

TENDER DOCUMENT FOR

**CONDUCTING DRONE SURVEY,
HYDROGRAPHIC SURVEY**

FOR

“REJUVENATION OF WATERBODIES” UNDER

JURISDICTION OF

BRAJRAJNAGAR MUNICIPALITY

NOTICE INVITING TENDER (NIT)

**The project envisages conducting Drone Survey, Hydrographic
Survey for rejuvenation of water bodies
under jurisdiction of
BRAJRAJNAGAR MUNICIPALITY**

Notice No. :

3558

Dated: 11/07/2023

1.0 BRAJRAJNAGAR MUNICIPALITY invites offline tender from experienced, competent and eligible interested/ intending Firms/ Agencies/ Surveyers/ Architectures in double cover system for Conducting Drone Survey, Hydrographic Survey for "Rejuvenation of Water bodies" Under Jurisdiction of BRAJRAJNAGAR MUNICIPALITY" as scheduled under:-

2.0

| | |
|-------------------------|---|
| Name of the work | Conducting Drone Survey, Hydrographic Survey for "Rejuvenation of Water Bodies" under Jurisdiction of BRAJRAJNAGAR MUNICIPALITY |
| Employer/Owner | BRAJRAJNAGAR MUNICIPALITY |
| Brief Scope of Work | The information as provided in the Bid document of the water bodies are based on very preliminary studies, as such it is tentative and may change significantly in further course of studies and hence there may be substantial reduction of quantities mentioned in BoQ. Therefore, bidders should keep this in mind while quoting unit rate for various item of work. |
| Completion of Work | 30 days reckoned from the date of issue of Work Order. |
| Cost of Tender document | Rs.600/- (Non – refundable) (Demand Draft from any scheduled bank should be in favor of Executive Officer, BRAJRAJNAGAR MUNICIPALITY payable at BRAJRAJNAGAR. |
| EMD | Rs. 1000/- (Demand Draft from any scheduled bank should be in favor of Executive Officer, BRAJRAJNAGAR MUNICIPALITY payable at BRAJRAJNAGAR. |

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| Last Date of Selling Tender Document | Up to 17.00Hrs. on dated 19.07.2023 |
| Last date of offline submission of Technical and Financial Bid | Up to 17.00Hrs. on dated 24.07.2023 |
| Date & time of opening of Technical Bid | At. 16.00 Hrs. on dated 25.07.2023 at Council Hall of BRAJRAJNAGAR MUNICIPALITY |
| Date & time of opening of Financial Bid | At. 16.00 Hrs. on dated 25.07.2023 at Council Hall of BRAJRAJNAGAR MUNICIPALITY |
| Validity of offer | 90 days after the last date fixed for submission of Bid |
| Performance Security | 5% (Five Percent only) of Contract value within 7 days from the issue of Letter of Award (LoA) |
| Security Deposit | 5% (Five Percent only) of Contract value will be deducted in each RA bill and will be paid after release of final payment. |
| Commencement of work | Commencement of work after issue of Letter of Award. |
| Price Adjustment | The rates quoted by the Bidder shall be firm & fixed. |
| <p>Exemption in EMD for Micro & Small Enterprises registered with NSIC/MSME: The micro and small enterprises registered with the NSIC/MSME are exempted from the submission of EMD/ Bid Security Deposit on production of requisite proof in the form of valid certification from NSIC/MSME for the tendered item/services. Micro and small enterprises having Udyog Aadhaar Memorandum are also entitled for the above exemption for which submission of valid memorandum certificate is must.</p> | |
| <p>If the office of BRAJRAJNAGAR MUNICIPALITY happens to be closed on the last date and time mentioned for any of the event, the said event will take place on the next working day at the same time and venue.</p> | |

The tenders shall be submitted through Registered Post/Speed Post addressed to:-

Executive Officer
Brajrajnagar Municipality
Brajrajnagar, Jharsuguda, Odisha. 768218
E-mail:-eobrjnmp@gmail.com

3.0 **Technical Bid:** Envelope –"A" (A1 & A2) wherein Envelope A1 shall contain receipt of tender fee documents and earnest money deposit and self attested copies of (i) PAN, (ii) GSTIN (iii) Firm/ Agency/ Surveyer/ architectures certificate. The envelope

A2 shall contain Financial Bid and complete Bid documents to be submitted offline only.

