

Subject: Tender for “The Procurement of Various Survey Equipment Under JMVP– II (Arth Ganga)”

Reference: Tender No.: IN-IWAI-270120-GO-RFB

CPP Portal Tender ID: 2022_JMVP_675234_1

Response to Pre-submission queries of the Bidders

S.no .	Page no & Clause .No	Existing	Clarification by Bidder	Amended by IWAI
1.	Section VII, Page no 85, and, Section XI, Page no 178. Schedule “A” Shallow water Multibeam Echo Sounder	Shallow water Multibeam Echo Sounder	i) The share the details of vessel which MBES to be installed. ii) Please specify the duration of survey.	i) Photo of IWAI Survey vessel installed with MBES is at <u>Annex-1</u> . ii) Two numbers trained technicians are to be deployed for Operation and Maintenance (O&M) period of three years.
2.	Section VII, Page no 103 and Section XI, page no 190 Schedule “F”, Sl#9 ‘ECHOSOUNDE R CUM DGPS RECEIVER’	GNSS Receiver:- Hemisphere / NovAtel / Trimble	Please confirm whether other makes are acceptable.	GNSS Receiver of all reputed brand, meeting with all the specifications as per tender Schedule of Requirements.
3.	Section VII, Page no 105 and Section XI, Page no 192 Schedule “G”, Sl#13 ‘Single Beam Echo Sounder with Transducer’	LCD Display:- Back-lighting: Electro-luminescent	Please confirm whether laptop is acceptable	Tender Condition prevails

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4.	Section VII, Page no 106 and Section XI, Page no 193 Schedule “G”, SI#20 Single Beam Echo Sounder	Chart Record:- High-Contrast Thermal Paper	Please confirm whether ES Digital output (Laptop) is acceptable	Tender Condition prevails
5.	Section VII, Page no 106 and Section XI, Page no 193 Schedule “G”, SI#23 ‘ Single Beam Echo Sounder with Transducer ’	Nominal Impedance :- 50 ohms	Please confirm whether 60 ohm is acceptable	“ Nominal Impedance: 50/60 ohms.
6.	Section VII, Page no 108 and Section XI, Page no 195 Schedule “I”, SI#1 Water Sampler	The standard water sampler should be simple tube type sampler which can be lowered into the water by rope. Upon reaching the desired depth, the messenger should activate the closing mechanism or release the closing mechanism, so that it closes the lid of the sampling tube in the water at that depth and sampler to be recovered by rope. To retrieve the water sample, open lid and save the water sample	Please specify the type of water sample	The standard water sampler of any reputed brand should be simple tube type sampler which can be lowered into the water by rope. Upon reaching the desired depth, the messenger should activate the closing mechanism or release the closing mechanism, so that it closes the lid of the sampling tube in the water at that depth and sampler to be recovered by rope. To retrieve the water sample, open lid and save the water sample.
7.	Section VII, Page no 108 and Section XI, Page no 195 Schedule “I”, SI#3 Water Sampler	Size: 1.2 litre capacity including messenger	1.2 ltr is non-standard. Depth of operation	Size: Capacity between 1.0 to 2.0 litre including messenger

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8.	Section VII, Page no 109 and Section XI, page no. 196 Schedule "J", Sl#1 Bottom Sampler Sl#3 Additional point	The Bottom Sampler to be quantitative sampler with precise sampling area to achieve nearly undisturbed samples in soft grounds. It should consist of a sturdy-walled metal cabinet equipped with two spring-loaded jaws which are released by a messenger. Two light plates cover the top opening of the sampler to prevent the sample from being washed out during ascent. Stainless steel, electro polished surface, small model manufactured from 3 mm plate with a surface area of 250 cm ² , weight approx. 5 kg.	Please specify the: (i) type of sampler (ii) area / volume. (iii) Depth of operation	(i) The Grab type Bottom Sampler to be quantitative sampler with precise sampling area to achieve nearly undisturbed samples in soft grounds. It should consist of a sturdy-walled metal cabinet equipped with two spring-loaded jaws which are released by a messenger. Two light plates cover the top opening of the sampler to prevent the sample from being washed out during ascent. (ii) Stainless steel, electro polished surface, small model manufactured from 3 mm plate with a surface area of 225 to 250 cm ² , weight approx. 5 kg. (iii) Depth of operation: 0.5m to 25m
9.	Additional point		Since the time for arranging quotes from various OEM's are too short, request you to kindly allow 4 weeks from publication of pre-bid answers.	Two weeks from the date of uploading of Pre-bid amendments.
10.	Section III, Page no 47	Evaluation And Qualification Criteria	Kindly Amend this as per policy Circular No.1(2)(1)/2016 From Government of India, Ministry of Micro, Small & Medium Enterprises0/0 the Development Commissioner(MSME	Tender Condition prevails

