for regulation of employment of children in all other occupations and processes. Employment of Child Labour is prohibited in Building and Construction Industry.

- (n) Inter-State Migrant workmen's (Regulation of Employment & Conditions of Service) Act 1979: The Act is applicable to an establishment which employs 5 or more inter-state migrant workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in another state). The Inter-State migrant workmen, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as housing, medical aid, traveling expenses from home upto the establishment and bank etc.
- (o) The Building and Other Construction works (Regulation of Employment and Conditions of Service) Act 1996 and the Cess Act of 1996: All the establishments who carry on any building or other construction work and employs 10 or more workers and covered under this Act. All such establishments are required to pay cess at the rate not exceeding 2% of the cost of construction as may be modified by the Government. The Purchaser of the establishment is required to provide safety measures at the Building or construction work and other welfare measures, such as Canteens, First –Aid facilities, Ambulance, Housing accommodations for workers near the work place etc. The Purchaser to whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the Government.
- (p) Factories Act 1948: the Act lays down the procedure for approval at plans before setting up a factory, health and safety provisions, welfare provisions, working hours, annual earned leave and rendering information regarding accidents or dangerous occurrences to designated authorities. It is applicable to premises employing 10 persons or more with aid of power or 20 or more persons without the aid of power engaged in manufacturing process
- (q) Weekly Holidays Act -1942

SALIENT FEATURES OF SOME OF THE MAJOR LAWS THAT ARE APPLICABLE FOR PROTECTION OF ENVIRONMENT

Laws on protection of Environment

1. The Water (Prevention and Control of Pollution) Act, 1974, This provides for the prevention and control of water pollution and the maintaining and restoring of wholesomeness of water. 'Pollution' means such contamination of water or such alteration of the physical, chemical or biological properties of water or such discharge of any sewage or trade effluent or of any other liquid, gaseous or solid substance into water (whether directly or indirectly) as may, or is likely to, create a nuisance or render such water harmful or injurious to public health or safety, or to domestic, commercial, industrial, agricultural or other legitimate uses, or to the life and health of animals or plants or of aquatic organisms.
2. The Air (Prevention and Control of Pollution) Act, 1981, This provides for prevention, control and abatement of air pollution. 'Air Pollution' means the presence in the atmosphere of any 'air pollutant', which means any solid, liquid or gaseous substance (including noise) present in the atmosphere in such concentration as may be or tend to be injurious to human beings or other living creatures or plants or property or environment.
3. The Environment (Protection) Act, 1986, This provides for the protection and improvement of environment and for matters connected therewith, and the prevention of hazards to human beings, other living creatures, plants and property. 'Environment' includes water, air and land and the inter-relationship which exists among and between water, air and land, and human beings, other living creatures, plants, micro-organism and property.
4. The Public Liability Insurance Act, 1991, This provides for public liability insurance for the purpose of providing immediate relief to the persons affected by accident occurring while handling hazardous substances and for matters connected herewith or incidental thereto. Hazardous substance means any substance or preparation which is defined as hazardous substance under the Environment (Protection) Act 1986, and exceeding such quantity as may be specified by notification by the Central Government.

Appendix F-Appointment of Adjudicator/Dispute Review Expert

Suggested Draft of Letter of Appointment of Adjudicators in contracts

Sub: _____(Name of the Contract)

To

Name and address of the Adjudicator

We hereby confirm your appointment as adjudicator for the above contract to carry out the assignment specified in this Letter of Appointment.

For administrative purpose _____ (*name of the officer representing the Purchaser*) has been assigned to administer the assignment and to provide the Adjudicator with all relevant information needed to carry out the assignment on behalf of both the Purchaser and the Supplier. The services will be required during the period of contract for the Services (Name of the Contract) _____.

The Adjudicator shall visit the site once in 3 (three) months till the completion of the Services indicated above or as specifically requested by Purchaser/Supplier for the period upto the end of defects liability period with prior intimation to the Purchaser and the Supplier. The duration of each visit shall ordinarily be for one day only. These durations are approximate and (*Name of the Purchaser and Name of the Supplier*) may find it necessary to postpone or cancel the assignment and/or shorten or extend the duration.