Entire Bid Documents related to eligibility criteria and Financial Bids are to be submitted.

However, documents related to eligibility criteria & other requirements as per bidding documents and complete set of bid documents duly signed by the bidder including original EMD, corrigendum & addendum if any (Envelope A) will also be submitted physically (hard copy) on or before the last date of submission of Tender.

- 4.0 Corrigendum, if any, published, would appear only on the Office Notice Board.
- 5.0 In case any information/details mentioned at two or more places in Tender documents is unclear/does not match, interpretation/clarification given by Employer shall be final and binding to the Bidder.
- 6.0 In case the office of BRAJRAJNAGAR MUNICIPALITY happens to be closed on the last date and time mentioned for any of the event such as opening of technical and Financial Bids etc., the said event will take place on the next working day at the same time and venue.
- 7.0 Incomplete quotations, conditional quotations, quotations received without EMD and quotation received after the stipulated time shall out rightly be rejected.
- 8.0 Any queries regarding the terms of reference can be obtained from the following office address on any working day Up to 17.00 Hrs. on dated 19.07.2023 through e-mail eobrjnmp@gmail.com addressed to Executive Officer Brajrajnagar Municipality.
- 9.0 BRAJRAJNAGAR MUNICIPALITY reserves the right to reject any one or all of the quotations without assigning any reason thereof.
- 10.0 In case of any dispute in the award of work or terms & condition of award and execution of works, the decision of Executive Officer, BRAJRAJNAGAR MUNICIPALITY is final and binding on all the parties.


11.7.23
Executive Officer
Brajrajnagar Municipality.

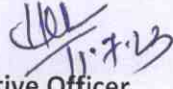
Memo No. No. 3559/dt. 11/7/2023.

Copy forward to the CDO, Zillaparishad-cum-P.D., DUDA Jharsuguda / E.E., R&B / E.E-NH / E.E, RD/ SDO, R&B/ Sub- Collector /Additional Chief Engineer-cum-ILW, PH Circle, Sambalpur / Office Notice Board for wide publication.


11.7.23
Executive Officer
Brajrajnagar Municipality.

Memo No. No. 3560/dt...11/7/2023.

Copy submitted to DIC, NIC, Jharsuguda with a request to publish this NIT on the portal of District website www.jharsuguda.nic.in.



Executive Officer

Brajrajnagar Municipality.

INSTRUCTIONS TO BIDDERS

1.0. Availability of Bid Document and Bid Submission

The Bid documents can be available in Office of the BRAJRAJNAGAR MUNICIPALITY and District website i.e. www.jharsuguda.nic.in with effect from 13.07.2023 to 17.00 Hrs. on Dt. 19.07.2023

The entire bid-submission would submissions are as follows:

- Technical Bid (Envelope-I of the Tender Document)
- Financial Bid (Envelope-II of the Tender Document)
- Both technical bid and financial bid to be submitted offline, through Registered Post/Speed Post only on or before the specified due date.

1.01. Offline Submission of Documents by bidder

The Bidder shall submit following document offline in separate sealed envelopes also.

- Technical Qualification Documents in original as mentioned in "Clause- Bidding Document"
- Originals of EMD, Tender Document fee in the form of Demand Draft.

1.02 Tender Fee

The Tender Fee Deposit as mentioned in NIT and shall also be submitted in physical form in courtesy of Executive Officer, BRAJRAJNAGAR MUNICIPALITY payable at BRAJRAJNAGAR .

The Tender Fee is accepted only in the following forms:

- Banker's cheque of a Nationalized Bank /Scheduled Commercial Bank (i.e. Public and Private Sector Banks).
- Demand Draft of a Nationalized Bank /Scheduled Commercial Bank

1.2 BIDDING DOCUMENT

1.21 The bidder is expected to examine all the documents prior to preparation and submission of bid.

1.22 The bidder is advised to visit the site at his own expenses to assess the accessibility, climate and other conditions of the area etc. before quoting the rates. No claim shall be entertained later, on any such account.