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) Nirnian Bhavan,A-Wing,7'h Floor Maulana Azad Road, New Delhi 110108	
11.	Page no 95, Section VII and Section XI, page no 181 Schedule "C", SI#3 Acoustic Doppler Current Profiler	Frequency:- Single frequency 600 KHz	Multi Frequency	Frequency: Single or Multi frequencies between 400-800 KHz
12.	Page no 95, Section VII and Section XI, page no 181 Schedule "C", SI#4 Acoustic Doppler Current Profiler	Velocity Profiling range:- 0.4m to 60m profiling.	Change to 0.06 to 40m profiling	Velocity Profiling range: 0.4m to 40m profiling or better
13.	Page no 95, Section VII and Section XI, page no 181 Schedule "C", SI#9 Acoustic Doppler Current Profiler	No. of cells :- 200 minimum,	Change to 128 maximum	No. of cells : minimum 128
14.	Page no 95, Section VII and Section XI, page no 181 Schedule "C", SI#11 Acoustic Doppler Current Profiler	Depth Range :- 0.3-100 m	Change to 80 m	Depth Range : 0.3m to 80 m or more.

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15.	Page no 95, Section VII and Section XI, page no 181 Schedule “C”, SI#12 Acoustic Doppler Current Profiler	Bottom Tracking:- At least 100m	Change to 40m	Bottom Tracking: minimum 40 mtr
16.	Page no 95, Section VII and Section XI, page no 181 Schedule “C”, SI#16 Acoustic Doppler Current Profiler	<u>Transducer</u> i) Configuration:- At least 4 Beams ii) Communication:- RS-232/RS-485/RS-422/Ethernet iii) Depth rating:- 100m or better iv) Tilt sensor Range:- +/-150, Accuracy +/-0.50	i) Multi Beam (9) ii) RS232/USB iii) 80m iv) Accuracy 1 deg	i) Configuration: minimum 4 Beams ii) Communication: RS-232/RS-485/RS-422/Ethernet/USB iii) Depth rating: Minimum 80m iv) Tilt sensor Range: maximum accuracy $\pm 1^\circ$ of range
17.	Page no 95, Section VII and Section XI, page no 181 Schedule “C”, SI#19 Acoustic Doppler Current Profiler	Accuracy :- 1 ⁰	Change to 2 ⁰	Accuracy: 2 ⁰ or better
18.	Page no 96, Section VII and Section XI, page no 182 Schedule “C”, SI#20 (vi) Acoustic Doppler Current Profiler	Hardware : Fully Rugged Laptop with latest Windows Operating system with i10 processor, 2TB HDD, 4GB dedicated Graphic card, 32GB RAM or better	Latest processor configuration laptop	Hardware: Fully Rugged Laptop with latest Windows Operating system with i7 processor, 1TB SDD HDD, 4GB dedicated Graphic card, 32GB RAM or better