The appointment will become effective upon confirmation of letter by you. The appointment of Adjudicator shall be liable for termination under a 30 (thirty) days written notice from the date of issue of the notice, if both Purchaser and the Supplier so desire. Also the appointment shall automatically stand terminated 14 days after the defect notice / correction period as stated in Clauses 7.1 of GCC/PCC is over.

The Adjudicator will be paid a fee of Rs. _____ (Rupees _____ only) per each day of visit at the worksite. The actual expenses for boarding and traveling in connection with the assignment will be reimbursed to the Adjudicator. The Adjudicator will submit a pre-receipted bill in triplicate to the Purchaser indicating the date of the visit, fees for the visit and a proof in support of the actual expenditure [only for items valued above Rs200 each) incurred by him against boarding, lodging and traveling expenses after performing the visit on each occasion. The Purchaser will make the admissible payment (both the Purchaser's and the Supplier's share) to the Adjudicator within 30 days of the receipt of the bill. The Supplier's share on this account (half the paid amount) will be recovered by the Purchaser from the Supplier's bills for the Services.

In accepting this assignment, the Adjudicator should understand and agree that he is responsible for any liabilities and costs arising out of risks associated with travel to and from the place of emergency repatriation, loss or damage to personal/professional effects and property. The Adjudicator is advised to effect personal insurance cover in respect of such risks if he does not already have such cover in place. In this regard, the Adjudicator shall maintain appropriate medical, travel, accident and third-party liability insurance. The obligation under this paragraph will survive till termination of this appointment.

Procedures for resolution of disputes by the Adjudicator is described in the contract of _____(name of the contract) between the Purchaser and the Supplier vide clause 8 of GCC/PCC. Your recommendation should be given in the format attached, within 28 days of receipt of a notification of dispute.

The Adjudicator will carry out the assignment in accordance with the highest standard of professional and ethical competence and integrity, having due regard to the nature and purpose of the assignment, and will conduct himself in a manner consistent herewith. After visiting the site, the Adjudicator will discuss the matter with the Purchaser and if necessary with the Supplier before arriving at any decision.

The Adjudicator will agree that all knowledge and information not within the public domain, which may be acquired while carrying out this service shall be all time and for all purpose, regarded as strictly confidential and held in confidence, and shall not be directly or indirectly disclosed to any party whatsoever, except with the permission of the Purchaser and the Supplier. The Adjudicator's decision should be communicated in the form of a speaking order specifying the reasons.

The Adjudicator will agree that any manufacturing or construction or consulting firm with which he might be associated with, will not be eligible to participate in bidding for any goods or works or consultant services resulting from or associated with the project of which this consulting assignment forms a part

Read and Agreed

Name of Adjudicator
Signature

Place:

Date:

Name of Purchaser
Signature of authorized representative of Purchaser

Name of the Supplier
Signature of authorized representative of Supplier

Attachment: Copy of contract document between the Purchaser and Supplier and format for recommendation.

SUMMARY OF ADJUDICATOR'S RESPONSIBILITIES

The Adjudicator has the following principal responsibilities:

1. Visit the site periodically.
2. Keep abreast of job activities and developments.
3. Encourage the resolution of disputes by the parties.
4. When a dispute is referred to it, conduct a hearing (no legal presentation), complete its deliberations, and prepare a recommendation in a professional and timely manner (as per sample format)

Sample Format of Adjudicator's Recommendation

[Project Name] Recommendation of Adjudicator

Dispute No. XX [NAME OF DISPUTE]

Hearing Date: _____

Dispute

Description of dispute. A one or two sentence summation of the dispute.

Supplier's Position

A short summation of the Supplier's position as understood by the Adjudicator.

Purchaser's Position

A short summation of the Purchaser's position as understood by the Adjudicator.

Recommendation

The Adjudicator's specific recommendation for settlement of the dispute. (*The recommended course is consistent with the explanation*).

Explanation

(*This section could also be called Considerations, Rationale, Findings, Discussion, and so on.*)

The Adjudicator's description of how each recommendation was reached.