1.23 Failure to comply with the requirements of bid submission will be at bidders" risk and shall be considered as non-responsive.

1.24 **Qualifying Criteria: Offline Technical Bid Submission**
The intending bidders must read the terms & conditions of tender documents carefully. They should only submit the bid if they consider themselves eligible and they are in possession of all the documents required.

1.3 **Offline Submissions of Technical Documents**

The Bidder shall submit following Technical Document along with the Bid Documents.

1.31. Bidder should submit self attested copies of (i) PAN, (ii) GSTIN (iii) Firm/ Agency/ Surveyers/ architectures certificate along with the bid. Quotation without one or more of these documents are bound to be rejected in separate sealed envelope clearly labeled as "TECHNICAL BID" for the Work (Write Name of Work/Project as mentioned in NIT) along with Details of Bidders Address, Phone, E-mail on Envelope.

1.32. **Originals EMD and Tender submission fee in the form of Demand Draft** in separate sealed envelope clearly labeled as "EMD AND TENDER FEE" for the work (Write Name of Work/Project as mentioned in NIT) along with Details of Bidders Address, Phone, Email on Envelope.

The offline submissions as mentioned above shall be submitted on BRAJRAJNAGAR MUNICIPALITY address mentioned in NIT as per date and time mentioned in NIT otherwise bids are liable to be rejected.

1.4 **Contents of Financial Bid**

The Financial Bid should be submitted separately, along with Technical Bid, before last date and time of submission of Bidding Document.

The estimated cost mentioned in NIT is based on the estimate based on the scope of work of the project and also based on DSR provisions and Non-scheduled items as per the standard practice. The bidder shall quote keeping in view all associated costs with the project including any out of pocket / mobilization expenses/ Custom duty (if any), Buildings and Other Construction Workers Welfare Cess, TDS, taxes (except GST) if any applicable as per Govt. terms, shall be paid by the Agency. **The Goods and Services Tax (GST) shall be paid extra over quoted cost to Agency.**

It is mandatory to bidders to deposit GST within time limit framed by Govt. of India, if applicable. The Goods and Services Tax (GST), shall be reimbursed to the Agency only after uploading of bills by Agency on GST Portal "to avail Input benefit of GST".

The company shall be performing all its duties of deduction of TDS and other deduction on payment made to the Agency as per applicable legislation in force on the date of submission of bid or to be newly / amended introduced during the execution of the Contract.

Quoted amount by bidder shall be firm and fixed for Three (03) months. The contract may be extended, according to the direction of Project Authority, in this case the rate quoted by the bidder remains firm and no escalation shall be applicable for extension. Therefore, it is advised to Agency to quote the rate accordingly.

The financial proposal is to be filled by bidder in the excel file attached in **Annexure-A** and **Annexure-A1** and should be submitted along with the bid.

Note:- The BRAJRAJNAGAR MUNICIPALITY reserves the right to waive minor deviations if they do not materially affect the capability of the Tender to perform the contract.

1.5 Opening of financial Bid

The financial bids of the technically qualified bidders shall be opened at the notified date and time mentioned in NIT.

1.6 Joint Venture

Joint Venture / Consortium / Associations are accepted/allowed and maximum number of partners is limited to 2 (i.e. one lead + 1 JV partner).

2.0 BID PRICES

2.1 The bidder shall fill in rates and prices for all the items of the schedule of works. The rates should be **inclusive of all applicable taxes & duties, if any, and exclusive of GST which will be paid as applicable.**

2.2 The quoted price shall include, but not be limited to, the following activities:

- All the survey works in the field, office work, including preparation of maps/ drawings/ sketches to the scales and extent indicated in the letter of acceptance, provision of skilled personnel, provision and maintenance of instruments and accessories, carry forward of temporary bench marks, stay at the project site, TA & DA of employees, provision of suitable labour etc.
- Restricting or stopping traffic of persons and vehicles near instruments or insight lines during instrument observations.
- Taking all necessary safety precautions;
- Clearing sight lines by removal of bushes and scrub.
- Access to the project site
- Making of temporary paths for movement of equipment etc.
- Any stoppage of works due to any unforeseen reason.