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19.	Section VII, Page no. 85 and Section XI, page no 178 Schedule 'A', SI#13(a) Shallow Water Multi Beam Echo Sounder System	Data Resolution:- Heave 1cm, Roll & Pitch 0.01° or better	i) Heave to 5cm or better. ii) Roll & Pitch to 0.05° or better.	Accuracy: Heave: 5cm or better, Roll & Pitch: 0.05° or better.
20.	Section VII, Page no. 85 and Section XI, page no 179 Schedule 'A', SI#15(f) Shallow Water Multi Beam Echo Sounder System	Communications:- Rs 232	amend it to RS232/USB/Bluetooth since there should be an open option.	Communications: RS 232 / USB / Bluetooth
21.	Section VII, Page no. 86 and Section XI, page no 179 Schedule 'A', SI#18 Shallow Water Multi Beam Echo Sounder System	Interface:- Serial interface for motion data, gyro data, navigation data, pps and sound velocity data	Serial/Ethernet interface for motion data, gyro data, navigation data, pps and sound velocity data.	Interface: Serial / Ethernet interface for motion data, gyro data, navigation data, pps and sound velocity data
22.	Section VII, Page no. 85 and Section XI, page no 179 Schedule 'A', SI#16 Shallow Water Multi Beam Echo Sounder System	Data acquisition /Processing Software and Laptop:- Fully Rugged Laptop with latest Windows Operating system with i10 processor, 2TB HDD, 4GB dedicated graphic card, 64GB RAM and 14" Helmsman color Monitor with VGA Splitter or better.	Amend it to i7 processor or whichever is latest highest configuration processor available in market. Since there is no i10 processor laptop available in market yet. Fully Rugged Laptops	Data acquisition /Processing Software and Laptop: Fully Rugged Laptop with latest Windows Operating system with i7 processor, 1TB SDD HDD, 4GB dedicated Graphic card, 64GB RAM and 14" Helmsman color Monitor with VGA Splitter or better.

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			comes with 1TB SSD HDD only	
23.	Section VII, Page no. 94 and Section XI, page no. 180 Schedule 'B', SI#18 SIDE SCAN SONAR	Hardware : Fully Rugged Laptop with latest Windows Operating system with i10 processor, 2TB HDD, 4GB dedicated graphic card, 32GB RAM or better	We request you to kindly amend it to i7 processor or whichever is latest highest configuration processor available in market Since there is no i10 processor laptop available in market yet. Fully Rugged Laptops comes with 1TB SSD HDD only	Hardware : Fully Rugged Laptop with latest Windows Operating system with i7 processor, 1TB SDD HDD, 4GB dedicated Graphic card, 32GB RAM or better
24.	Section VII, Page no. 95 and Section XI, page no. 181 Schedule "C", SI#10 Acoustic Doppler Current Profiler	Cell Size:- 2.0 cm minimum	We request you to kindly amend it to 10.00 cm. Since it is not possible to measure in size of 2cm cell size as reducing cell size can increase standard deviation and affect overall quality of discharge data, hence cell size should be 10 cm	Cell Size: 10 cm or better
25.	Section VII, Page no. 96 and Section XI, page no. 182 Schedule "C", SI#20(vi) Acoustic Doppler Current Profiler	Hardware : Fully Rugged Laptop with latest Windows Operating system with i10 processor, 2TB HDD, 4GB dedicated graphic card, 32GB RAM or better	We request you to kindly amend it to i7 processor or whichever is latest highest configuration processor available in market. Since there is no i10 processor laptop	Same as amendment no. 18 above.

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			available in market yet. Fully Rugged Laptops comes with 1TB SSD HDD only	
26.	Section VII, Page no. 97 and Section XI, page no. 184 Schedule “D”, SI#1(g) RTK DGPS	Ports :- 1 RS232/Power port 1 Bluetooth Port 1 Internal GSM Slot 1 Radio Port	Since the system is already equipped with Wi-Fi & Bluetooth for wireless communication. We request you to kindly provide option for both internal and external cellular transmission & reception.	Ports: 1no. RS232 Power port 1 Internal GSM Slot 1 Radio Port Wireless communication.
27.	Section VII, Page no 98 and Section XI, page no. 185 Schedule “D”, SI#7(a) RTK DGPS	Base : Integrated GSM/GPRS, radio, IMU base tilt sensor support/ tilt must have support for minimum 30° or more, and multipath mitigation technology.	We request you to kindly amend it to Integrated/External GSM/GPRS, radio, IMU base tilt sensor support/ tilt must have support for minimum 30° or more, and multipath mitigation technology	Tender condition prevails
28.	Section VII, Page no 98 and Section XI, page no. 185 Schedule “D”, SI#7(b) RTK DGPS	Rover :- Integrated GSM/GPRS, radio, IMU base tilt sensor support/ tilt must have support for minimum 30° or more, and multipath mitigation technology.	We request you to kindly amend it to Integrated/External GSM/GPRS, radio, IMU base tilt sensor support/ tilt must have support for minimum	Tender Condition prevails

