

Corrigendum in Tender No. HWT210120608

Bid for Selection of Agency for Supply, Installation/System Integration, Commissioning, Maintenance, Training and Operation of Continuously Operating Reference System Network. DGNSS Rover, Controller and Surveying Accessories for updating and Maintenance of GIS based Maps on behalf of Settlement Commissioner and Director of Land Record, Revenue Department, Govt. of Gujarat, Gandhinagar.

The following amendments have been made to the tender document through this corrigendum:

Note: Those bidders who have submitted financial bid on n-procure website are required to re-submit the price details as per revised financial bid on nprocure website.

Sr. No.	Tender Reference	Existing Clause	Amended Clause
---------	------------------	-----------------	----------------

SECTION I**Eligibility Criteria for the bidder:**

1	Page 4 of 72 Point 1	The bidder should have minimum annual average turnover of Rs. 10 Crore in modern survey instrument and technology business for each of the last three financial years as on 31st March 2019. The copies of Audited Annual Accounts/Balance Sheet along with Profit & Loss Account and CA Certified Statement for last three financial years as on 31st March 2019 shall be attached along with the bid. (Form no. E-1)	The bidder should have cumulative turnover of Rs. 20 crore in last three years from modern survey instrument and technology business as on 31st March 2019. The copies of Audited Annual Accounts / Balance Sheet along with Profit & Loss Account or CA Certified turnover Statement as applicable for last three financial years / period as on 31st March 2019 shall be attached along with the bid. ((Form no. E-1)
2	Page 4 of 72 Point 4	The bidder/OEM should have experience of supply /installations and maintenance of minimum 3 sites/CORS projects with at least 30 CORS Base Stations cumulatively in last 3 years as on bid submission Date. (Form no. E-4)	The bidder/OEM/OEM Subsidiary should have experience of supply /installations and maintenance of minimum 3 sites/CORS projects with at least 30 CORS Base Stations cumulatively in last 5 years as on bid submission Date. (Form no. E-4)
3	Page 4 of 72 Point 5	Bidder must ensure that the warranty support & service should be available up to delivery locations to provide repairing cum replacement services of faulty equipment within 48 hrs. Bidder is required to provide the name, address & contact details of the authorized service center for providing warranty support & repairing cum replacement service up to delivery locations. (Form no. E-5)	Bidder must ensure that the warranty support & service should be available up to delivery locations to provide repairing cum replacement services of faulty equipment within 72 hrs. Bidder is required to provide the name, address & contact details of the authorized service center for providing warranty support & repairing cum replacement service up to delivery locations. (Form no. E-5)
4	Page 4 of 72 Point 6	The bidder must be Authorized Dealer/ Distributor/ Re-seller or should be authorized by its OEM to quote this bid. Please upload the copy of Authorization Certificate on OEM letter head, OEM Malicious Code Certificate, Country of origin, Dispatch Details along with packing List and Airway bill must be provided, Supplied items Launching Year Product launched not before 5 years from bid date. Products launched before 5 years are not eligible. (Bidding product detail sheet; Form E-7) and signed by authorized signatory for the item(s) to be offered in this bid. (Form no. E-6)	The bidder must be Authorized Dealer/ Distributor/ Re-seller or should be authorized by its OEM to quote this bid. Please upload the copy of Authorization Certificate on OEM letter head, OEM Malicious Code Certificate, Country of origin, Dispatch Details along with packing List and Airway bill must be provided, Supplied items Launching Year Product launched not before 6 years from bid date. Products launched before 6 years are not eligible. (Bidding product detail sheet; Form E-7) and signed by authorized signatory for the item(s) to be offered in this bid. (Form no. E-6)
5	Page 4 of 72 Point 7	Warranty assured by bidders should be reflected on OEMs website/portal (please upload OEM undertaking letter)	Consider this clause in Warranty section as below; Warranty assured by bidders should be reflected on OEMs website/portal (please upload OEM undertaking letter) or Bidder should submit Certificate of Warranty assured from their OEM on OEM's Letterhead.

SECTION II**General Terms & Conditions:**

6	Page 8 of 72 Technical Evaluation Criteria: Technical Specifications evaluation criteria (100 Marks):	Technical Specification evaluation criteria (100 Marks)														
		Particulars	Average	Marks	Moderate	Marks	Advance	Marks	Particulars	Average	Marks	Moderate	Marks	Advance	Marks	
		Reference Station							DGNSS Reference Station Receiver							
		Number of Channels	450 or Higher	5	550 or Higher	7.5	650 or Higher	10	Number of Channels	350 to 400 channels : 2.5 marks						
										401 to 450	5	451 to 550	7.5		551 or more	10
Position Update Rate	1 Hz to 20 Hz	5	Upto 50 Hz	7.5	Upto 100 Hz	10	Position Update Rate	1 Hz to 20 Hz	5	21 Hz to 50 Hz	7.5		51 Hz to 100 Hz	10		

Sr. No.	Tender Reference	Existing Clause						Amended Clause								
		Ingress Protection (IP)	IP65	5	IP67	7.5	IP68	10	Ingress Protection (IP)	IP65	5	IP66	7.5		IP67 or Higher	10
		NAVIC (IRNSS) Constellation	-	5	L - Band	7.5	L-Band, S-Band	10	NAVIC (IRNSS) Constellation	-	5	L - Band	7.5		L-Band, S-Band	10
		Rover Receiver						DGNSS Integrated Rover								
		Number of Channels	450 or Higher	5	550 or Higher	7.5	650 or Higher	10	Number of Channels	350 to 400 channels : 2.5 marks						
										401 to 450	5	451 to 550	7.5		551 or more	10
		Position Update Rate	1 Hz to 5 Hz	5	Upto 10 Hz	7.5	Upto 20 Hz	10	Position Update Rate	1 Hz to 5 Hz	5	6 Hz to 10 Hz	7.5		11 Hz to 20 Hz	10
		Ingress Protection (IP)	IP65	5	IP67	7.5	IP68	10	Ingress Protection (IP)	IP65	5	IP66	7.5		IP67 or Higher	10
		NAVIC (IRNSS) Constellation	-	5	L - Band	7.5	L-Band, S-Band	10	NAVIC (IRNSS) Constellation	-	5	L - Band	7.5		L-Band, S-Band	10
		Controller						Controller								
		Integrated Display with Both Hard and Soft Keyboard	4.5 inch to 5.5 inch	5	5.6 inch to 6.5 inch	7.5	6.6 inch to 8 inch	10	Integrated Display with Both Hard and Soft Keyboard OR Survey grade rugged daylight visible and readable display tablets/ACU with attached/detachable keyboard (brightness 700 nit or higher)	4 inch to 5 inch OR 5.0 inch to 6.0 inch	5	5.1 inch to 6 inch OR 6.1 inch to 7.0 inch	7.5		6.1 inch to 8 inch OR 7.1 inch to 8 inch	10
		Ingress Protection (IP)	IP65	5	IP67	7.5	IP68	10	Ingress Protection (IP)	IP65	5	IP66	7.5		IP67 or Higher	10
		Total						100 Marks	Total						100 Marks	
		Cut off Marks						50 Marks	Cut off Marks						50 Marks	
7	Page 8 of 72 Project Experience and Field Demonstration (100	Evaluation Criteria	Marks System				Maximum Marks		Evaluation Criteria	Marks System				Maximum Marks		
		Past Experience and Technical Expertise - 50 Marks														

Sr. No.	Tender Reference	Existing Clause		Amended Clause	
	Demonstration (100 Marks): Sr. No. 1	Previous Similar Project Experience supplying, installation and commissioning of CORS Network(RTK) system including Software, hardware with all accessories	The Bidder/OEM should have prior experience in supplying, installation and commissioning of CORS Network(RTK) system including Software, hardware with all accessories a) At least 3 CORS projects with minimum 30 reference stations cumulatively ; - 10 Marks b) At least 4 CORS projects with minimum 40 reference stations cumulatively; - 30 Marks c) More than 4 CORS projects with minimum 80 reference stations cumulatively; -50 Marks	50	Previous Similar Project Experience supplying, installation and commissioning of CORS Network(RTK) system including Software, hardware with all accessories The Bidder/OEM/OEM Subsidiary should have prior experience in supplying, installation and commissioning of CORS Network(RTK) system including Software, hardware with all accessories a) At least 3 CORS projects with minimum 30 reference stations cumulatively ; - 10 Marks b) At least 4 CORS projects with minimum 40 reference stations cumulatively; - 30 Marks c) More than 4 CORS projects with minimum 80 reference stations cumulatively; -50 Marks
8	Page 9 of 72 The Maximum marks allocated by department technical committee for demonstration of systems:	In order to secure maximum marks in this category by each bidder, they also need to demonstrate the complete features/ capabilities of their offered equipment/system. To facilitate this, department has kept demonstration criteria non-restrictive and completely open for bidders to justify and practically prove in the field before the authorities, the full features/capabilities of their offered equipment/system. Bidders may submit in writing to the department before demonstrating that what they are going to demonstrate, how they will demonstrate (methodology) and advantages of the special/additional features/capabilities (if any) which are mentioned or may not be mentioned in the tender specifications. Similarly, after completion of demonstration, bidder may submit explicitly in writing the exercise of demonstration conducted including the methodology and specific features/ capabilities shown/demonstrated. ● Offered methodology during demonstration – 10 Marks ● Additional features offered during demonstration -10 Marks		20	In order to secure maximum marks in this category by each bidder, they also need to demonstrate the complete features/ capabilities of their offered equipment/system. To facilitate this, department has kept demonstration criteria non-restrictive and completely open for bidders to justify and practically prove in the field before the authorities, the full features/capabilities of their offered equipment/system. Bidders may submit in writing to the department before demonstrating that what they are going to demonstrate, how they will demonstrate (methodology) and advantages of the special/additional features/capabilities (if any) which are mentioned or may not be mentioned in the tender specifications. Similarly, after completion of demonstration, bidder may submit explicitly in writing the exercise of demonstration conducted including the methodology and specific features/ capabilities shown/demonstrated. ● Offered methodology during demonstration – 10 Marks (other than mentioned in field demonstration of various survey methods. Any additional method, feature, facility that is desirable and useful to the department that should be demonstrated and acceptable to the department shall be considered.) ● Additional features offered i.e. Like Anti Jamming, Laser Distance Meter, User-friendly operation etc. are desirable and useful to the department that should be demonstrated and acceptable to the department shall be considered.) -10 Marks
9		The Technical bid shall have a weighted at 70% in the overall evaluation of the bid and the Commercial bid shall have a weighted at 30% in the overall evaluation. Proposals will be ranked according to their combined technical (Tn) and financial (Fn) scores using the weights (T = 0.70 the weight given to the Technical Proposal; P = 0.30 the weight given to the Financial Proposal; T + P = 1). The final evaluation will be based on Final Score which shall be calculated as shown below: Final Score (S) = Tn x T + Fn x P			The Technical bid shall have a weighted at 60% in the overall evaluation of the bid and the Commercial bid shall have a weighted at 40% in the overall evaluation. Proposals will be ranked according to their combined technical (Tn) and financial (Fn) scores using the weights (T = 0.60 the weight given to the Technical Proposal; P = 0.40 the weight given to the Financial Proposal; T + P = 1). The final evaluation will be based on Final Score which shall be calculated as shown below: Final Score (S) = Tn x T + Fn x P