2.3 **The rate should include all taxes & duties, calibration, insurance, transportation etc. (excluding GST) and nothing extra will be paid over and above the contract price as specified in Annexure-A.**

2.4 Income tax and all other taxes, levies, impositions, deductions, charges, fees and similar assessments whatsoever imposed, assessed, levied or collected by the State Government and the Government of India or any subdivision thereof or any tax authority therein upon the Agency (Successful bidder to whom the work is awarded by BRAJRAJNAGAR MUNICIPALITY) and his staff, shall be paid and/ or borne by the Bidder and BRAJRAJNAGAR MUNICIPALITY shall perform duty of deduction from payments whenever required by law.

2.5 Any conditional bid shall be rejected.

3.0 BID VALIDITY

The offer(s) submitted by the bidder shall be valid for a period of 01 (one) year from the date of opening of the quotations.

4.0 BID OPENING

Bid opening date & venue will be intimated later to all the bidders. The bidders can send their representatives, if they desire so as to attend the bid opening.

5.0. DRONE SURVEY

(a) Scope of Work

Topographic and Hydrological Cross Section Survey using Photogrammetric Technique by Un-manned Aerial Vehicle (UAV) / Drone in combination with DGPS / DGNSS Receiver 'or' similar arrangement with LIDAR, in connection with Hydrological study for 03(three) Nos. of Water Bodies located at the location mentioned below. The exact boundary of the study area will be indicated in detail, along with the award letter to the successful bidder. The project area will be confined within the administrative boundary of BRAJRAJNAGAR MUNICIPALITY.

| Sl. No. | Name of the Water Body | Approximate AREA for conducting Survey |
|---------|---|--|
| 1. | Jalabhandar Bandha near Rampur Bridge | Minimum A 1.554 Dc. |
| 2. | Jagannath Bandha & Telenpali Bandha | Minimum A 1.383 Dc. |
| 3. | Suru Bandha Khaliamal | Minimum A 4.840 Dc. |
| 4. | Sukha Bandha near Nuadihi N.H. Road | Minimum A 2.840 Dc. |
| 5. | Badahi Bandha & Badhai Kanta | Minimum A 6.660 Dc. |
| 6. | Sundhi Bandha Nuadihi | Minimum A 2.023 Dc. |
| 7. | Bhulia Bandha Old Gandghora | Minimum A 1.27 Dc. |
| 8. | Nuakanta Talakanta near Ramgarh | Minimum A 10.532 Dc. |
| 9. | Kanta near Chuakani Khadiapada | Minimum A 1.490 Dc. |
| 10. | Deula Bandha 01 near Sanjob and Ramgarh | Minimum A 1.874 Dc. |

| | | |
|-----|--------------------------------|-------------------------|
| 11. | Sundhi Kanta 01 near Nuadihi | Minimum A 1.890 Dc. |
| 12 | Dumeri Munda 01 near Khaliamal | Minimum A 13.960 Dc. |

The total area to be surveyed, need to be minimum 1.0 sq.km., for consideration of catchment area, with natural drainage pattern, Buffer Zone area etc. However, it may decrease or increase during the course study and the same will be informed to the successful bidder and the bidder will not have any claim for the revision of rate especially in the case of decrease in area to be surveyed.

(b) General specifications:

Before quoting the rates, the agency shall inspect the site of work and fully acquaint himself with the site conditions in regard to accessibility of site, and all such factors which may affect satisfactory execution of the work. No claim what so ever shall be entertained due to any difficult site conditions over and above unit rates quoted by the survey agency.

1. The quoted rates shall include the cost of labour, equipment, boats etc. required for work, construction of site office etc. complete. Nothing extra shall be paid on any account whatsoever and above the rates quoted by the agency for relevant item of schedule of quantity.
2. Good and Service Tax/Income Tax and any other tax applicable shall be recovered at source from bills of the agency as per prevailing tax structure of Govt. of India.
3. BRAJRAJNAGAR MUNICIPALITY shall not be responsible for any mishappening/loss/damage of equipment or human resource or due to some natural calamities caused during the course of the work. The agency shall be fully responsible and shall take full care of any mishappening, accident, disaster, or any unforeseen circumstances while doing survey work. Any consequential legal/financial/judicial matters shall be full liability of the agency. BRAJRAJNAGAR MUNICIPALITY, shall not be liable in whatsoever manner.
4. Survey drawings shall be the copy right of the BRAJRAJNAGAR MUNICIPALITY. In no way the Survey agency shall supply or use these maps and drawings to any other agency or for any other work.
5. The agency shall make his own arrangement for filtered and unfiltered water and lighting etc. as per requirement at his own cost.