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			30° or more, and multipath mitigation technology.	
29.	Section VII, Page no 97-98, and Section XI, page no. 183 & 185 Schedule “D”, SL#1(a) and SL#7 RTK DGPS	SL#1(a) - CHANNELS:- 500 or more Parallel Channel Receiver For tracking GPS (L1, L2, L5), Glonass (L1, L2, L2C), Galileo, SBAS (WAAS,EGNOS, MSAS, GAGAN). Tilt sensor on base and rover (optional). SL#7: Tilt Sensor (optional), GSM and Radio Modems	We request you to kindly confirm if Tilt sensor on base and Rover is mandatory or not, as it is an upgrade option and will result in increase of price. Kindly clarify if it is required or not so that we can quote accordingly	SL#1(a) - CHANNELS: 500 or more Parallel Channel Receiver for tracking GPS (L1, L2, L5), Glonass (L1, L2, L2C), Galileo, SBAS (WAAS, EGNOS, MSAS, GAGAN), Bediou (optional). Tilt sensor on base and rover. SL#7: Tilt Sensor, GSM and Radio Modems
30.	Section VII, Page no. 101 and Section XI, page no. 188 Schedule “D”, SI#14(d) RTK DGPS	Hardware: Laptop with latest Windows Operating system with i10 processor, 2TBHDD, 4GB dedicated Graphic card, 8GB RAM or better	We request you to kindly amend it to i7 processor or whichever is latest highest configuration processor available in market. Since there is no i10 processor laptop available in market yet. Fully Rugged Laptops comes with 1TB SSD HDD only	Hardware: Laptop with latest Windows Operating system with i9 processor, 1TB SDD HDD, 4GB dedicated Graphic card, 8GB RAM or better.
31.	Section VII, Page no. 108 and Section XI, page no. 195 Schedule “T”, SI#10 & 11 Water sampler	SI#10: Empty weight: 2.0 KG SI#11: Full weight : 3.24 Kg	SI#10: We request you to kindly amend it to 3.0 Kg SI#11: We request you to kindly amend it to 4.2 Kg	SI#10: Empty weight: 2.0 / 3.0 Kg SI#11: Full weight : Minimum 3.0 Kg and maximum 4.5 Kg

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32.	Section VII, Page no. 109 and Section XI, page no. 196 Schedule “J”, SI#3 Bottom sampler	Stainless steel, electro polished surface, small model manufactured from 3 mm plate with a surface area of 250 cm ² , weight approx. 5 kg	We request you to kindly amend the surface area to 225 cm ² .	Stainless steel, electro polished surface, small model manufactured from 3 mm plate with a surface area of 225 to 250 cm ² , weight approx. 5 kg.
33.	Section VII, Page no. 97 and Section XI, page no. 183 Schedule “D”, SI#1(a) RTK DGPS	Channels GPS (L1, L2, L5), Glonass (L1, L2, L2C), Galileo, SBAS (WAAS, EGNOS, MSAS, GAGAN)	We request you to kindly add BeiDou constellation also for stability and reliability purpose	CHANNELS: 500 or more Parallel Channel Receiver for tracking GPS (L1, L2, L5), Glonass (L1, L2, L2C), Galileo, SBAS (WAAS, EGNOS, MSAS, GAGAN), Bediou (Optional). Tilt sensor on base and rover.
34.	Section VII, Page no. 97 & 98, and Section XI, page no 183 & 185 Schedule “D”, SI#1(a) and SI#7 RTK DGPS	I. CHANNELS:- 500 or more Parallel Channel Receiver For tracking GPS (L1, L2, L5), Glonass (L1, L2, L2C), Galileo, SBAS (WAAS,EGNOS, MSAS, GAGAN). Tilt sensor on base and rover (optional). II. Tilt Sensor (optional), GSM and Radio Modems	There are two type of tilt sensor in the market: 1. IMU based tilt Sensor: An Inertial Measurement Unit (IMU) comprised of three accelerometers and three gyroscopes to provide the necessary information for the positioning engine to precisely determine the attitude of the rover, allowing the tilt heading and thus the position of the pole tip to be computed in real time other benefits are. a. Immune to magnetic disturbance means it can be used anywhere.	Same as amendment no. 29 above.