Respectfully submitted,

Date : _____

Date : _____

Date : _____

Appendix G- Specifications & Drawings of control center

1. Technical details of Proposed/existing Control Centre (All components) at Dehradun (U.K.)

Sl. No.	Requirement at each location	Specifications
1	Civil and Electrical:	<ul style="list-style-type: none"> • Approx. 600 sq. Feet built up area is provisioned for control center at GBO complex, 17 E.C. Road Dehradun. Necessary civil works (with False ceiling and flooring) for cable routing, fitting Precision ACs and de-humidifier, Electrical works (incl. Earthing) for installing the Control centre with power back-up etc provisioned for Control center.
2	Power Back-up	Seven (07) days 24X7 Un-interrupted power back-up arrangement with N+1 redundancy. This may be achieved by having a first 2 (two) Hours power backup through UPS with Gen set as alternate source of Power thereafter (Detailed power calculation sheet is to be submitted with the bid).
3	Precision AC & De-humidifier	Seamless AC environment in the Control Centre
4	Lightening Conductor And Surge protection	Lightening Conductor and Surge protector of reputed brand as per the UNAVCO specs
5	Racks	Racks for housing the Servers, Switches, Router, KVM, Firewall etc.
6	Server with N+1 redundancy capable of handling 500 concurrent user	<p>Standard 42U Rack mountable chassis based following servers of reputed make DELL/IBM/HP etc. with fault tolerant architecture:</p> <ul style="list-style-type: none"> (i) Control Server: For processing the Network corrections (ii) Site Server: Secure interface to receive CORS data (iii) Web server: User Interface (iv) FTP server: for raw CORS data <p>Refer Section VI (4): Drawing</p> <p>Servers of 64 bit, at least 64 MB cache or higher, Multi core (at least 2X8 core) Intel Xeon E5-2650 (2.5 Ghz) or better processor with availability of extra sockets for adding atleast 2 more processors, atleast 64 GB Ram (with spare sockets for scalability), Server OS with modules for Clustering, Virtualization, Remote server management etc, at least 1.2 TB X 2 HDD SAS 2.5" 12 Gbps 10K rpm, Fiber Channel and Fast Ethernet connectors, Graphic Card supports above 1 Gbps etc.</p> <p>Capable to support up to minimum of 400 connected receiver stations with approximately 500 bytes per second traffic per node with latency better than 200 milliseconds. Architecture of server is such that its capabilities can be enhanced in future with expansion of CORS network (i.e. increase in number of reference station and concurrent user etc), without changing basic architecture of server.</p>
7	Other hardware components	Other hardware components viz load balancer (s), hardware Firewall (s), L3 switches, Other Switches, Routers etc.

8	Desktop computer with Display	One high end system with Dual core i7 or latest processor with at least 16 GB or higher RAM, Good cache atleast 8M, Graphics card, 1.2 TB HDD SAS 2.5" 12 Gbps 10K rpm with two nos. of 40" TFT display panel of reputed brand at Control Centre for monitoring of the CORS network at control centre.
9	Redundancy	No single point of failure configuration for all components like controllers, fans, disks and power supplies.
10	OS Support	Windows Server OS (Version 2016 or later) with modules for Clustering, Virtualization, Remote server management etc.,
11	Management	<ul style="list-style-type: none"> • GUI & CLI based remote management. • Management host must be provided with the solution. • Periodical online firmware upgrades.
12	Control center Software with perpetual license	Client/Server Architecture
		Run automatically and continuously as a windows service under Windows™ 2016 Server and 64bit operating system supported
		Software Services shall start automatically with other services when booting.
		The software supports installation in virtual environments including Microsoft Hyper-V and VMWare
		The operator does not need to be logged into Windows.
		If power fails, the software restarts immediately when the power returns and the computer reboots
		have fast and efficient multiple-user access to its own database
		Graphical User-Interface
		The client application have a “graphical user interface”, with typical Windows™ look and feel, that controls the server. It should be able to be installed on remote PC’s as well as on the server:
		Easy to learn and use and Self-explanatory panels, boxes, windows, toolbars
		Map-views include background map for a better visibility of the network.
		Graphical UI with drop-down menus for better configuration and organization of system setup in UI and to select receiver hardware type, antenna type, tectonic plate and datum per station.
		Software run independently from the GUI and software must run as a Windows Service
		The software provides one common user interface for a complete redundant system installation over all servers used within the setup. It also provides health status information on the functionality of the software as well as on the underlying services. It shall be possible to restart services through this user interface
		Security
		The Software have three-access level Administrator, User and Guest:
		Administrators is able to start and stop the various operations, create and change configurations, set parameters and modes etc.
		The User security level allows the modification and configuration of operation relevant settings
		Viewers only be able to inspect the operation of the software, configuration parameters, system and receiver status etc. and not be able control the software and its operation
		System monitoring