(c) **Data Capture Specifications**

Scope of Drone Survey

1. The Drones to be used in the Survey should be equipped with all the mandatory sensors e.g. Autonomous Flight Termination System (AFTS) or Return Home (RH) option, flashing anti-collision strobe lights, memory Card, Flight Controller with flight data logging capability, Detection and Avoid Collision capability.
2. The camera used in the Drone should be of minimum 20 megapixel or above resolution RGB camera with capability to capture high quality undistorted pictures. Camera should have the resolution to capture the images less than 5cm Ground Sample Distance (GSD) or 5cm per pixel.
3. In order to ensure the generation of the elevation model photo grammatically (e.g. Digital Surface Model (DSM) and Digital Terrain Model (DTM), images should be

acquired with proper overlap. The Drone survey should be planned in such a way that the forward (front) overlap should be minimum 70% and lateral (side) overlap should be minimum 70%.

4. The survey should cover the entire area to capture all image. The flight path plan and the numbers of flights taken shall be responsibility of the Agency, so as to cover the entire area along with output data.
5. Before undertaking Drone Survey, at least five GCP (Ground Control Point) per sq. km./part thereof with calibrated DGPS must be established. The GCPs should be well distributed all over the Survey area. The error of GCP should be less than 5cm. The GCP top should be marked with YELLOW or WHITE colored "CROSS" or "PLUS" signage, which should be captured by the Drone Camera.
6. In order to maintain consistency in quality of images, it is recommended to carry out the Drone survey in better light condition.
7. The Co-ordinate reference system to be used for acquiring the Drone survey images should be in Geographic Reference System with WGS-1984 Datum and in Decimal Degrees / Degree, Minute, Seconds, as units. The same ortho-mosaic map shall also be submitted in the Universal Transverse Mercator (UTM) with WGS-1984 datum and units as Meters.
8. Data output and formats:

| Sl. No. | Data type | Format | Pixel/cm |
|---------|---|--------------------------|----------------|
| 1 | Orthomosaic Image | .tiff (geo tiff) | 5cm |
| 2 | Digital Elevation Model (3D) - DSM &DTM | .tiff (geo tiff) | 15 cm for both |
| 3 | Point cloud | . las/. dxf/. dwg | |
| 4 | Contours (One Mtr. interval) | .shp / .dwg (geo tagged) | |
| 5 | GCPs data | .shp and MS-Excel | |
| 6 | RMSE (Root Mean Square Error) Report | .txt/ .doc/pdf | |

9. The Authority reserves the Right for checking the accuracy of the Survey Output, with respect to Horizontal and vertical Control.

D) Drone Imagery Specifications

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|------------------------------|---|
| GSD (Ground Sample Distance) | 5 cm |
| Bands | R G B (Three band natural colour imagery) |
| End overlap | 70% minimum |
| Side overlap | 70% minimum |

| | |
|------------------------|---|
| Collection condition | <p>As pre following conditions:</p> <ul style="list-style-type: none"> • Sun angle no less than 30 degrees to minimize shadow • The project site has high relief changes therefore photograph will be captured at high sun angle to avoid shadows due to these high relief formations. • Cloud free with minimal smoke, smog, fog and dust. • Minimum soil moisture and after sufficient gap after rainfall. • Every effort shall be made to avoid breaks within individual flight lines. Where necessary, the entire flight line composed of the resulting segments shall meet all of the requirements set forth in these specifications. Where breaks occur, these shall have an overlap of at least four frames to ensure a stereo model of overlap or tie. |
| Horizontal Accuracy | 10cm GSD or better for the ortho-photo generated. |
| Radiometric Resolution | Minimum 8 bit per band in accordance with chosen image format |
| Horizontal Datum | The World Geodetic Datum (WGS-84). |
| Map Projection | The coordinate system for all deliverables is the Universal Transverse Mercator (UTM). |

6.0. HYDROGRAPHIC SURVEY

(a) Brief Scope of Work

(i) ***Bathymetric survey shall be carried out as follows:***

Cross sections are to be undertaken at interval of 5 Meter x 5 Meter grid Interval within the stretch of Water Bodies.