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			<p>b. Calibration free means there is no need of extra time for calibration and error free reading. c. Can measure the pole tilt for more than 30° if required means can measure more point and it will increase the productivity. IMU based tilt sensor provides most accurate readings. 2. Magnetometer based Tilt sensor: Other type of sensor uses the magnetic compass and electronic bubble to measure the tilt direction and degree of tilt, Because the heading provided by the magnetometer depends on an accurate global model of the earth's magnetic field, and because the sensor itself is susceptible to local sources of magnetic interference which can render it unusable, the achievable tilt angle is less (15°), compensated points cannot be measured in</p>	

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			<p>all instances, and the system must remain static when measuring a compensated point This is very old technology and has various limitations like</p> <p>a. Will not work during stakeout. b. Tilt will not work for more than 12°-15°. c. Required frequent calibration if you are transporting them, temperature variation is more than 10°, special tools are required, if it drops, etc., if you are working in magnetic field or near to objects which can create disturbance. Manometer will not work if there is any kind of disturbance and disturbance can be generated by earth magnetic field, building, heavy metallic machinery.</p> <p>There are numerous benefit of having tilt sensor:</p> <p>1. Accurate survey: tilt sensor will compensate all the ambiguity of leveling.</p>	

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			<p>2.Productivity: Now the surveyor doesn't require to wait and level the pole. It will help organization with more productivity at least by 25%- 30%.</p> <p>3.Mounting on Boat: Tilt sensor will allow user to take accurate measurement even when it is mounted on boat or on floating.</p>	
35.	<p>Section VII, Page no. 98, and Section XI, page no. 184</p> <p>Schedule "D", SI#3</p> <p>RTK DGPS</p>	<p>One number Controller should be supplied for Base and Rovers</p>	<p>In Surveying, people use COGO feature frequently for various purpose and one of them is generating a new point based on various method like Distance-Distance, Distance-Bearing and Bearing-Bearing etc. Surveyor perform these activities manually which leads many kind ambiguities. We request to kindly add the inbuilt distance meter in the controller. So that surveyor can perform this activity in real time on the field without any hesitation and record an error free data. This feature will</p>	<p>DISPLAY CONTROLLER: One number Controller should be supplied for Base and Rovers. Inbuilt distance meter (Optional).</p>

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			help to record the data where the point is in accessible due to any reason and also this will save the time also as from single place surveyor can record many points.	
36.	Section VII, Page no. 101 and Section XI, page no. 188 Schedule “D”, SI#14(d) RTK DGPS	Hardware: Laptop with latest Windows Operating system with i10 processor, 2TBHDD, 4GB dedicated Graphic card, 8GB RAM or better	No Laptop is available with i10 processor.	Same as amendment no. 30 above.
37.	Section VII, Page no. 85 and Section XI, page no. 178 Schedule ‘A’, SI#1 Shallow water Multibeam Echo Sounder	Sounding Method –Shallow Water Multibeam system : Multi-Phase Echo Sounder (MPES)/Interferometric (with bathymetric data with IHO SP 44 Special Order Compliant)	There is available technology like CAATI (Computed Angle of Arrival Transient Imaging), which is better, and overcomes the limitation of Interferometric systems. CAATI system explicitly resolves multiple simultaneous arrivals from different directions using its algorithm. CAATI technology is not affected by the problem of phase noise due to multipath and water-column backscatter	Sounding Method – Shallow Water Multi-beam system : Multi-Phase Echo Sounder (MPES) / Interferometric / CAATI (bathymetric data with IHO SP 44 Special Order Compliant)