Sr. No.	Tender Reference	Existing Clause	Amended Clause																																																																																				
10	Page 10 of 72 Point 29	As per the provision in Electronics & IT/ITeS Start-up Policy Resolution No. ITS/10/2015/5284/IT dated 6th June, 2016 issued by Department of Science & Technology OR As per Govt. of India Gazette notification no. GSR 34 (E) dated 16th January 2019 or as amended time to time; in e-Governance project undertaken by Government Departments or its Boards, Corporations or parastatal bodies getting grants from the Government, the chosen solution provider or system integrator will pass on job work or will outsource part of the work of a value ranging between 5% to 10% of the contract value to the eligible start-ups and to students of shortlisted Technical Colleges in Gujarat. In such arrangements, the responsibility of meeting SLAs (Service Level Agreements) will continue to belong to the solution provider or the system integrator.	As per the provision in Electronics & IT/ITeS Start-up Policy Resolution No. ITS/10/2015/5284/IT dated 6th June, 2016 issued by Department of Science & Technology OR As per Govt. of India Gazette notification no. GSR 34 (E) dated 16th January 2019 or as amended time to time; in e-Governance project undertaken by Government Departments or its Boards, Corporations or parastatal bodies getting grants from the Government, the chosen solution provider or system integrator will pass on job work or will outsource part of the work of a value ranging between 5% to 10% of the contract value to the eligible start-ups and to students of shortlisted Technical Colleges in Gujarat. In such arrangements, the responsibility of meeting SLAs (Service Level Agreements) will continue to belong to the solution provider or the system integrator. No Tender Fee and EMD Exemption.																																																																																				
11	Page 10 of 72 Point 32	Delivery & Installation: Within 60 working days from the date of purchase order at respective site/locations across the Gujarat State. The delivery location details are available at SECTION VIII.	Delivery & Installation: Within 90 working days from the date of purchase order at respective site / locations across the Gujarat State. The delivery location details are available at SECTION VIII.																																																																																				
12	Page 12 of 72 37. Scope of Work: Background: Para 2	The Settlement Commissioner of Land Records, Gujarat State on behalf of Government of Gujarat is inviting the technical and commercial proposal from agency experienced in DGNSS technology to establish Real Time CORS network and processing center in State. The RFP document also includes the maintenance and operation of Network for 6 (Six) years from the date of installation and commissioning.	The Settlement Commissioner of Land Records, Gujarat State on behalf of Government of Gujarat is inviting the technical and commercial proposal from agency experienced in DGNSS technology to establish Real Time CORS network and processing center in State. The RFP document also includes the maintenance and operation of Network for 1 (One) year Warranty + 5 (Five) years CAMC from the date of installation and commissioning.																																																																																				
13	Page 13 of 72 37. Scope of Work: Scope of Work: Para 3	<ul style="list-style-type: none"> Supply of state of art software to run CORS stations with capabilities of subscription service for different options of services such as RTK, Post Processing (PP/Static Survey) and Post Processing Kinematics (PPK) etc. with add on application for all available services as well services to run on mobile devices (Android/ iPhone or iPad) as a services to customers with billing options. 	<ul style="list-style-type: none"> Supply of state of art software to run CORS stations with capabilities of subscription service for different options of services such as RTK, Post Processing (PP/Static Survey) and Post Processing Kinematics (PPK) etc. 																																																																																				
14	Page 16 & 17 of 72 System Configuration and Components Control Centre	The control centre will be setup at Gujarat State Data Centre at Gandhinagar. It will already have IT infrastructure, uninterrupted power supply and AC supply facility. The bidders supply only software, OS, DB software, Load Balancing software and other required software for control center. The application should be able to host on x86 platform. The required computing power and storage will be provided in SDC by department. The supplied controller should also support Bhunaksha mobile application developed in android developed by NIC.	The control centre will be setup at Gujarat State Data Centre at Gandhinagar. It will already have IT infrastructure, uninterrupted power supply and AC supply facility. The bidders supply only software, OS, DB software, Load Balancing software and other required software for control center. The application should be able to host on x86 platform. The required computing power and storage will be provided in SDC by department. The supplied controller should also support Bhunaksha mobile application developed in android developed by NIC. Bidder should provide API/Functionality for latitude- longitude to be consumed by BHUNAKSHA mobile application.																																																																																				
15	Page 17 of 72 Hardware and Software Requirements: a. DGNSS Receiver 1)	The offered receiver must be capable of tracking minimum 25 satellites with up to 6 signals per satellite simultaneously. The offered receiver shall have 450+ physical channels to accommodate this tracking. Dynamic channel allocation is not an acceptable substitute for physical channels as it requires the receiver to cycle through channels and loads the CPU of the receiver. Multiple frequency, 450+ channel DGNSS receiver supporting the following simultaneous signal tracking:	The offered receiver shall have 350+ physical channels to accommodate this tracking. Dynamic channel allocation is not an acceptable substitute for physical channels as it requires the receiver to cycle through channels and loads the CPU of the receiver. Multiple frequency, 350+ channel DGNSS receiver supporting the following simultaneous signal tracking:																																																																																				
16	Page 18 of 72 Table 1: The DGNSS Signals tracked and recorded by the proposed hardware:	<table border="1"> <thead> <tr> <th>GPS</th> <th>GLONASS</th> <th>GALILEO</th> <th>COMPASS (BeiDou)</th> <th>NavIC (IRNSS)</th> <th>SBAS</th> <th>L-Band</th> </tr> </thead> <tbody> <tr> <td>1. L1 C/A</td> <td>1. L1 C/A</td> <td>1. L1 CBOC</td> <td>1. B1</td> <td>1. L5</td> <td>1. L1 C/A</td> <td>Any, Free Subscription</td> </tr> <tr> <td>2. L2P</td> <td>2. L1P</td> <td>2. ESA</td> <td>2. B2</td> <td></td> <td>2. L5</td> <td></td> </tr> <tr> <td>3. L2C</td> <td>3. L2C/A</td> <td>3. ESB</td> <td>3. B3</td> <td>Upgradable to IRNSS S Band</td> <td>3. Gagan</td> <td></td> </tr> <tr> <td>4. L5</td> <td>4. L2P</td> <td>4. E5AltBoc</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>5. L3 CDMA</td> <td>5. E6</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	GPS	GLONASS	GALILEO	COMPASS (BeiDou)	NavIC (IRNSS)	SBAS	L-Band	1. L1 C/A	1. L1 C/A	1. L1 CBOC	1. B1	1. L5	1. L1 C/A	Any, Free Subscription	2. L2P	2. L1P	2. ESA	2. B2		2. L5		3. L2C	3. L2C/A	3. ESB	3. B3	Upgradable to IRNSS S Band	3. Gagan		4. L5	4. L2P	4. E5AltBoc						5. L3 CDMA	5. E6					<table border="1"> <thead> <tr> <th>GPS</th> <th>GLONASS</th> <th>GALILEO</th> <th>COMPASS (BeiDou)</th> <th>NavIC (IRNSS)</th> <th>SBAS</th> <th>L-Band</th> </tr> </thead> <tbody> <tr> <td>1. L1 C/A</td> <td>1. L1 C/A</td> <td>1. E1 CBOC</td> <td>1. B1</td> <td>1. L5</td> <td>1. L1 C/A</td> <td>Any, Free Subscription</td> </tr> <tr> <td>2. L2P</td> <td>2. L1P</td> <td>2. E5a</td> <td>2. B2</td> <td></td> <td>2. L5</td> <td></td> </tr> <tr> <td>3. L2C</td> <td>3. L2C/A</td> <td>3. E5b</td> <td>3. B3</td> <td>Upgradable to IRNSS S Band</td> <td>3. Gagan</td> <td></td> </tr> <tr> <td>4. L5</td> <td>4. L2P</td> <td>4. AltBoc</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>5. L3 CDMA</td> <td>5. E6</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	GPS	GLONASS	GALILEO	COMPASS (BeiDou)	NavIC (IRNSS)	SBAS	L-Band	1. L1 C/A	1. L1 C/A	1. E1 CBOC	1. B1	1. L5	1. L1 C/A	Any, Free Subscription	2. L2P	2. L1P	2. E5a	2. B2		2. L5		3. L2C	3. L2C/A	3. E5b	3. B3	Upgradable to IRNSS S Band	3. Gagan		4. L5	4. L2P	4. AltBoc						5. L3 CDMA	5. E6				
GPS	GLONASS	GALILEO	COMPASS (BeiDou)	NavIC (IRNSS)	SBAS	L-Band																																																																																	
1. L1 C/A	1. L1 C/A	1. L1 CBOC	1. B1	1. L5	1. L1 C/A	Any, Free Subscription																																																																																	
2. L2P	2. L1P	2. ESA	2. B2		2. L5																																																																																		
3. L2C	3. L2C/A	3. ESB	3. B3	Upgradable to IRNSS S Band	3. Gagan																																																																																		
4. L5	4. L2P	4. E5AltBoc																																																																																					
	5. L3 CDMA	5. E6																																																																																					
GPS	GLONASS	GALILEO	COMPASS (BeiDou)	NavIC (IRNSS)	SBAS	L-Band																																																																																	
1. L1 C/A	1. L1 C/A	1. E1 CBOC	1. B1	1. L5	1. L1 C/A	Any, Free Subscription																																																																																	
2. L2P	2. L1P	2. E5a	2. B2		2. L5																																																																																		
3. L2C	3. L2C/A	3. E5b	3. B3	Upgradable to IRNSS S Band	3. Gagan																																																																																		
4. L5	4. L2P	4. AltBoc																																																																																					
	5. L3 CDMA	5. E6																																																																																					