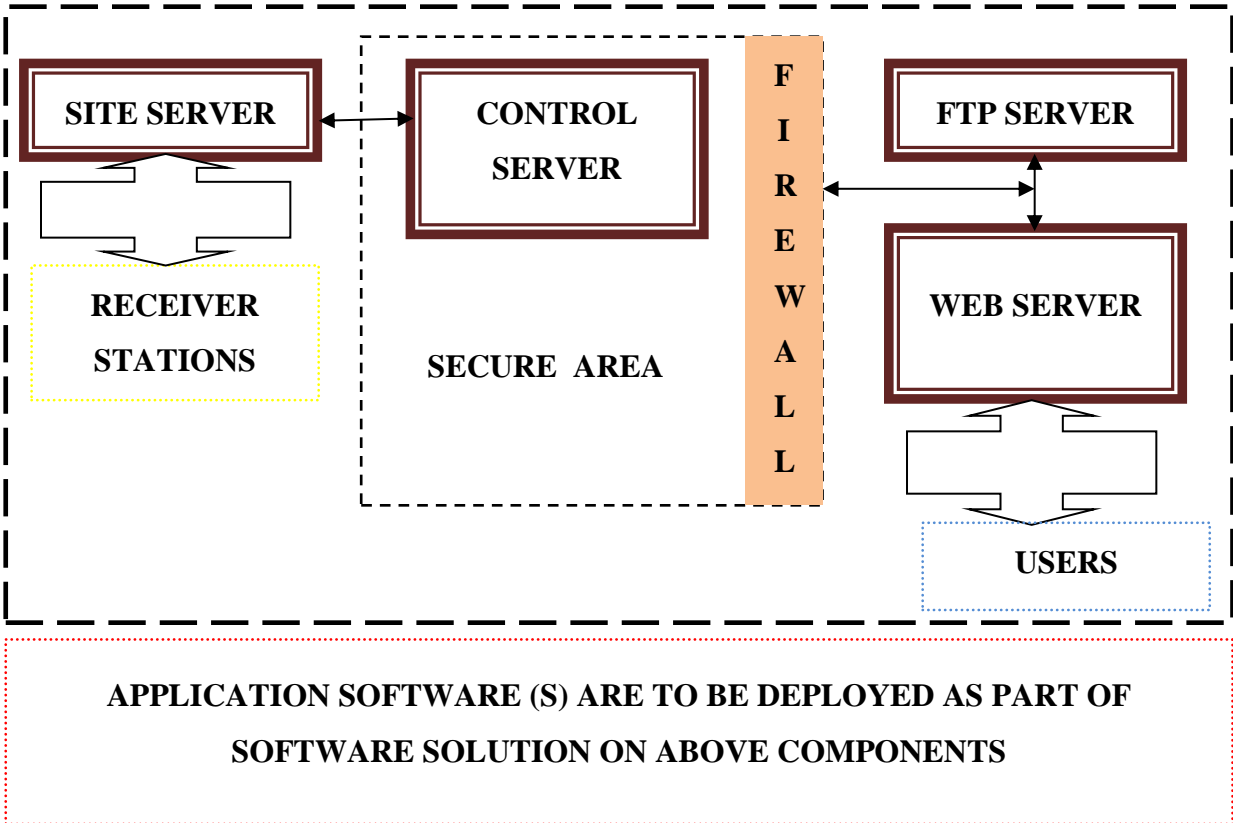
		<p>The software monitors the various communication links and the operation of the entire system</p> <p>The software provides one view with offers the health status of all modules in the system at one glance.</p> <p>Controls GNSS receivers, directly and remotely</p> <p>The software remotely control the GNSS receivers</p> <p>Generates event logs, alarms & warnings on receiver status, network status and data quality status</p> <p>Check all downloaded data for completeness and retrieve missing data automatically from the internal receiver memory</p> <p>The software allows monitoring the current velocities of point or station movement additionally to their displacements</p> <p>The GNSS Software is able to monitor the stations coordinates in real time and post processing with the possibility to configure alarms and reports. This system must have the following minimum set of features:</p> <ul style="list-style-type: none"> - relative position monitoring based on fixed stations inside the Network - Absolute position monitoring based on PPP technology <p>The results shall be presented in a graphical way and shall allow a system administrator to view time series on the integrity checks.</p> <p>The software is capable to analyze the performance of rovers in a network based on network corrections and Time to Fix (TTF) of a rover after reset</p> <p>The software is capable of eliminate negative effects from erroneous coordinates (for example, incorrect coordinates or antenna height, or shifts resulting from earth movements)</p> <p>System processing</p> <p>The GNSS Software Computes in real-time a global adjustment of the network for best estimation of all GNSS errors</p> <p>GNSS-software is able to perform the independent calculation of reference station absolute and global positions using PPP method and comparison with given reference station coordinates. Any inconsistency, removes the station from network solution automatically and notify the operator, according to alarm configuration</p> <p>Allows the Network RTK solution to be valid even outside the polygon of Reference Stations up to 20km</p> <p>The software uses individual reference station velocities in the network processing</p> <p>The software is capable to operate and process Network-RTK corrections for at least 400 reference stations on one single standard-industrial server within one single instance/process of the software and within one module. The software is capable to handle at least 500 users at the same time on one single standard-industrial server within one single instance/process of the software and within one module.</p> <p>The software can create full-constellation Network-RTK corrections for at least 500 users</p> <p>The software is capable to send Glonass, Beidou and Galileo corrections in case of multi-constellation-capable receivers are not deployed on all reference stations. The bidder shall explain the used methodology for this solution.</p> <p>The GNSS Software can generate different type of corrections to allow different kind of services:</p> <p>Network-RTK corrections of the following satellite systems, frequencies and signals: GPS (L1, L2, L2C, L5), Glonass (G1, G2), QZSS, Galileo (E1 and E5 AltBoc (pilot and data)) and BeiDou (B1, B2) (all together)</p>