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			interfering faced by conventional interferometric systems. We request you to incorporate the CAATI technology in multibeam specifications.	
38.	Section VII, Page no. 85. and Section XI, page no. 178 Schedule 'A', SI#2 Shallow water Multibeam Echo Sounder	Minimum Depth measurement : 0.5 mtr below transducer	0.5 meter is very difficult to achieve as the blanking of the transducer is typically around 0.2 meter for most transducers. We request you to amend this specification to 0.7 meter below transducer, to allow wider participation.	Minimum Depth measurement : 0.7m below transducer or better
39.	Section VII, Page no. 85 and Section XI, page no. 178 Schedule 'A', SI#3 Shallow water Multibeam Echo Sounder	Bathymetric and side scan frequency: Minimum 230 kHz	CAATI/ Interferometric multibeam operates on a fixed frequency ranging from 200 Khz to 500 Khz. We request you to please put a range to allow wider participation.	Bathymetric and side scan frequency: Minimum 200 KHz
40.	Section VII, Page no. 85 and Section XI, page no. 178 Schedule 'A', SI#4	Maximum depth measurement: 100 meter or better	The multibeam echosounder is to be deployed in NW-1 at Farakka, where maximum depth is approximately 60-70	Maximum measurement depth: 75 meter or more

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	Shallow water Multibeam Echo Sounder		meter. We request a change in the specs to “75 meter or more” which will allow wider participation	
41.	Section VII, Page no. 85 and Section XI, page no. 178 Schedule ‘A’, SI#13(a) Shallow water Multibeam Echo Sounder	Dynamic / Integrated Motion Sensor - Data Resolution Heave 1cm, Roll & Pitch 0.01° or better	The motion sensor accuracy drives the performance of the multibeam system; the specs do not mention the required accuracy of the motion sensor, but only resolution. Please incorporate the accuracy parameter in the specifications.	Same as amendment no. 19 above.
42.	Section VII, Page no. 86, Para 1.2 and Section XI, page no. 178. Schedule ‘A’ Shallow water Multibeam Echo Sounder	Operation and Maintenance for three years	As per tender, operation of the multibeam system is in the vendor’s scope. We believe that IWAI has all the expertise required to operate any kind of multibeam system for survey. Operation of the system and preparation of a chart is required to be done by a qualified and certified surveyor, which IWAI has. This, we believe, will be an economical option for IWAI than employing an external agency.	Tender conditions prevails

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43.	Section VII, Page no. 94 and Section XI, page no. 180 Schedule 'B', Sl#15 SIDE SCAN SONAR	Towing Cable: Towing cable shall be flexible for transportation and operation purpose. Stainless steel coated minimum length of 100 mtr.	We request you to also consider Kevlar cables, as these are equally efficient as steel cables. Also, the tensile strength of the Kevlar is 10 times that of steel of equal weight.	Towing Cable: Towing cable shall be flexible for transportation and operation purpose. Stainless steel/ Kevlar cables coated minimum length of 100 mtr.
44.	Section VII, Page no. 94 and Section XI, page no. 180 Schedule 'B', Sl#18 SIDE SCAN SONAR	Hardware: Fully Rugged Laptop with latest Windows Operating system with i10 processor, 2TB HDD, 4GB dedicated Graphic card, 32GB RAM or better.	Fully ruggedized laptops come with only i7 processor. We request you to please change the specification to i7.	Same as amendment no. 23 above.
45.	Section VII, Page no. 102 and Section XI, page no. 189 Schedule 'E', Sl#5 DGPS Receiver	Position update rate: upto 50 Hz	In general, all DGPS for survey works has an update rate of 10 Hz, and 50 Hz update rate is recommended for IMO vessels. Hence, we request for a change in position update rate to 10 Hz.	Tender condition prevails.
46.	Section VII, Page no. 102 and Section XI, page no. 189 Schedule 'E', Sl#9 DGPS Receiver	Keyboard and Display: VFD display 16 characters by 2 rows, On/Off key for one button start up or better	VFD Display comes with a specific make and model. We request you to also incorporate LCD display to allow wider participation.	Keyboard and Display: VFD/LCD display 16 characters by 2 rows, On/Off key for one button start up or better