Sr. No.	Tender Reference	Existing Clause	Amended Clause
17	Page 18 of 72 Hardware and Software Requirements: a. DGNSS Receiver 12)	Internal battery must be capable of operating as an internal battery backup system (UPS/Inverter) with user configurability to enable/disable this functionality.	Internal battery must be capable of operating as an internal battery backup system for UPS/Inverter/Solar pannel.
18	Page 18 of 72 Hardware and Software Requirements: a. DGNSS Receiver 21)	Must contain embedded (non-removable) memory with 16GB or higher of logging space.	Shall contain embedded (non-removable)/ removable memory with 16GB or higher of logging space.
19	Page 18 of 72 Hardware and Software Requirements: a. DGNSS Receiver 24)	Internally logged data shall have a file size of less than 1MB (unzipped) for a 24 hour, 15 second file to maximize storage capacity.	Internally logged data shall have a file size of less than 10 MB (unzipped) for a 24 hour, 15 second file to maximize storage capacity.
20	Page 19 of 72 Hardware and Software Requirements: a. DGNSS Receiver 30)	The receiver must have an integrated RJ45 connector (supporting both TCP/IP and UDP), two serial ports, USB, and an external frequency input.	The receiver with an integrated RJ45 connector is desirable (supporting both TCP/IP and UDP), two serial ports, USB, and an external frequency input.
21	Page 19 of 72 Hardware and Software Requirements: a. DGNSS Receiver 37)	The receiver must support multiple Bluetooth connections.	The receiver must support one or more Bluetooth connections.
22	Page 19 of 72 Hardware and Software Requirements: a. DGNSS Receiver 42)	The receiver shall support on-board worldwide real-time precise point positioning (PPP), via both Internet Protocol (IP) and L-Band satellite delivery.	DELETED
23	Page 19 of 72 Hardware and Software Requirements: a. DGNSS Receiver 46)	The offered receiver must be configurable in the field without the use of additional aids such as data collectors, computers, PDA type devices, or similar devices/technologies. This should be accomplished via a multi-line LCD style display with sufficient buttons to facilitate such configuration.	The offered receiver must be configurable in the field through Front panel LCD style display or similar attachment with sufficient buttons to facilitate such configuration.
24	Page 19 of 72 Hardware and Software Requirements: b. DGNSS Antenna 1)	Chock Ring (With External radome) or Geodetic Class antenna with DM Element tracking the above mentioned signals	Chock Ring (With External radome) with (Dorne Margoline) DM Element or Geodetic Class antenna tracking the above mentioned signals

Sr. No.	Tender Reference	Existing Clause	Amended Clause
25	Page 19 of 72 Hardware and Software Requirements: b. DGNSS Antenna 10)	Shock rating MILDSTD-810-F	DELETED
26	Page 19 of 72 Hardware and Software Requirements: b. DGNSS Antenna 11)	Vibrating rating MILDSTD-810-F	DELETED
27	Page 20 of 72 Hardware and Software Requirements: d. Control Centre Software Design and architecture of the software: Point 1 Para 4	<p>1. The DGNSS software must use the latest technology available:</p> <ul style="list-style-type: none"> o Client / Server Architecture o Must run automatically and continuously as a system service on server. o 32/64 bit operating system supported o Software services shall start automatically with other services when booting o The software must allow to be used with cloud platform. <p>Three access levels for Administrators, User and Guest:</p> <ul style="list-style-type: none"> o Shall have 3 access levels consist of Administrators, User and Guest o Administrator must have full control of software and receivers o Admin must be able to start and stop the various operations, create and change configuration, set parameters and modes etc. o One Admin shall be the support team of the Agency for remote maintenance o The Users security level allows the modification and configuration of operation relevant settings o Operators change log , all configuration changes must be logged in a database so the performed changes can be assigned to when and who did the change o The software shall have the capability to grant other interested parties viewer rights only (Guests) o Viewers should only be able to inspect the operation of the software, configuration parameters, system and receiver status etc. o Viewers should not be able to control the software and its operation 	<p>1. The DGNSS software must use the latest technology available:</p> <ul style="list-style-type: none"> o Client / Server Architecture o Must run automatically and continuously as a system service on server. o 32/64 bit operating system supported o Software services shall start automatically with other services when booting o The software must allow to be used with cloud platform.(Gujarat Government has own cloud platform.) <p>Access levels for Administrators and User:</p> <ul style="list-style-type: none"> o Shall have access levels consist of Administrators and Users o Administrator must have full control of software and receivers o Admin must be able to start and stop the various operations, create and change configuration, set parameters and modes etc. o One Admin shall be the support team of the Agency for remote maintenance o The Users security level allows the modification and configuration of operation relevant settings o Operators change log , all configuration changes must be logged in a database so the performed changes can be assigned to when and who did the change o The software shall have the capability to grant other interested parties viewer rights only o Viewers should only be able to inspect the operation of the software, configuration parameters, system and receiver status etc. o Viewers should not be able to control the software and its operation
28	Page 21 of 72 Hardware and Software Requirements: d. Control Centre Software Design and architecture of the software: Point 2. The DGNSS Software must perform the minimum tasks as described below: Controls DGNSS receivers, directly and remotely: Para 3	<ul style="list-style-type: none"> o Communication between the server and the reference station receivers must have the flexibility to operate as: <ul style="list-style-type: none"> ● Dial up modem ● Internet, intranet, LAN/WAN (TCP/IP) ● Streaming raw data from remote server shall be done either via: <ul style="list-style-type: none"> (i) Binary Raw data (ii) RTCM v3.x 	<ul style="list-style-type: none"> o Communication between the server and the reference station receivers must have the flexibility to operate as: <ul style="list-style-type: none"> ● Internet, intranet, LAN/WAN (TCP/IP) ● Streaming raw data from remote server shall be done either via: <ul style="list-style-type: none"> (i) Binary Raw data (ii) RTCM v3.x

Sr. No.	Tender Reference	Existing Clause	Amended Clause
29	Page 21 of 72 Hardware and Software Requirements: d. Control Centre Software Design and architecture of the software: Point 2. The DGNSS Software must perform the minimum tasks as described below: Point six on page	<ul style="list-style-type: none"> ● The DGNSS software shall provide access to the following communication channels: <ul style="list-style-type: none"> o Provisional dial up via individual land line modems o Provisional dial up via cellular GSM/GPRS modems and multiplexer o Provisional external radio modem support in case of single base RTK o Internet, Intranet, LAN/WAN (TCP/IP) or with Mobile cellular GPRS or Wi-Fi using RTCM standard NTRIP 1.0 and NTRIP 2.0 	<ul style="list-style-type: none"> ● The DGNSS software shall provide access to the following communication channels: <ul style="list-style-type: none"> o cellular GSM/GPRS modems and multiplexer o Provisional external radio modem support in case of single base RTK o Internet, Intranet, LAN/WAN (TCP/IP) or with Mobile cellular GPRS or Wi-Fi using RTCM standard NTRIP 1.0 or higher
30	Page 23 of 72 Hardware and Software Requirements: d. Control Centre Software Design and architecture of the software: Point 2. The DGNSS Software must perform the minimum tasks as described below: Point two on page	<ul style="list-style-type: none"> ● The DGNSS software shall correct the remote receivers and stream raw data without any interaction on local RTK and receiver configuration and provide the following features: <ul style="list-style-type: none"> o Processing kernel should apply the zero difference based algorithms for the global real time adjustment of the network for better reliability and robustness o Use of all stations available within the network to compute a model of distance dependent errors and to compute corrections designed to compensate for these errors o The following network RTK standard method should be supported <ul style="list-style-type: none"> o concept of VRS o MAC o FKP o Use of minimum cut off angle of 10 degree or more o Use of DGNSS predicted ephemeris from the University of Bern and IGS as well as broadcast ephemeris o Possibility to split the network in clusters so that to have either a central or a distributed installation (for provisional backup or redundancy) o Allows the Network RTK solution to be valid even outside the polygon of reference stations up to 20km o The software must use individual reference stations velocities in the network processing o The software package must use DCB files in ionosphere modelling o The software must be able to calculate the TEC(Total Electron Content) and Ionosphere Scintillation in real time o The software should also derive IPWV (Integrated Perceptible Water Vapour) in atmosphere in real time 	<ul style="list-style-type: none"> ● The DGNSS software shall correct the remote receivers and stream raw data without any interaction on local RTK and receiver configuration and provide the following features: <ul style="list-style-type: none"> o Processing kernel should apply the zero difference based algorithms for the global real time adjustment of the network for better reliability and robustness (optional) o Use of all stations available within the network to compute a model of distance dependent errors and to compute corrections designed to compensate for these errors o The following network RTK standard method should be supported <ul style="list-style-type: none"> o concept of VRS / MAC / FKP / Max / iMax o Use of minimum cut off angle of 10 degree or more o Use of DGNSS predicted ephemeris from the University of Bern and IGS as well as broadcast ephemeris o Possibility to split the network in clusters so that to have either a central or a distributed installation (for provisional backup or redundancy) o Allows the Network RTK solution to be valid even outside the polygon of reference stations up to 20km o DELETED o The software package must use DCB files in ionosphere modelling o DELETED o DELETED
31	Page 24 of 72	DGNSS Rover Hardware	DGNSS Rover & Controller Hardware
32	Page 24 of 72	Antenna Type: Latest technology antenna of high quality geodetic type to mitigate multipath effects. Antenna Phase Centre (APC): Antenna must have a valid international DGNSS service (IGS/NGS) type absolute antenna calibration	Antenna Type: Latest technology antenna of high-quality geodetic type to mitigate multipath effects. All upgrades including NavIC (IRNSS) must be provided during warranty and 5 years CAMC. Antenna Phase Centre (APC): Antenna must have a valid international DGNSS service (IGS/NGS) type absolute antenna calibration.