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	<p>RTCM MSM input and output</p>
	<p>DGPS corrections in RTCM v2.x format</p>
	<p>Single RTK corrections from specific stations</p>
	<p>Single RTK corrections from nearest station (requires user's position via NMEA string).</p>
	<p>All Real-time corrections are given in the International Recognized Standard called RTCM. RTCM messages in version 2.x and 3.x only are allowed. Any deviation to this standard is not recommended.</p>
	<p>The following three Network-RTK standard method (RTCM standard) are supported</p> <ul style="list-style-type: none"> - Concept of Virtual Reference Stations (VRS) - MAC (Master Auxiliary Concept) - FKP (Flaechen korrektur parameter)
	<p>- Distribution channels</p>
	<p>The GNSS Software provides access to the following communication channels:</p>
	<p>Provisional dial-up via individual land-line modems,</p>
	<p>Provisional dial-Up via cellular/GSM modems and a multiplexer.</p>
	<p>Provisional Radio modems (Satel, Pacific Crest) in case of one-way corrections like single base RTK.</p>
	<p>Internet, intranet, local or wide area networks (TCP/IP) or with Mobile Cellular GPRS or Wireless technology using RTCM standard NTRIP 1.0 and NTRIP 2.0</p>
	<p>Web Interface</p>
	<p>The Software includes a web server part to provide:</p>
	<ul style="list-style-type: none"> - Management and control of end users access: - Clients can register online - Once the registration is accepted by the administrator, clients can access the web server services according to their specific authorization - The software allows the customer billing and management of costs
	<p>Clients can pay online</p>
	<p>The Software allows the downloading of Rinex and Virtual Rinex files</p>
	<ul style="list-style-type: none"> - The software provides Online post processing service by using the network reference stations
	<p>Availability and compatibility</p>
	<p>High Availability of Network RTK service for user of specified accuracy and precision on an average > 95 % computed on monthly basis</p>
	<p>The Network is compatible with all industry standard RTK Rovers</p>
	<p>The Network provides solution for the Rover compatible with high accuracy correction stream delivered via non-Terrestrial communications e.g. L- Band Satellites.</p>
	<p>The Network allow users to access a range of GNSS accuracy levels on their mobile device, from 1 meter to a few centimeters, on-demand.</p>
	<p>Client/Server Architecture</p>