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47.	Section VII, Page no. 102 and Section XI, page no. 189 Schedule 'E', SI#10 DGPS Receiver	Operating temperature: -40 °C to +65 °C	The operating temperature range of -40°C to +65°C is never seen in the Indian surveying environment. Please consider reasonable operating temperature.	Operating temperature: -5°C to +55°C or better
48.	Section VII, Page no. 102 and Section XI, page no. 189 Schedule 'E', SI#12 DGPS Receiver	Waterproof Dustproof	The DGPS receiver is to be kept inside the boat, and only the antenna is to be used in an open environment. We assume the specs mentioned are for the antenna; the receiver cannot be waterproof, as it has a display and on/off button. Please confirm the specifications are only for the DGPS antenna.	Waterproof Dustproof Antenna
49.	Section VII, Page no. 103 and Section XI, page no. 190 Schedule 'F', SI#2 Echo Sounder Cum DGPS Receiver	LCD Display	An LCD display is limited to very few manufacturers as currently, most echosounders are rugged and to be used in all-weather environment, which is why manufacturers do not offer an LCD display. If an LCD display is critical, we can provide a tablet on	Tender condition prevails

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			which the user can see all the data. Please change the requirement to state 'LCD display or tablet'.	
50.	Section VII, Page no. 103 and Section XI, page no. 190 Schedule 'F', Sl#10 Echo Sounder Cum DGPS Receiver	Vertical resolution: 1 cm	Please clarify if this resolution is for DGPS data or for the depth data.	Vertical resolution: 1 Cm (Depth data)
51.	Section VII, Page no. 103 and Section XI, page no. 191 Schedule 'F', Sl#14 Echo Sounder Cum DGPS Receiver	RS232/RS422 output	Currently, most echosounders come with an ethernet port as well, and is a more reliable interface than RS232 as the user requires a converter interface with the laptop in case of an RS232 port. We request you to please consider and add Ethernet port as an option along with RS232/RS422 output.	RS232/RS422/Ethernet output
52.	Section VII, Page no. 103 and Section XI, page no. 192 Schedule 'F', Sl#15	GPS/Nav Integration	This should be optional as the Echosounder specs do ask for an inbuilt DGPS	GPS/Nav Integration (optional)

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	Echo Sounder Cum DGPS Receiver			
53.	Section VII, Page no. 104 and Section XI, page no. 191 Schedule 'F', SI#17 Echo Sounder Cum DGPS Receiver	Data output: ODEC PMC dt (True Depth & Status), Atlas DESO -25, Odom Digitrac, Odom Echotrac, NMEA DBT, NMEA DBS, NMEA.	In sr. no. 4 of the Schedule 'F' specs, it is stated that Echosounder cum DGPS output format should be compatible with Hydrographic software. Keeping the format "ODEC PMC dt (True Depth & Status), Atlas DESO -25, Odom Digitrac, Odom Echotrac" restricts the vendor for participation, as these are the proprietary format of specific make and model. The current accepted universal format is NMEA. We request you please make this specs the same as Sr. no. 4 of Schedule 'F'.	Data output: ODEC PMC dt (True Depth & Status) / Atlas / DESO -25 / Odom Digitrac / Odom Echotrac / NMEA DBT, NMEA DBS or NMEA.
54.	Technical Part – 1.1. - Qualification Criteria (ITB 32.1) – page 50	<u><i>B. If Bidder is not manufacturer:</i></u> <i>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)</i>	Please confirm whether the requirement is for the Manufacturer to demonstrate the qualifications as in (a), (b) and (c) of ITB 32.1.A (page 48-49), or is it for the Bidder (who	<u><i>B. If Bidder is not manufacturer:</i></u> <i>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 Bidder shall demonstrate the</i>

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		<i>and the Bidder shall demonstrate that it has successfully completed at least 03 contracts of similar goods in the past 07 years.</i>	is not the manufacturer) to do so.	<i>above qualifications (a), (b), (c) and the Bidder shall demonstrate that it has successfully completed at least 03 contracts of similar goods in the past 07 years.</i>