Sr. No.	Tender Reference	Existing Clause	Amended Clause
33	Page 24 of 72	<p>The DGNSS rover should be able to get 2 cm to 5 cm of accuracy with the following hardware solutions.</p> <p>i. Multi frequency handheld portable DGNSS rover (Detail Specification Attached)</p> <p>ii. Existing DGNSS Receivers with the department of Land Records, Gujarat Handheld DGNSS Rover Specification</p> <ul style="list-style-type: none"> - Should at least support GPS L1,L2,L5 and GLONASS L1, L2 in network RTK solution environment - Should have software functionality required for normal RTK operations like Stake out, Feature coding, Area subdivide and calculation, site calibration, active background maps, linked files, support for laser distance meter etc. - The handheld rover should be able to provide 25 cm of accuracy in network RTK without any external antenna to allow user to carry out survey activity with ease - A customized pole should be supplied in case of precise fast static measurement in field - The rover should have at least 5MP or higher inbuilt camera for documentation - Should have inbuilt slot for memory expansion (8GB or higher required) and inbuilt SIM card slot for network RTK corrections - Should have minimum of 1 GB or Higher RAM - Update rate 1Hz to 20 Hz 	<p>The DGNSS rover should be able to get 2 cm to 5 cm of accuracy with the following hardware solutions.</p> <p>i. Multi frequency portable DGNSS rover (Detail Specification Attached)</p> <p>ii. Existing DGNSS Receivers with the department of Land Records, Gujarat Handheld DGNSS Rover Specification</p> <ul style="list-style-type: none"> - Should at least support GPS L1,L2,L5 and GLONASS L1, L2 in network RTK solution environment - Should have software functionality required for normal RTK operations like Stake out, Feature coding, Area subdivide and calculation, site calibration, active background maps, linked files, support for laser distance meter etc. - A customized pole should be supplied in case of precise fast static measurement in field - The controller should have at least 5MP or higher inbuilt camera for documentation - Should have inbuilt slot for memory expansion (8GB or higher required) and inbuilt SIM card slot for network RTK corrections - Should have minimum of 1 GB or Higher RAM - Update rate 1Hz to 20 Hz
34	Page 24 of 72	<p>Additional Hardware Requirement</p> <p>During the warranty period of 6 years, all receiver firmware shall be updated. It is strongly recommended that equipment must be upgraded and /or replaced as the technology changes. Equipment changes should however be minimized as they have the potential of resulting in a change in position. If data quality decreases the receiver equipment shall be replaced/ upgraded.</p>	<p>Additional Hardware Requirement</p> <p>During the warranty period of 1 year + 5 years of CAMC, all receiver firmware shall be updated. It is strongly recommended that equipment must be upgraded and /or replaced as the technology changes. Equipment changes should however be minimized as they have the potential of resulting in a change in position. If data quality decreases the receiver equipment shall be replaced/ upgraded.</p>
35	Page 25 of 72 Last Para of page	<p>On-Site Installation Requirement</p> <p>Each CORS site and entire network should be high quality and at least lifetime of 15 years. The Agency shall design the entire network including each CORS site in such a way that critical volume of space around the antenna should remain undisturbed. Power and internet outages should be taken into consideration though they are infrequent and short lived. Special emphasis by the department will be given on the standard of the material used for entire installation including steel, concrete grade, hardware quality and workmanship of the Agency. Each monument and server room installation should be neat, elegant and professional as per international standards. No loose connection or hanging cables will be tolerated in the entire setup. The Agency should communicate the certified design of each monument and server room to the department with safety standards. The sites for the installations have not been decided yet. The Agency has to propose the site according to their solution with designs of each proposed monument in their technical proposal. Department desires to install at least 5 base stations on ground, remaining base stations may be installed based on site requirement.</p>	<p>On-Site Installation Requirement</p> <p>Each CORS site and entire network should be high quality and at least lifetime of 10 years. The Agency shall design the entire network including each CORS site in such a way that critical volume of space around the antenna should remain undisturbed. Power and internet outages should be taken into consideration though they are infrequent and short lived. Special emphasis by the department will be given on the standard of the material used for entire installation including steel, concrete grade, hardware quality and workmanship of the Agency. Each monument and server room installation should be neat, elegant and professional as per international standards. No loose connection or hanging cables will be tolerated in the entire setup. The Agency should communicate the certified design of each monument and server room to the department with safety standards. The sites for the installations have not been decided yet. The Agency has to propose the site according to their solution with designs of each proposed monument in their technical proposal. Department desires to install at least 5 base stations on ground, remaining base stations may be installed based on site requirement.</p>

Sr. No.	Tender Reference	Existing Clause	Amended Clause
36	page 30 of 72	<p>Quality Control Requirement</p> <p>To ensure the data quality the following verifications shall be made on a daily basis using TEQC to check the quality of the incoming 24hrs RINEX files decimated to 15 seconds epochs. The following statistics must be calculated and recorded MP1, MP2, o/slp, IODslp. The TECQ statistics shall be supplemented with those obtained by forming the ionosphere free linear combination of L1, L2 phases by the method of double differences. This is the method used to calculate daily site coordinates. The combination performance measured shall be used to recommend equipment upgrades for prospective or existing sites whose data underperform compared to its established peers. In addition these results shall be used to search for systematic errors in the network such as a tendency for a model of receiver or antenna to underperform when compared to its peers.</p>	<p>Quality Control Requirement</p> <p>To ensure the data quality the following verifications shall be made on a daily basis using TEQC or similar software to check the quality of the incoming 24hrs RINEX files decimated to 15 seconds epochs. The following statistics must be calculated and recorded MP1, MP2, o/slp, IODslp. The TEQC or similar software statistics shall be supplemented with those obtained by forming the ionosphere free linear combination of L1, L2 phases by the method of double differences. This is the method used to calculate daily site coordinates. The combination performance measured shall be used to recommend equipment upgrades for prospective or existing sites whose data underperform compared to its established peers. In addition these results shall be used to search for systematic errors in the network such as a tendency for a model of receiver or antenna to underperform when compared to its peers.</p>
37	Page 33 of 72	<p>42. Warranty/AMC (Comprehensive 6 years)</p> <p>42.1. Warranty: Comprehensive onsite warranty of 6 Years from the date of installation of procured equipments.</p> <p>42.2. All the CORS System, surveying equipment along with their peripherals & accessories (including third party items) and all the software applications including Server Operating System, database amongst other not explicitly mentioned hereunder shall have to be covered by a warranty for 6 years after the date of successful installation and commissioning at site.</p> <p>42.3. Warranty assured by agency should be reflected on OEMs website/portal</p> <p>42.4. Warranty period will include preventive as well as corrective maintenance.</p> <p>42.5. In case of any defect in any of the surveying equipment along with their peripherals & accessories (including third party items) during Warranty period, the supplier shall arrange to replace/repair the defective part at his cost and ensure that the equipment and peripherals are in ready to use state throughout the contract.</p> <p>42.6. Bidder must ensure that the warranty support & service should be available up to delivery locations to provide repairing cum replacement services of faulty equipment within 48 hrs.</p> <p>42.7. If any equipment becomes faulty for 3 times in one month during the warranty period, the bidder shall replace the same with new equipment of same or higher capability without any additional cost to the purchaser.</p> <p>42.8. If any manufacturing or other technical defects are found within the warranty period, the same will have to be replaced or rectified free of cost by the bidder.</p>	<p>42. Warranty (1 year Comprehensive Onsite Warranty Support + 5 years CAMC Support)</p> <p>42.1. Warranty: Comprehensive onsite warranty of 1 Year from the date of installation of procured equipments/software.</p> <p>42.2. All the CORS System, surveying equipment along with their peripherals & accessories (including third party items) and all the software applications including Server Operating System, database amongst other not explicitly mentioned hereunder shall have to be covered by a warranty for 1 year after the date of successful installation and commissioning at site.</p> <p>42.3. .Warranty assured by bidders should be reflected on OEMs website/portal (please upload OEM undertaking letter) or Bidder should submit Certificate of Warranty assured from their OEM on OEM's Letterhead.</p> <p>42.4. Warranty period will include preventive as well as corrective maintenance.</p> <p>42.5. In case of any defect in any of the surveying equipment along with their peripherals & accessories (including third party items) during Warranty period, the supplier shall arrange to replace/repair the defective part at his cost and ensure that the equipment and peripherals are in ready to use state throughout the contract.</p> <p>42.6. Bidder must ensure that the warranty support & service should be available up to delivery locations to provide repairing cum replacement services of faulty equipment within 72 hrs.</p> <p>42.7. If any equipment becomes faulty for 3 times in one month during the warranty/CAMC period, the bidder shall replace the same with new equipment of same or higher capability without any additional cost to the purchaser.</p> <p>42.8. If any manufacturing or other technical defects are found within the warranty period, the same will have to be replaced or rectified free of cost by the bidder.</p> <p>42.9. In case, bidder does not provide satisfactory support & does unwarranted delay in providing warranty support, Government offices reserves right to repair the equipment at risk & cost of the bidder.</p>
38		<p>42.9. Maintenance service: Free maintenance services shall be provided by the Bidder during the period of warranty.</p> <p>42.10. In case, bidder does not provide satisfactory support & does unwarranted delay in providing warranty support, Government offices reserves right to repair the equipment at risk & cost of the bidder.</p>	<p>42.10. Comprehensive Annual Maintenance Contract (CAMC) (5 years):</p> <ul style="list-style-type: none"> • Free Comprehensive Annual Maintenance service (onsite) shall be provided by the Bidder for 5 years after completion of warranty period of 1 year. • During CAMC period, the bidder should provide all necessary support services as and when required by the Settlement Commissioner and Director of Land Record, Revenue Department. • A maintenance contract shall be required to facilitate hardware and software maintenance. The maintenance contract shall at least consist of the following elements: <ul style="list-style-type: none"> i. The contract shall cover maintenance period of 5 years after warranty period of 1 year ii. Necessary replacement of hardware components iii. Regular update/upgrading of all software with the latest version available iv. Provider shall bear for all maintenance costs. • The maintenance contract shall be effective from completion of warranty period of 1 year