(ii) The survey shall be undertaken at the point of intersection of polluted drains / water spread area, as decided by Engineer-in-charge. Width of the water bodies may vary depending on the topography.

(iii) Agency has to establish 1 No. of TBM, showing X, Y & Z co-ordinates, for longitude, latitude and Reduced Level.

- (iv) Establishing vertical control (accuracy +0.1m) and establishing bench mark (accuracy + 50 millimeter) at suitable interval. Transfer of Bench Mark/datum w.r.t. MSL.
- (v) Establishing horizontal control and marking of selected points, on the banks, at suitable intervals. (accuracy +/- 50 millimeter).
- (vi) Scope of Bathymetric Survey using dual frequency Echo Sounder with DGPS (Beacon Based) and "Hypac" Software acquisition and processing Software on Water Bodies.

1. Before commencement of surveys the DGPS should be calibrated on a TBM/BM to the specified accuracy. Echo sounder shall be checked and calibrated daily before and after survey by means of bar check/lead line etc.
2. The proposed survey boat should be equipped with DGPS (Beacon Based), Echo sounder, Hypac Max acquisition and navigating software or equivalent, Qualified Hydrographic Survey personnel for conducting bathymetric surveys and provide survey charts in required numbers after duly processing the above acquired data using HYPAC MAX Processing System or equivalent.
3. The proposed boat for survey should have minimum speed and sufficient deck space to place all electronic/survey equipment and should have compatibility to the other equipment of vessel and should be able to maneuver at low speeds.
4. Survey in grid of minimum 5m for hydrographic surveys to be carried out in the water body boundaries, any suitable scale (1:1000, 1:500 or 1:200) as desired by the Engineer In-charge.
5. The soundings/depths are to be taken at an accuracy of 0.10m and reduced to MSL.
6. The depth/heights shall be plotted in meters and decimeter.
7. Necessary permission for execution of work has to be taken by the Agency at his cost.
8. The vertical control/water level is to be established with respect to the MSL. The water level is to be taken at every 15 minutes during the course of bathymetric survey.
9. Raw data of bathymetric survey is to be handed over to Executive Officer on completion of survey.

For monitoring the surveys work, the Agency shall provide access to their Survey Vessel/Boat to Employer's representative

(b) Technical Specifications

Establishment of Bench Mark

The levels shall be on the basis of GTS bench marks in the vicinity, if available. The Agency shall transfer the benchmark to the site. All levels shall be related to IMSL. New Bench mark shall be established either on existing abutments, Dam site or other monoliths which shall meet the stability requirement for bench marks specified by Survey of India. Alternatively, new benchmark of suitable type shall be built to survey of India standards. Value of bench marks shall be established to accuracy better than +/- 5 millimeters.

(c) Establishment of Horizontal control and marking the selected points on banks

Horizontal control established shall be properly connected to nearby G.T.S., if any, or other points, approved by Engineer-in-Charge.

(d) Establishment of Vertical Control

The vertical control shall be established with suitable water level gauges and/or GTS Bench Marks, if any, within or near the survey area and simultaneous tidal observations shall be taken into account to reduce the soundings to a recoverable or approved MSL. Sites of water level gauges should be carefully selected, to ensure the free flow of water levels to and from the gauge locations. Approval of the site engineer should be obtained for the location(s) of the water level gauge(s). For vertical control and determination of MSL, leveling between bench marks and to determine water level gauge zero etc. The leveling accuracy shall be + 0.10 m. For recording of water levels, water level gauges shall be erected at approved locations. The water levels shall be recorded at interval not more than 15 minutes. However, time and height of low water shall be accurately determined.