		Run automatically and continuously as a windows service under Windows™ 2016 Server and 64bit operating system supported
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2. Drawings

Control Centre Architecture:



Control Centre Architecture

Section IX Contract Forms

Table of Forms

Performance Security - Bank Guarantee	133
Advance Payment Security	135

Performance Security - Bank Guarantee

[Guarantor letterhead or SWIFT identifier code]

Performance Guarantee No.....*[insert guarantee reference number]*

Date.....*[insert date of issue of the guarantee]*

To: _____ *[name of Purchaser]*

_____ *[address of Purchaser]*

WHEREAS _____ *[name and address of Supplier¹]* (hereinafter called "the Applicant") has undertaken, in pursuance of Contract No. _____ dated _____ to execute _____ *[name of Contract and brief description of Goods and related Services]* (hereinafter called "the Contract");

AND WHEREAS it has been stipulated by you in the said Contract that the Applicant shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with his obligations in accordance with the Contract;

AND WHEREAS we have agreed to give the Applicant such a Bank Guarantee;

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Applicant, up to a total of _____ *[amount of guarantee²]* _____ *[in words]*, such sum being payable in the types and proportions of currencies in which the Contract Price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of _____ *[amount of guarantee]* as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

¹*In the case of a JV, insert the name of the Joint Venture*

²*An amount shall be inserted by the Guarantor, representing the percentage of the Contract Price specified in the Contract and denominated in Indian Rupees.*

We hereby waive the necessity of your demanding the said debt from the Applicant before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Goods and related Services to be supplied thereunder or of any of the Contract documents which may be made between you and the Applicant shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid until (i.e.) 60 days following the Completion date of the Contract including any warranty obligations³, and any demand for payment under it must be received by us at this office on or before that date.

Signature and seal of the guarantor _____

Name of Bank _____

Address _____

Date _____

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

³ Completion date as described in GC Clause 18.4

Advance Payment Security
Demand Guarantee
[Guarantor letterhead or SWIFT identifier code]

Advance Payment Guarantee No.....*[insert guarantee reference number]*
Date.....*[insert date of issue of the guarantee]*

To: _____ *[name of Purchaser]*
_____ *[address of Purchaser]*
_____ *[name of Contract]*

Gentlemen:

In accordance with the provisions of the Conditions of Contract, Clause 16 ("Terms of Payment") of the above-mentioned Contract, _____ *[name and address of Supplier⁴]* (hereinafter called "the Applicant") shall deposit with _____ - _____ *[name of Purchaser]* a bank guarantee to guarantee his proper and faithful performance under the said Clause of the Contract in an amount of _____ *[amount of guarantee⁵]* _____ *[in words]*.

We, the _____ *[bank or financial institution]*, as instructed by the Applicant, agree unconditionally and irrevocably to guarantee as primary obligator and not as Surety merely, the payment to _____ *[name of Purchaser]* on his first demand without whatsoever right of objection on our part and without his first claim to the Applicant, in the amount not exceeding _____ *[amount of guarantee]* _____ *[in words]*.

We further agree that no change or addition to or other modification of the terms of the Contract or of Goods and related Services to be supplied thereunder or of any of the Contract documents which may be made between _____ *[name of Purchaser]* and the Applicant, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

⁴In the case of a JV, insert the name of the Joint Venture

⁵An amount shall be inserted by the bank representing the amount of the Advance Payment, and denominated in Indian Rupees.

This guarantee shall remain valid and in full effect from the date of the advance payment under the Contract until _____ [*name of Purchaser*] receives full repayment of the same amount from the Applicant. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

Yours truly,

Signature and seal: _____

Name of Bank: _____

Address: _____

Date: _____

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.