Sr. No.	Tender Reference	Existing Clause	Amended Clause																																																
39	Page 34 of 72 Point 44.	<p>Project timeline (2 months)</p> <p>The work schedule for the project is listed in Table below. The total project duration is 2 months: T: LOI acceptance Date</p> <table border="1" data-bbox="327 334 1115 915"> <thead> <tr> <th data-bbox="327 334 453 370">Sr. No.</th> <th data-bbox="453 334 785 370">Milestones</th> <th data-bbox="785 334 1115 370">Completion Timeline</th> </tr> </thead> <tbody> <tr> <td data-bbox="327 370 453 444">1</td> <td data-bbox="453 370 785 444">Phase 1: Detailed feasibility study and designing</td> <td data-bbox="785 370 1115 444">T + 7 days</td> </tr> <tr> <td data-bbox="327 444 453 509">2</td> <td data-bbox="453 444 785 509">Phase 2: Control centre implementation</td> <td data-bbox="785 444 1115 509">T + 20 days</td> </tr> <tr> <td data-bbox="327 509 453 574">3</td> <td data-bbox="453 509 785 574">Phase 3: Construction of Monumentation</td> <td data-bbox="785 509 1115 574">T + 40 days</td> </tr> <tr> <td data-bbox="327 574 453 688">4</td> <td data-bbox="453 574 785 688">Phase 4: Supply all hardware/software, Installation, Testing, Analysis and running the system</td> <td data-bbox="785 574 1115 688">T + 55 days</td> </tr> <tr> <td data-bbox="327 688 453 818">5</td> <td data-bbox="453 688 785 818">Phase 5: System Training for System Administrator and Field Training</td> <td data-bbox="785 688 1115 818">T + 60 days</td> </tr> <tr> <td data-bbox="327 818 453 915">6</td> <td data-bbox="453 818 785 915">Warranty/AMC for 6 years.</td> <td data-bbox="785 818 1115 915">From the date of Completion of installation : 6 years</td> </tr> </tbody> </table>	Sr. No.	Milestones	Completion Timeline	1	Phase 1: Detailed feasibility study and designing	T + 7 days	2	Phase 2: Control centre implementation	T + 20 days	3	Phase 3: Construction of Monumentation	T + 40 days	4	Phase 4: Supply all hardware/software, Installation, Testing, Analysis and running the system	T + 55 days	5	Phase 5: System Training for System Administrator and Field Training	T + 60 days	6	Warranty/AMC for 6 years.	From the date of Completion of installation : 6 years	<p>Project timeline (3 months)</p> <p>The work schedule for the project is listed in Table below. The total project duration is 3 months: T: LOI acceptance Date</p> <table border="1" data-bbox="1115 334 2072 915"> <thead> <tr> <th data-bbox="1115 334 1241 370">Sr. No.</th> <th data-bbox="1241 334 1629 370">Milestones</th> <th data-bbox="1629 334 2072 370">Completion Timeline</th> </tr> </thead> <tbody> <tr> <td data-bbox="1115 370 1241 444">1</td> <td data-bbox="1241 370 1629 444">Phase 1: Detailed feasibility study and designing</td> <td data-bbox="1629 370 2072 444">T + 15 days</td> </tr> <tr> <td data-bbox="1115 444 1241 509">2</td> <td data-bbox="1241 444 1629 509">Phase 2: Control centre implementation</td> <td data-bbox="1629 444 2072 509">T + 30 days</td> </tr> <tr> <td data-bbox="1115 509 1241 574">3</td> <td data-bbox="1241 509 1629 574">Phase 3: Construction of Monumentation</td> <td data-bbox="1629 509 2072 574">T + 60 days</td> </tr> <tr> <td data-bbox="1115 574 1241 688">4</td> <td data-bbox="1241 574 1629 688">Phase 4: Successfully Inspection, Delivery hardware/software with accessories at site locations.</td> <td data-bbox="1629 574 2072 688">T + 75 days</td> </tr> <tr> <td data-bbox="1115 688 1241 818">5</td> <td data-bbox="1241 688 1629 818">Phase 5: All hardware/software with successful Installation, Commissioning ,Testing, Analysis and running the system and acceptance of the Department.</td> <td data-bbox="1629 688 2072 818">T + 85 days</td> </tr> <tr> <td data-bbox="1115 818 1241 915">6</td> <td data-bbox="1241 818 1629 915">Phase 6: System Training for System Administrator and Field Training</td> <td data-bbox="1629 818 2072 915">T + 90 days</td> </tr> <tr> <td data-bbox="1115 915 1241 1013">7</td> <td data-bbox="1241 915 1629 1013">Warranty for 1 year</td> <td data-bbox="1629 915 2072 1013">From the date of Completion of successful installation</td> </tr> <tr> <td data-bbox="1115 1013 1241 1110">8</td> <td data-bbox="1241 1013 1629 1110">CAMC (Comprehensive Annual Maintenance Contract) for 5 years</td> <td data-bbox="1629 1013 2072 1110">From the completion of warranty period of 1 year</td> </tr> </tbody> </table>	Sr. No.	Milestones	Completion Timeline	1	Phase 1: Detailed feasibility study and designing	T + 15 days	2	Phase 2: Control centre implementation	T + 30 days	3	Phase 3: Construction of Monumentation	T + 60 days	4	Phase 4: Successfully Inspection, Delivery hardware/software with accessories at site locations.	T + 75 days	5	Phase 5: All hardware/software with successful Installation, Commissioning ,Testing, Analysis and running the system and acceptance of the Department.	T + 85 days	6	Phase 6: System Training for System Administrator and Field Training	T + 90 days	7	Warranty for 1 year	From the date of Completion of successful installation	8	CAMC (Comprehensive Annual Maintenance Contract) for 5 years	From the completion of warranty period of 1 year
Sr. No.	Milestones	Completion Timeline																																																	
1	Phase 1: Detailed feasibility study and designing	T + 7 days																																																	
2	Phase 2: Control centre implementation	T + 20 days																																																	
3	Phase 3: Construction of Monumentation	T + 40 days																																																	
4	Phase 4: Supply all hardware/software, Installation, Testing, Analysis and running the system	T + 55 days																																																	
5	Phase 5: System Training for System Administrator and Field Training	T + 60 days																																																	
6	Warranty/AMC for 6 years.	From the date of Completion of installation : 6 years																																																	
Sr. No.	Milestones	Completion Timeline																																																	
1	Phase 1: Detailed feasibility study and designing	T + 15 days																																																	
2	Phase 2: Control centre implementation	T + 30 days																																																	
3	Phase 3: Construction of Monumentation	T + 60 days																																																	
4	Phase 4: Successfully Inspection, Delivery hardware/software with accessories at site locations.	T + 75 days																																																	
5	Phase 5: All hardware/software with successful Installation, Commissioning ,Testing, Analysis and running the system and acceptance of the Department.	T + 85 days																																																	
6	Phase 6: System Training for System Administrator and Field Training	T + 90 days																																																	
7	Warranty for 1 year	From the date of Completion of successful installation																																																	
8	CAMC (Comprehensive Annual Maintenance Contract) for 5 years	From the completion of warranty period of 1 year																																																	
40	Page 34 of 72 Point 45.	<p>Payment Terms:</p> <p>Payment for Goods and Services shall be made by Purchasing Department in Indian Rupees as follows: 60% payment of total project value for successfully Delivery of RTK DGPS systems, Survey Systems, software, hardware with accessories. 20% payment of total project value for RTK DGPS systems, Survey Systems, software, hardware with successful installation & commissioning and acceptance of the Department. 10% payment of total project value after providing Successful Training to the department users. 10% payment of total project value divided equally each year in Warranty/AMC period of 6 years.</p>	<p>Payment Terms:</p> <p>Payment for Goods and Services shall be made by Purchasing Department in Indian Rupees as follows: 60% payment of total project value for Successfully Inspection, Delivery hardware/software with accessories at site locations. 20% payment of total project value for All hardware/software with successful Installation, Commissioning ,Testing, Analysis and running the system and acceptance of the Department. 10% payment of total project value after providing Successful Training to the department users. 10% payment of total project value divided equally each year in CAMC period of 5 years</p>																																																

Sr. No.	Tender Reference	Existing Clause	Amended Clause
41	Page 34 of 72 Point 46.	<p>46. Penalty Clause 45.1. Penalties for delay in delivery and installation: a) If the bidder fails to deliver and install the requisite hardware and software within 60 working days from the issue of the confirmed purchase order, then a sum equivalent to one percent (1%) of the total contract value shall be deducted from the payment for each calendar week of delay or part thereof. The amount of penalties for delay in delivery and installation of hardware/software shall be subject to a maximum limit of 10% of the total contract value. b) Delay in excess of 5 weeks (after due date of delivery and installation) will be sufficient to cause for termination of the contract. In that case the Performance Bank Guarantee of the bidder will be forfeited. c) In case, the selected bidder does not supply the ordered items for any reason, he will be liable to pay the difference amount to the purchaser, over and above the Performance Guarantee, which indenter departments\Boards\Corporations have to pay to the next or other selected bidder for purpose of the said items.</p>	<p>46. Penalty Clause 46.1. Penalties for delay in delivery and installation: a) If the bidder fails to deliver and install the requisite hardware and software & training within 90 working days from the issue of the confirmed purchase order, then a sum equivalent to one percent (1%) of the total contract value shall be deducted from the payment for each calendar week of delay or part thereof. The amount of penalties for delay in delivery and installation of hardware/software shall be subject to a maximum limit of 10% of the total contract value. b) Delay in excess of 5 weeks (after due date of delivery and installation) will be sufficient to cause for termination of the contract. In that case the Performance Bank Guarantee of the bidder will be forfeited. c) In case, the selected bidder does not supply the ordered items for any reason, he will be liable to pay the difference amount to the purchaser, over and above the Performance Guarantee, which indenter departments\Boards\Corporations have to pay to the next or other selected bidder for purpose of the said items.</p>
42	Page 34 of 72 Point 46.	<p>45.2. Operational / Warranty period Penalties: a) During warranty period of 6 years, if the complaint is not resolved within 48 hrs, the penalty of Rs. 500 per day will be levied. However, if the complaint is not resolved within 7 days then from 8th day till 14th day, the penalty would be levied @ 150% and from 15th day onwards the penalty @ 200% of the above rates would be levied. The amount of penalty will be recovered from the Performance bank guarantee during warranty period. b) The amount of Operational/Warranty period Penalty shall be subject to a maximum limit of 10% of the total contract value. c) Successful bidder should submit the Performance Bank Guarantee @ 10% of total order value for the duration of warranty period (6 years) + extra 3 months as per bid requirements. In any case, bidder is required to maintain 10% PBG at all time during the period of contract. In case of any penalty claimed from the submitted PBG during the contract period, the successful bidder is required to submit the additional PBG of the amount equal to the penalty claimed for the duration up to the validity of original Bank Guarantee. For example, "X" amount of penalty will be claimed during the 5th month of contract period, then bidder is required to submit the additional PBG of "X" amount for the period of 34 months i.e. 39 months - 5 months.</p>	<p>46.2. Warranty (1 year) and CAMC (5 years) period Penalties: a) If the complaint is not resolved within 72 hrs, the penalty of Rs. 500 per day will be levied. However, if the complaint is not resolved within 7 days then from 8th day till 14th day, the penalty would be levied @ 150% and from 15th day onwards the penalty @ 200% of the above rates would be levied. The amount of penalty will be recovered from the Performance bank guarantee during warranty period. b) The amount of penalty shall be subject to a maximum limit of 10% of the total contract value. c) Successful bidder should submit the Performance Bank Guarantee @ 10% of total order value for the duration of 6 years + extra 3 months as per bid requirements. In any case, bidder is required to maintain 10% PBG at all time during the period of contract. In case of any penalty claimed from the submitted PBG during the contract period, the successful bidder is required to submit the additional PBG of the amount equal to the penalty claimed for the duration up to the validity of original Bank Guarantee. For example, "X" amount of penalty will be claimed during the 5th month of contract period, then bidder is required to submit the additional PBG of "X" amount for the period of 34 months i.e. 39 months - 5 months.</p>
43	Page 36 of 72	<p>Implementation Phase (Penalty) SLA Parameter : Delay in any of the project milestones & Availability of all functionalities of the Supplied Software and Hardware.</p>	<p>Clause Deleted</p>
44	Page 36 of 72	<p>SLA Parameter : Training In case session is rated Satisfactory or Excellent by more than 50 percent but less than 75 percent attendees, then the Agency has to take the training session again and will be paid only 50 percent of the per training cost. In case session is rated Satisfactory or Excellent by less than 50 percent attendees, then the Agency has to take the training session again and will be paid only twenty five percent of the per training cost. No payment would be due for re-training session. Training documents and video graphic should be submitted separately.</p>	<p>SLA Parameter : Training In case Training session is rated Satisfactory or Excellent by less than 75 percent attendees, then the Agency has to take the training session again and No payment would be given for re-training session. Training documents and video graphic should be submitted separately.</p>

Sr. No.	Tender Reference	Existing Clause	Amended Clause
45	Page 37 of 72	<p>Revised Clause: SLA Parameter: Availability of Resource (Project manager) for 6 years. SLA Description: Availability of required resources at Main office, Gandhinagar etc. Attendance record to be maintained by Agency. Liquidated damages will be levied as per the following; % Availability Liquidated damages as % of the Quarterly payments of the total charges for 6 years of Project Manager as per financial bid. <95% & >= 92% 0.5% < 92% & >= 90% 1% < 90% & >= 87% 2%</p> <p>The attendance will be maintained by the agency and monthly attendance details will be shared with Department. Total 24 leaves will be given to project manager in a year. Project Manager will work at Settlement Commissioner office and as per GoG office timings.</p>	