(e) Position Fixing

For position fixing the Agency shall use a suitable position fixing equipment with horizontal positional accuracy of + 1 m. The Agency may however propose alternative position fixing system that meets above mentioned positional accuracy, provided at least 3 lines of position can be used to determine position. The position fixing system shall be calibrated against a most accurate system or a fixed base line before deployment to the satisfaction of Engineer-in-Charge. While taking soundings vessel shall be moved at a slow speed (not greater than 3 knots).

(f) Reporting Pattern

- (i) A survey report in triplicate describing the conduct of the survey along with a soft copy and all observed data, along with original records viz. calculations field books, measurement books, Eco-rolls etc. shall be submitted to BRAJRAJNAGAR MUNICIPALITY. The data furnished shall be adequate to re-plot the survey chart independently on the basis of these documents.
- (ii) The charts shall be plotted at 1:1000 scale or any other scale as directed by Engineer-in-Charge. U.T.M. grid and geographical grid shall be marked on the chart as per normal cartographic practice. Soundings shall be shown in meter and decimeters and shall be reduced to Chart Datum. **Contours shall be marked at 0.5 m interval.** On the chart the soundings shall be marked duly showing high water and low water lines, delineation of shoals, symbols and legends, North line etc. As the area covered shall be in more than one chart, the Agency shall provide a single chart (Index Map) in triplicate. All charts/maps should display reference to the ground station and datum based on which the controls are fixed and shall indicate date/time of surveys and name of person in-charge conducting the surveys.
- (iii) Master copy of each chart, map shall be provided on stable film (RTM) along three hard copies and one soft copy on Compact Disc in a format compatible with AUTOCAD.
- (iv) The Agency shall also integrate the topographic survey map with hydrographic survey. The topographic survey map will be prepared and developed by Bidder.
- (v) The Agency shall submit survey reports as per specification laid down. However, the contour shall be marked at an interval 0.5 m on the survey charts.

- (vi) Survey maps shall be plotted at 1:1000 scale. An Index Map (Single Chart) showing entire area of survey and the physical features mentioned above shall also be prepared and submitted in triplicate along with soft copy as specified.
- (vii) In addition to the above a longitudinal section of the deepest channel in the sea for establishing the sea bed profile shall be provided. The scale of the L- section shall be decided by Engineer-in-charge.

g) Deliverables

The activity involves Conducting Detailed Topographic & Hydrographic Survey to develop the latest plan form of showing details of latest position empanelment and other permanent features like bridges, roads, highways, habitation, marginal bunds, vegetation etc. in stretch.

The following will be the deliverables of the project:

- i. Topographic map at suitable Scale
- ii. Contours Map at 0.5m interval
- iii. Digital Elevation Model (DEM)
- iv. DGPS and Leveling Network raw and processed data
- v. Digital Ortho Imagery, in tiles and seamlessly mosaiced over the survey area Surveying agency shall supply 3 sets of all final drawings of Surveyed area including five sets of soft copies in CDs or Pen drives in Auto CAD and PDF format.

7.0 TERMS AND CONDITIONS

- 7.1** Time of Completion: **1 (One) month** from the date of award of work or in accordance with the requirements of the Client including the period of mobilization.
- 7.2** The bidder shall mobilize the required manpower and machineries at Project Site within 5 days from issue of Letter of Award.
- 7.3** Time for completion is the essence of the contract and no relaxation of any account shall be entertained. Progress of work shall be monitored on weekly basis.
- 7.4** In the event of any delay in completion of the project, a penalty of 0.5% of the contract value, per week shall be charged subject to the maximum of 10 (ten)% of the contract value. The contract may be terminated on accumulation of the maximum amount.