ADDITIONAL POINTS

55.	Technical Part – 1.1.(e) - Qualification Criteria (ITB 32.1): page 49-50	<p>Liquid Assets : The minimum amount of liquid assets and/or credit facilities net of other contractual commitments of the successful Bidder shall be:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>SCHEDULE</th> <th>EQUIPMENTS</th> <th>Solvency (in ₹)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">A</td> <td>Shallow Water Multi Beam Echo Sounder System with O & M (03 yrs) and CAMC (02 yrs)</td> <td style="text-align: right;">1,08,36,610</td> </tr> <tr> <td style="text-align: center;">B</td> <td>Side Scan Sonar</td> <td style="text-align: right;">48,81,356</td> </tr> <tr> <td style="text-align: center;">C</td> <td>ADCP (Acoustic Doppler Current Profiler)</td> <td style="text-align: right;">35,59,322</td> </tr> <tr> <td style="text-align: center;">D</td> <td>RTK DGPS</td> <td style="text-align: right;">51,80,000</td> </tr> <tr> <td style="text-align: center;">E</td> <td>DGPS Receiver</td> <td style="text-align: right;">14,40,000</td> </tr> <tr> <td style="text-align: center;">F</td> <td>Echo Sounder Cum DGPS Receiver</td> <td style="text-align: right;">15,39,840</td> </tr> </tbody> </table>	SCHEDULE	EQUIPMENTS	Solvency (in ₹)	A	Shallow Water Multi Beam Echo Sounder System with O & M (03 yrs) and CAMC (02 yrs)	1,08,36,610	B	Side Scan Sonar	48,81,356	C	ADCP (Acoustic Doppler Current Profiler)	35,59,322	D	RTK DGPS	51,80,000	E	DGPS Receiver	14,40,000	F	Echo Sounder Cum DGPS Receiver	15,39,840	<p>Bank Solvency</p> <p>The minimum amount of Bank Solvency shall be:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>SCHEDULE</th> <th>EQUIPMENTS</th> <th>Bank Solvency (in ₹)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">A</td> <td>Shallow Water Multi Beam Echo Sounder System with O & M (03 yrs) and CAMC (02 yrs)</td> <td style="text-align: right;">1,08,36,610</td> </tr> <tr> <td style="text-align: center;">B</td> <td>Side Scan Sonar</td> <td style="text-align: right;">48,81,356</td> </tr> <tr> <td style="text-align: center;">C</td> <td>ADCP (Acoustic Doppler Current Profiler)</td> <td style="text-align: right;">35,59,322</td> </tr> <tr> <td style="text-align: center;">D</td> <td>RTK DGPS</td> <td style="text-align: right;">51,80,000</td> </tr> <tr> <td style="text-align: center;">E</td> <td>DGPS Receiver</td> <td style="text-align: right;">14,40,000</td> </tr> <tr> <td style="text-align: center;">F</td> <td>Echo Sounder Cum DGPS Receiver</td> <td style="text-align: right;">15,39,840</td> </tr> </tbody> </table>	SCHEDULE	EQUIPMENTS	Bank Solvency (in ₹)	A	Shallow Water Multi Beam Echo Sounder System with O & M (03 yrs) and CAMC (02 yrs)	1,08,36,610	B	Side Scan Sonar	48,81,356	C	ADCP (Acoustic Doppler Current Profiler)	35,59,322	D	RTK DGPS	51,80,000	E	DGPS Receiver	14,40,000	F	Echo Sounder Cum DGPS Receiver	15,39,840
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S.no .	Page no & Clause .No	Existing			Clarification by Bidder	Amended by IWAI		
		G	Single Beam Echo Sounder With Transducer	17,62,712		G	Single Beam Echo Sounder With Transducer	17,62,712
		H	Transducer for Echo Sounder	2,13,559		H	Transducer for Echo Sounder	2,13,559
		I	Water Sampler	84,746		I	Water Sampler	84,746
		J	Bottom Sampler	1,60,000		J	Bottom Sampler	1,60,000
		K	FTP Server and Data Storage System	83,31,773		K	FTP Server and Data Storage System	83,31,773
		L	Hydrographic Survey Software Hysweep and Hypack	14,04,000		L	Hydrographic Survey Software Hysweep and Hypack	14,04,000
						<p>The Bidder shall submit Bank Solvency certificate from a nationalized / scheduled bank in India for a minimum amount as mentioned above. The Bank Solvency certificate submitted by the Bidder shall not be older than six (06) months from the Bid Submission Last Date.</p>		