SECTION III

Minimum Technical Specifications:

46	Page 38 of 72	<p>A. Establishment of Continuously Operating Reference Stations (CORS), Supply, Installation and Commissioning CORS (DGNSS Base) with required components (With 6 years onsite Warranty) A.1 Differential Global Navigation Satellite System (DGNSS), DGNSS Receiver Technical Specification (Qty 50) (Roof Based installation: 45 qty, Ground Based installation: 05 qty)</p>	<p>A. Establishment of Continuously Operating Reference Stations (CORS), Supply, Installation and Commissioning CORS (DGNSS Base) with required components (With 1 year onsite Warranty + 5 years CAMC) A.1 Differential Global Navigation Satellite System (DGNSS), DGNSS Receiver Technical Specification (Qty 50) (Roof Based installation: 45 qty, Ground Based installation: 05 qty)</p>																																																												
		<table border="1"> <thead> <tr> <th data-bbox="327 691 562 716">Specifications</th> <th data-bbox="562 691 783 716">Characteristics</th> <th data-bbox="783 691 1115 716">Specifications</th> </tr> </thead> <tbody> <tr> <td data-bbox="327 716 562 740">RECEIVER FEATURES & FUNCTIONS</td> <td data-bbox="562 716 783 740">Receiver Type</td> <td data-bbox="783 716 1115 740">Base</td> </tr> <tr> <td></td> <td data-bbox="562 740 783 805">Measurements Specification</td> <td data-bbox="783 740 1115 805">Low noise GNSS code and carrier phase measurement</td> </tr> <tr> <td></td> <td data-bbox="562 805 783 935">Mode of Processing</td> <td data-bbox="783 805 1115 935">Static & Fast Static, Real Time Kinematic (RTK), Both Static & Fast Static and Real Time Kinematic (RTK)</td> </tr> <tr> <td></td> <td data-bbox="562 935 783 1097">"RTK processing (hint: Network RTK Correction - All Commonly available industry standard Network Solution)"</td> <td data-bbox="783 935 1115 1097">Both Single Base RTK Correction & Network</td> </tr> <tr> <td></td> <td data-bbox="562 1097 783 1179">Receiver Antenna</td> <td data-bbox="783 1097 1115 1179">External</td> </tr> <tr> <td></td> <td data-bbox="562 1179 783 1260">Antenna calibration:</td> <td data-bbox="783 1179 1115 1260">Antenna calibrated by IGS/NGS (National Geodetic Survey)</td> </tr> <tr> <td></td> <td data-bbox="562 1260 783 1373">Antenna Type</td> <td data-bbox="783 1260 1115 1373">Choke Ring (with external radome)/Geodetic Class Antenna with DM Element</td> </tr> <tr> <td></td> <td data-bbox="562 1373 783 1471">Multi-path Mitigation for Receiver Antenna</td> <td data-bbox="783 1373 1115 1471">Yes</td> </tr> <tr> <td></td> <td data-bbox="562 1471 783 1563">Supported positioning signal bands for the Antenna</td> <td data-bbox="783 1471 1115 1563">L1,,L2,L5,G1,G2,G3,E1,E5ab,E6,B1,B2,B3</td> </tr> </tbody> </table>	Specifications	Characteristics	Specifications	RECEIVER FEATURES & FUNCTIONS	Receiver Type	Base		Measurements Specification	Low noise GNSS code and carrier phase measurement		Mode of Processing	Static & Fast Static, Real Time Kinematic (RTK), Both Static & Fast Static and Real Time Kinematic (RTK)		"RTK processing (hint: Network RTK Correction - All Commonly available industry standard Network Solution)"	Both Single Base RTK Correction & Network		Receiver Antenna	External		Antenna calibration:	Antenna calibrated by IGS/NGS (National Geodetic Survey)		Antenna Type	Choke Ring (with external radome)/Geodetic Class Antenna with DM Element		Multi-path Mitigation for Receiver Antenna	Yes		Supported positioning signal bands for the Antenna	L1,,L2,L5,G1,G2,G3,E1,E5ab,E6,B1,B2,B3	<table border="1"> <thead> <tr> <th data-bbox="1115 691 1402 716">Specifications</th> <th data-bbox="1402 691 1623 716">Characteristics</th> <th data-bbox="1623 691 2066 716">Specifications</th> </tr> </thead> <tbody> <tr> <td data-bbox="1115 716 1402 740">RECEIVER FEATURES & FUNCTIONS</td> <td data-bbox="1402 716 1623 740">Receiver Type</td> <td data-bbox="1623 716 2066 740">Base</td> </tr> <tr> <td></td> <td data-bbox="1402 740 1623 805">Measurements Specification</td> <td data-bbox="1623 740 2066 805">Low noise GNSS code and carrier phase measurement</td> </tr> <tr> <td></td> <td data-bbox="1402 805 1623 935">Mode of Processing</td> <td data-bbox="1623 805 2066 935">Static & Fast Static, Real Time Kinematic (RTK), Both Static & Fast Static and Real Time Kinematic (RTK)</td> </tr> <tr> <td></td> <td data-bbox="1402 935 1623 1097">"RTK processing (hint: Network RTK Correction - All Commonly available industry standard Network Solution)"</td> <td data-bbox="1623 935 2066 1097">Both Single Base RTK Correction & Network</td> </tr> <tr> <td></td> <td data-bbox="1402 1097 1623 1179">Minimum independent and concurrent data logging sessions</td> <td data-bbox="1623 1097 2066 1179">8 to 12</td> </tr> <tr> <td></td> <td data-bbox="1402 1179 1623 1260">Receiver Antenna</td> <td data-bbox="1623 1179 2066 1260">External</td> </tr> <tr> <td></td> <td data-bbox="1402 1260 1623 1373">Antenna calibration:</td> <td data-bbox="1623 1260 2066 1373">Antenna calibrated by IGS/NGS (National Geodetic Survey)</td> </tr> <tr> <td></td> <td data-bbox="1402 1373 1623 1471">Antenna Type</td> <td data-bbox="1623 1373 2066 1471">Choke Ring (with external radome) with DM (Dorne Margoline) Element /Geodetic Class Antenna</td> </tr> <tr> <td></td> <td data-bbox="1402 1471 1623 1563">Multi-path Mitigation for Receiver Antenna</td> <td data-bbox="1623 1471 2066 1563">Yes</td> </tr> </tbody> </table>	Specifications	Characteristics	Specifications	RECEIVER FEATURES & FUNCTIONS	Receiver Type	Base		Measurements Specification	Low noise GNSS code and carrier phase measurement		Mode of Processing	Static & Fast Static, Real Time Kinematic (RTK), Both Static & Fast Static and Real Time Kinematic (RTK)		"RTK processing (hint: Network RTK Correction - All Commonly available industry standard Network Solution)"	Both Single Base RTK Correction & Network		Minimum independent and concurrent data logging sessions	8 to 12		Receiver Antenna	External		Antenna calibration:	Antenna calibrated by IGS/NGS (National Geodetic Survey)		Antenna Type	Choke Ring (with external radome) with DM (Dorne Margoline) Element /Geodetic Class Antenna		Multi-path Mitigation for Receiver Antenna	Yes
Specifications	Characteristics	Specifications																																																													
RECEIVER FEATURES & FUNCTIONS	Receiver Type	Base																																																													
	Measurements Specification	Low noise GNSS code and carrier phase measurement																																																													
	Mode of Processing	Static & Fast Static, Real Time Kinematic (RTK), Both Static & Fast Static and Real Time Kinematic (RTK)																																																													
	"RTK processing (hint: Network RTK Correction - All Commonly available industry standard Network Solution)"	Both Single Base RTK Correction & Network																																																													
	Receiver Antenna	External																																																													
	Antenna calibration:	Antenna calibrated by IGS/NGS (National Geodetic Survey)																																																													
	Antenna Type	Choke Ring (with external radome)/Geodetic Class Antenna with DM Element																																																													
	Multi-path Mitigation for Receiver Antenna	Yes																																																													
	Supported positioning signal bands for the Antenna	L1,,L2,L5,G1,G2,G3,E1,E5ab,E6,B1,B2,B3																																																													
Specifications	Characteristics	Specifications																																																													
RECEIVER FEATURES & FUNCTIONS	Receiver Type	Base																																																													
	Measurements Specification	Low noise GNSS code and carrier phase measurement																																																													
	Mode of Processing	Static & Fast Static, Real Time Kinematic (RTK), Both Static & Fast Static and Real Time Kinematic (RTK)																																																													
	"RTK processing (hint: Network RTK Correction - All Commonly available industry standard Network Solution)"	Both Single Base RTK Correction & Network																																																													
	Minimum independent and concurrent data logging sessions	8 to 12																																																													
	Receiver Antenna	External																																																													
	Antenna calibration:	Antenna calibrated by IGS/NGS (National Geodetic Survey)																																																													
	Antenna Type	Choke Ring (with external radome) with DM (Dorne Margoline) Element /Geodetic Class Antenna																																																													
	Multi-path Mitigation for Receiver Antenna	Yes																																																													

Sr. No.	Tender Reference	Existing Clause		Amended Clause			
			Phase centre Accuracy Phase centre Repeatability	Less than 2 mm		Supported positioning signal bands for the Antenna	L1,,L2,L5,G1,G2,G3,E1,E5ab,E6,B1,B2,B3
			Minimum Tracking elevation	0 degree		Phase centre Accuracy Phase centre Repeatability	Less than 2 mm Less than 1 mm
			Minimum independent and concurrent data logging sessions	8 to 12		Minimum Tracking elevation	0 degree
47	Page 39 of 72	GNSS TRACKING SIGNALS	Receiver Tracking Signals (Hint: Select applicable Signals only)	Receiver Tracking Signals (Hint: Select applicable Signals only) GPS - L1,GPS - L1C/A,GPS - L2,GPS - L2C,GPS - L2 P, GPS - L5, GLONASS - L1, GLONASS - L2,C/A,GLONASS - L2P,GLONASS - L3, NAVIC (IRNSS) L5, Upgradable to IRNSS L5 and S band Galileo:- L5,Galileo - E1,Galileo - E5 a,Galileo E5 b,Galileo - E5 ab,Galileo- E6, BeiDou - B2,BeiDou - B3, *NavIC (IRNSS) Constellation preferable (L & S-Band)	GNSS TRACKING SIGNALS	Receiver Tracking Signals (Hint: Select applicable Signals only)	Receiver Tracking Signals (Hint: Select applicable Signals only) GPS - L1, L2, L2C, L5 GLONASS - L1, L2, L2C, L3 NAVIC (IRNSS) L5, Upgradable to IRNSS L5 and S band Galileo - E1, E5a, E5b, Alt-BOC, E6 BeiDou - B1, B2, B3 *NavIC (IRNSS) Constellation preferable (L & S-Band)
			Number of Channels	450 or higher * (a.450 or higher, b. 550 or higher ,c. 650 or higher)		Number of Channels	350 or higher* * (a.400 to 450, b. 451 to 550 ,c. 551 or higher)
			Position Update Rate	1Hz to 20 Hz or higher *(a. 1Hz to 20 Hz, b. Up to 50 Hz, c. Up to 100 Hz)		Position Update Rate	1Hz or higher *(a. 1Hz to 20 Hz, b. 21 Hz to 50 Hz, c. 51 Hz to 100 Hz)
			SBAS Support	GAGAN		SBAS Support	GAGAN
48	Page 40 of 72	ENVIRONMENTAL PARAMETERS	Minimum Operating Temperature	-40° C (Optional)	ENVIRONMENTAL PARAMETERS	Minimum Operating Temperature	-40° C (Optional)
			Maximum Operating Temperature	65° C (149° F) (Optional)		Maximum Operating Temperature	65° C (149° F) (Optional)
			Minimum Storage Temperature	65° C (149° F) (Optional)		Minimum Storage Temperature	-40° C (Optional)