**FORM-I
STRUCTURE & ORGANISATION**

| Sl. No. | Particulars | Details Submitted by Bidder |
|---------|---|-----------------------------|
| 1. | Name & address of the bidder | |
| 2. | Telephone no./Telex no./Fax no. | |
| 3. | Legal status of the bidder (attach copies of original document defining the legal status) (a) A proprietary firm (b) A partnership firm (c) A limited company or Corporation (d) A Company registered under Act 1956 / 2013 | |

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|----|--|------------------|
| 4. | Particulars of registration with various Government Bodies (attach attested photocopy) | |
| | Organization/Place of Registration 1. 2. 3. | Registration No. |
| 5. | Names and titles of Directors & Officers with designation to be concerned with this work. | |
| 6. | Designation of individuals authorized to act for the organization | |
| 7. | Has the bidder, or any constituent partner in case of partnership firm Limited Company/ Joint Venture, ever been convicted by the court of law? If so, give details. | |
| 8. | In which field of Civil Engineering construction the bidder has specialization and interest? | |
| 9. | Any other information considered necessary but not included above. | |

Signature of Bidder(s)

FORM-II

FORMAT FOR UNDERSTANDING THE PROJECT SITE
[To be submitted on Bidder's Original Letter Head]

- A. I/We hereby solemnly declare that I/We have visited the site of work and have familiarized myself/ourselves of the working conditions there in all respects and in particular, the following:-
- a. Topography of the Area
 - b. Soil & rock conditions at the site of work
 - c. Availability of local labour, both skilled and unskilled and the prevailing labour rates
 - d. Availability of water & electricity
 - e. The existing roads and access to the site of work
 - f. Availability of space for putting labour camps, Offices, survey equipment's, repairing works yard etc.
 - g. Climatic condition and availability of working days
 - h. Law & Order, Security & Working conditions
 - i. Methodology to be adopted for successful completion of work
 - j. Working hours and shifts for completing the work as per tender conditions
- B. I/We have kept myself/ourselves fully informed of the provisions of this tender document comprising NIT, General Information, Form of Bid, Instructions to the Tenderers & Appendices, General Conditions of the Contract, Special Conditions of Contract, and Specifications, Annexure and Statement of advertised Quantities apart from information conveyed to me/ us through various other provisions in this tender document.
- C. I/We have quoted my/ our rates as per financial bid format based on the prevailing rates.

I/We hereby submit our BID considering above all facts gathered during site visit and each & every aspect have been considered. Advertised Quantities taking into account all the factors given above and elsewhere in tender document.

Yours faithfully,

Date:

(Signature, name and designation
of the Authorized signatory)

Place:

Name and seal of Bidder

Form of Quotation

CONDUCTING DRONE SURVEY, HYDROGRAPHIC SURVEY FOR REJUVENATION OF WATERBODIES"
UNDER JURISDICTION OF BRAJRAJNAGAR MUNICIPALITY.

To,

EXECUTIVE OFFICER
BRAJRAJNAGAR MUNICIPALITY, BRAJRAJNAGAR
e-mail : eobrjnmp@gmail.com

I/We the undersigned, having carefully examined and understood the documents on which quotation to be based, hereby agree to carry out the aforesaid Survey works on item rate basis described in the Schedule of work, in conformity with the specifications and terms and condition as specified in the document.

The price will remain valid for 90 (Ninety) days from the date of submission of bid. Unless and until a formal contract is prepared and executed, this quotation, together with your acceptance thereof, shall constitute a binding contract between us.

I/We undersigned, that you are not bound to accept the lowest or any quotation you may receive.

Signed this _____ day _____ 2023

Signature and Seal of Bidder
or Authorized Representative

Name of firm :
Address of firm :
Telephone No. :
Fax No. :
E-mail :

BILL OF QUANTITIES (BoQ) AND SCHEDULE OF PRICE

| Sl. No. | ITEM | UNIT | Rate in (R.S.) | |
|---------|---|--------------------------------|----------------|----------|
| | | | In figure | In words |
| 1 | Scope of work as per Clause (Drone Survey) | Each square km. | | |
| 2 | Scope of work as per Clause (Hydrographic Survey) | Each Acre of water spread Area | | |
| Total | | | | |

Note:

- A) Quoted price shall be inclusive of all levies and taxes and exclusive of GST which will be paid as applicable.
- B) Quantity mentioned may vary according to the site conditions.
- C) Payment will be made according to actual executed quantity and unit price.
- D) The Water Bodies may increase for all the above survey work, accordingly the payment will be paid.

Date:

Place:

Signature of Bidder
Name and Stamp