Sr. No.	Tender Reference	Existing Clause		Amended Clause			
			Maximum Storage Temperature	65° C (149° F) (Optional)		Maximum Storage Temperature	65° C (149° F) (Optional)
			Non Condensing Humidity, Rh	95%		Condensing Non Condensing Humidity, Rh	100% 95%
			Ingress Protection	IP65 Certified waterproof/dustproof or better *(IP65, b. IP 67, c.IP68)		Ingress Protection	IP65 Certified waterproof/dustproof or better *(IP65, b. IP 66, c.IP67 or Higher)
			Drop & Shock	Withstand 1 meter drop onto hard surfaces		Drop & Shock	Withstand 1 meter drop onto hard surfaces
		ACCESSORIES	Antenna Mount	Fix Base station installation with required Monumentation as on Field Tribach with Optical Plummet and Adapter	ACCESSORIES	Antenna Mount	Fix Base station installation with required Monumentation and heavy duty Adapter.
49	Page 41 of 72	WARRANTY / TRAINING	On-site Warranty	6 years	WARRANTY / TRAINING	On-site Warranty	1 year + 5 years CAMC
			Training	Installation, Functioning and operational training at site		Training	Installation, Functioning and operational training at site
50	Page 41 of 72	TEST REPORTS	Compliance to Dust test	MILSTD-810 G (optional)	DELETED		
			Compliance to Water Intrusion test	MILSTD-810 G (optional)			
			Agreed to furnish OEM Test report to the Buyer on demand	Yes			
51	Page 42 of 72	A.2 Industrial Grade Modem/Router for Base Station Communication with Server (Qty: 50)	Form Factor	Compact rugged industrial grade form factor	A.2 Industrial Grade Modem/Router for Base Station Communication with Server (Qty: 50)	Form Factor	Compact rugged industrial grade form factor
			Ethernet Ports	3 x LAN Gigabit Ethernet Ports 2 x WAN Gigabit PoE/PoE+ Ethernet Ports		Ethernet Ports	2 x LAN Gigabit Ethernet Ports 2 x WAN Gigabit PoE/PoE+ Ethernet Ports
			LTE Connectivity	Should have minimum dual 4G LTE interface		LTE Connectivity	Should have minimum dual 4G LTE SIM for mobile internet connectivity
			LTE Bands	<ul style="list-style-type: none"> Should support FDD LTE 1, 3, 5, 7, 8, 18, 19, 21, 28 bands. Should support TDD LTE band 38, 39, 40, 41 bands 		LTE Bands	<ul style="list-style-type: none"> Should support FDD LTE 1, 3, 5, 7, 8, 18, 19, 21, 28 bands. Should support TDD LTE band 38, 39, 40, 41 bands
52	Page 44 of 72	RECEIVER TRACKING CAPABILITIES	Base Line Processing Range (Static)	500 Km or higher	RECEIVER TRACKING CAPABILITIES	Base Line Processing Range (Static)	500 Km or higher

Sr. No.	Tender Reference	Existing Clause		Amended Clause			
			Number of Channels	450 or higher * (a.450 or higher, b. 550 or higher ,c. 650 or higher)		Number of Channels	350 or higher* * (a.400 to 450, b. 451 to 550 ,c. 551 or higher)
			Initialisation Time	40 seconds or less		Initialisation Time	40 seconds or less
			Maximum Position Update Rate	1 Hz or better *(a.1 Hz to 5 Hz. b. up to 10Hz, c. up to 20 Hz)		Maximum Position Update Rate	1 Hz or higher *(a.1 Hz to 5 Hz. b. 6 Hz to 10 Hz, c. 11 Hz to 20 Hz)
			Tilt Sensor	Yes,		Tilt Sensor	Yes,
			Tilt Position	tilted up to 15°		Tilt Position	tilted up to 15°
			Position Acquisition	Fix		Position Acquisition	Fix
53	Page 44 of 72	GNSS TRACKING SIGNALS (RECEIVER)	GPS Tracking Signals (NAVSTAR)	L1,L1 C/A,L2,L2 C/A,L2E,L2P,L5	GNSS TRACKING SIGNALS (RECEIVER)	GPS Tracking Signals (NAVSTAR)	L1, L2, L2C, L5
			GLONASS Tracking Signals	L1C/A, L1P, L2C/A, L2P, L3		GLONASS Tracking Signals	L1, L2, L2C, L3
			NavIC (IRNSS) Tracking Signals	L5, Upgradable to IRNSS S band		Navic (IRNSS) Tracking Signals	L Band, Upgradable to IRNSS S band
			Galileo Tracking Signals	E1, E5A, E5B, E5 AltBOC, E6		Galileo Tracking Signals	E1, E5a, E5b, Alt-BOC, E6
			BeiDou Tracking Signals	B1,B2,B3		BeiDou Tracking Signals	B1,B2,B3
			L-band tracking Signals	Yes		L-band tracking Signals	Yes
			SBAS Support	GAGAN		SBAS Support	GAGAN
			*NavIC (IRNSS) Constellation preferable (L & S-Band)			*NavIC (IRNSS) Constellation preferable (L & S-Band)	
54	Page 45 of 72	GENERIC	Weight of Receiver (including Battery)	Compact, portable easily carrying and handling	GENERIC	Weight of Receiver (including Battery)	Compact, portable easily carrying and handling
			Radio Power	1 Watt to 5 Watt Enable both function Receiving and Transmitting		Radio Power	1 Watt to 5 Watt Enable both function Receiving and Transmitting (Optional)
			Additional Features of Receiver, if any	SBAS:L1C/A, L5 (optional)		Additional Features of Receiver, if any	SBAS:L1C/A, L5 (optional)
55	Page 46 of 72	ENVIRONMENTAL PARAMETERS	Minimum Operating	-40° C (Optional)	ENVIRONMENTAL PARAMETERS	Minimum Operating	-40° C (Optional)
			Maximum Operating	65° C (149° F) (Optional)		Maximum Operating	65° C (149° F) (Optional)
			Minimum Storage	-40° C (-40° F)		Minimum Storage	-40° C (-40° F)
			Maximum Storage	80° C (176° F)		Maximum Storage	75° C (176° F)
			Non Condensing Humidity, Rh	100%		Condensing Humidity, Rh	100%
			Non Condensing Humidity, Rh			Non Condensing Humidity, Rh	95%
			Ingress Protection	IP65 Certified waterproof/dustproof or better *(IP65, b. IP 67, c.IP68)		Ingress Protection	IP65 Certified waterproof/dustproof or better *(IP65, b. IP 66, c.IP67 or Higher)
			Drop & Shock	Withstand 1 meter drop onto hard surfaces		Drop & Shock	Withstand 1 meter drop onto hard surfaces
56	Page 46 of 72	OEM ACCESSORIES	Stop and Go Pole supplied - inclusive in the scope of supply	Low weight Carbon pole: Length 2 Meter Quantity: 2 Nos. Per Rover Yes	OEM ACCESSORIES	Stop and Go Pole supplied - inclusive in the scope of supply	Low weight Carbon pole: Length 2 Meter Quantity: 1 Nos. Per Rover Yes

Sr. No.	Tender Reference	Existing Clause		Amended Clause			
			Clamp for Controller supplied - inclusive in the scope of supply	Yes Quantity: 2 Nos. Per Rover		Clamp for Controller supplied - inclusive in the scope of supply	Yes Quantity: 1 Nos. Per Rover
			USB Data Transfer Cable - inclusive in the scope of supply	Yes		USB Data Transfer Cable - inclusive in the scope of supply	Yes
			Power Cable, Connectors and Cables for Connecting to Car Batteries - inclusive in the scope of supply	YES		Power Cable, Connectors and Cables for Connecting to Car Batteries - inclusive in the scope of supply	YES
			Light Weight carrycase / Roll Over Trolley for Transporting Equipment and Accessories	YES		Light Weight carrycase / Roll Over Trolley for Transporting Equipment and Accessories	YES
			List of Items and Quantity of each item included in the offer	All Standard OEM Accessories		List of Items and Quantity of each item included in the offer	All Standard OEM Accessories
57	Page 47 of 72	WARRANTY / TRAINING	On-site Warranty	6 years	WARRANTY / TRAINING	On-site Warranty	1 year Warranty + 5 years CAMC

Sr. No.	Tender Reference	Existing Clause		Amended Clause			
			Training	Installation, Functioning and operational training at site		Training	Installation, Functioning and operational training at site
58	Page 47 of 72	TEST REPORTS	Compliance to Dust test	MILSTD-810 G (optional)	DELETED		
			Compliance to Water Intrusion test	MILSTD-810 G (optional)			
			Agreed to furnish OEM Test report to the Buyer on demand	Yes			
59	Page 48 of 72	RAM / STORAGE	Memory - RAM	8 GB	RAM / STORAGE	Memory - RAM	1 GB or higher/alternate tablet device 4 GB or Higher
			Internal Storage Capacity	32 GB		Internal / Removable Storage Capacity	2 GB or higher/alternate tablet device 32 GB or higher
60	Page 48 of 72	DISPLAY / KEYPAD	Type of Display	LED	DISPLAY / KEYPAD	Type of Display	TFT/LCD/LED
			Colour Display	Yes		Colour Display	Yes
			Touch Screen Display	Yes		Touch Screen Display	Yes
			Sunlight-readable	Yes		Sunlight-readable	Yes
			Display Resolution	WXGA		Display Resolution	WVGA or better
			Display Size(in inch)	5.0 to 8.0 Inch or External Display * Integrated Display with both hard and soft Keyboard (size) *(a. 4.5 inch to 5.5 Inch, b. 5.6 inch to 6.5 Inch, c. 6.6 Inch to 8 Inch)		Display Size(in inch)	4 inch to 8 inch (Integrated Display with Both Hard and Soft Keyboard) *(a. 4 inch to 5 Inch, b. 5.1 inch to 6 Inch, c. 6.1 Inch to 8 Inch) or Survey grade rugged daylight visible and readable display tablets/ACU with attached/detachable keyboard (brightness 700 nit or higher) 5.0 inch to 8.0 inch *(a. 5 inch to 6 Inch, b. 6.1 inch to 7 Inch, c. 7.1 Inch to 8 Inch)
			Keyboard	Full Alphanumeric hard keyboard or virtual keyboard is allowed but the digits should be large sized and should be visible in daylight		Keyboard	Full Alphanumeric hard keyboard and virtual keyboard is allowed but the digits should be large sized and should be visible in daylight
61	Page 49 of 72	BATTERY	Power Source	Internal - Rechargeable Battery	BATTERY	Power Source	Internal - Rechargeable Battery
			Controller Supports 12 V External Battery	No		Controller Supports 12 V External Battery	No
			Chemistry of Battery	Li-ion		Chemistry of Battery	Li-ion
			Battery Back Up Time	8		Battery Back Up Time	8
			Number of Batteries required for operation	1		Number of Batteries required for operation	1
			Number of Batteries Supplied	2		Number of Batteries Supplied	2

Sr. No.	Tender Reference	Existing Clause		Amended Clause			
			Battery Charger for Rechargeable Batteries inclusive in the scope of supply	Yes	Battery Charger for Rechargeable Batteries inclusive in the scope of supply	Yes	
			12 V Vehicle Charging Kit inclusive in the scope of supply	Yes	12 V Vehicle Charging Kit inclusive in the scope of supply	Yes	
			Hot - Swappable b/w External and Internal Power Sources without affecting Data Recording	Yes	Hot - Swappable b/w External and Internal Power Sources without affecting Data Recording	Yes	
			OPERATING CONDITIONS		OPERATING CONDITIONS		
			Minimum Operating Temperature	-30°	Minimum Operating Temperature	-30° C	
			Maximum Operating Temperature	60°	Maximum Operating Temperature	60° C	
			Non Condensing Humidity, Rh	90	Condensing Non Condensing Humidity, Rh	100% 95%	
62	Page 49 of 72	WARRANTY / TRAINING	On-site Warranty	6 years	WARRANTY / TRAINING	On-site Warranty	1 year + 5 years CAMC
			Training	Installation, Functioning and operational training at site		Training	Installation, Functioning and operational training at site
63	Page 49 of 72	TEST REPORTS	Compliance to Dust test	MIL-STD-810 F, MILSTD-810 G, IEC-60529 or Equivalent Spec	DELETED		
			Compliance to Water Intrusion test	MIL-STD-810 F, MILSTD-810 G, IEC-60529 or Equivalent Spec			
			Compliance to Vibration / Shock test	MIL-STD-810 F, MILSTD-810 G,			
			Availability of Test Reports from Central Govt. / NABL approved / ILAC accredited Lab to prove conformity to the specification	YES			
64	Page 50 of 72	INTEGRATED PERIPHERALS/ CONNECTIVITY	Connectivity	USB, RS232, Ethernet, Wi-Fi, Bluetooth, GSM,GPRS,LTE,	INTEGRATED PERIPHERALS/ CONNECTIVITY	Connectivity	USB, RS232, Wi-Fi, Bluetooth, GSM,GPRS,LTE,
65	Page 50 of 72	OPERATING CONDITIONS	Ingress Protection	IP 65 or higher *(a.IP65, b. IP 67, c.IP68)	OPERATING CONDITIONS	Ingress Protection	IP 65 or higher *(a.IP65, b. IP 66, c.IP67 or Higher)

Sr. No.	Tender Reference	Existing Clause			Amended Clause		
66	Page 52 of 72	The GNSS Software must perform the minimum tasks as	Controls GNSS receivers remotely	i) The GNSS software shall poll the receivers through an active connection and stream raw data as well as download data files without any interaction on local RTK and DGPS data that may be transmitted from Base stations to RTK rovers II) Remote firmware upgrades of the receivers must be possible using the software III) Streaming raw data from remote server shall be done either via: 1). Binary Raw data 2). RTCM 2.x v3.x IV) Communication between the server and the reference station receivers must have the flexibility to operate as: a). Internet, intranet, LAN/WAN (TCP/IP) or b). Mobile Cellular GPRS or Wireless technology using RTCM standard NTRIP Protocol c). Dial up modem d). RS232 (Serial Port)	The GNSS Software must perform the minimum tasks as	Controls GNSS receivers remotely	i) The GNSS software shall poll the receivers through an active connection and stream raw data as well as download data files without any interaction on local RTK and DGPS data that may be transmitted from Base stations to RTK rovers II) Remote firmware upgrades of the receivers must be possible using the software III) Streaming raw data from remote server shall be done either via: 1). Binary Raw data 2). RTCM 2.x v3.x IV) Communication between the server and the reference station receivers must have the flexibility to operate as: a). Internet, intranet, LAN/WAN (TCP/IP) or b). Mobile Cellular GPRS or Wireless technology using RTCM standard NTRIP Protocol

SECTION IV

FINANCIAL BID FORMAT:

67	Page 56 of 72	#	Particulars	UoM	Quantity (a)	Unit Price with 6 Years Warranty (In Rs. Without Tax) (b)	Total Price with 6 Years Warranty (In Rs. Without tax) (c=a*b)	Rate of GST (%)	#	Particulars	UoM	Quantity (a)	Unit Price with 1 Year Warranty (In Rs. Without Tax) (b)	Unit wise CAMC Charges for 5 years (In Rs. Without tax) (c)	Total Price with 1 Year Warranty + 5 years CAMC (In Rs. Without tax) (d=a*(b+c))	Rate of GST (%)
		(A)	Establishment of Continuously Operating Reference Stations (CORS), Supply, Installation and Commissioning CORS (DGNSS Base) with required components (With 6 years onsite Warranty)						(A)	Establishment of Continuously Operating Reference Stations (CORS), Supply, Installation and Commissioning CORS (DGNSS Base) with required components						
		1	DGNSS Receiver & Antenna Nos for CORS Station with 2 Batteries and OEM Cable 30 Mt.	Nos	50				1	DGNSS Receiver & Antenna Nos for CORS Station with 2 Batteries and OEM Cable 30 Mt.	Nos	50				

Sr. No.	Tender Reference	Existing Clause						Amended Clause								
		2	Industrial Grade Modem / Router for Base Station Communication with Server	Nos	50				2	Industrial Grade Modem / Router for Base Station Communication with Server	Nos	50				
		3	DGNS Integrated Rover including 2 Battery and charger	Nos	150				3	DGNS Integrated Rover including 2 Battery and charger	Nos	150				
		4	5" to 8" Display Controller with Battery, charger and required cables.	Nos	150				4	Display Controller with Battery, charger and required cables.	Nos	150				
		5	Network RTK Application (software) (Support with 150 Base Station & 2000 Users) with Operating System, DB Software and other required software.	Nos	1				5	Network RTK Application (software) (Support with 150 Base Station & 2000 Users) with Operating System, DB Software and other required software.	Nos	1				
		6	Surveying Accessories per Rover (Carbon pole: quantity :2, Controller bracket:1, Bipod: 2)	Nos	150				6	Surveying Accessories per Rover (Carbon pole: quantity :1, Controller bracket:1, Bipod: 1)	Nos	150				
		(B) CORS Base Station Installation						(B) CORS Base Station Installation								
		1	CORS Installation on Roof Based with Civil work, Fencing: Antenna Installation Kit, Cable Protector, Lightning Protector, indoor enclosure, inverter with battery and required accessories.	Nos	45 Base Station				1	CORS Installation on Roof Based with Civil work, Fencing: Antenna Installation Kit, Cable Protector, Lightning Protector, indoor enclosure, inverter with battery and required accessories.	Nos	45 Base Station				

Sr. No.	Tender Reference	Existing Clause						Amended Clause									
		2	CORS Installation on Ground Based with Civil work, Fencing: Antenna Installation Kit, Cable Protector, Lightning Protector, outdoor enclosure, solar panel with charger/controll er, battery and required accessories *As per international standard (UNAVCO)	Nos	05	Base Station				2	CORS Installation on Ground Based with Civil work, Fencing: Antenna Installation Kit, Cable Protector, Lightning Protector, outdoor enclosure, solar panel with charger/controller, battery and required accessories *As per international standard (UNAVCO)	Nos	05	Base Station			
		3	Project Manager Monitoring Centre	Nos	1				3	65" Monitoring LED Screen	Nos	1					
		4	65" Monitoring LED Screen	Nos	1				4	Computer Hardware	Nos	1					
		5	Computer Hardware	Nos	1												
									#	Particulars	UoM	Quantity (a)	Per year Charges (In Rs. Without tax) (b)	Charges for 6 years (In Rs. Without tax) (c=a*b*6)	Rate of GST (%)		
									C	Project Manager for Monitoring Centre	Nos	1					
		Total (A) + (B)						Total (A) + (B) + (C)									
		<p>Note:</p> <ul style="list-style-type: none"> - For Financial evaluation, Total (A) + (B) without taxes will be considered. All rates will inclusive 6 Years Warranty/AMC. - The Bidder shall explicitly mention the applicable rate of tax. - Supply and installation of the above mentioned materials should be carried out by the successful bidder at various locations across the Gujarat State. - The above mentioned quantity of the item is indicative and for evaluation purpose only. However, at the time of order, the quantity may get change depending upon the requirements. - Department has reserves the right to increase or decrease quantity of DGNS Base and DGNS Rover 						<p>Note:</p> <ul style="list-style-type: none"> - For Financial evaluation, Total (A) + (B) + (C) without taxes will be considered. All rates will inclusive 1 Year Warranty + 5 years CAMC. - The Bidder shall explicitly mention the applicable rate of tax. - Supply and installation of the above mentioned materials should be carried out by the successful bidder at various locations across the Gujarat State. - The above mentioned quantity of the item is indicative and for evaluation purpose only. However, at the time of order, the quantity may get change depending upon the requirements. - Department has reserves the right to increase or decrease quantity of DGNS Base and DGNS Rover 									

Sr. No.	Tender Reference	Existing Clause	Amended Clause
<p>Same effect clauses in the tender also stands modified as per this corrigendum.</p> <p>Software licenses for control center should be perpetual so that after completion of contract period system should be work. Bidder will provide all updates,upgrades,bug fixing of software during the contract period without any additional cost of tenderer.</p> <p>All software licences has to be perpetual.</p> <p>Security Audit from CERT-in empaneled vendor will be carried out before hosting the application at GSDC and security audit's cost of software will be borne by Department.</p> <p>All other tender terms & conditions and technical specifications remain unchanged.</p> <p>Note: Those bidders who have submitted financial bid on n-procure website are required to re-submit the price details as per revised financial bid on nprocure website.</p>			