GOVERNMENT OF JHARKHAND
Department of Forest, Environment & Climate Change, Jharkhand
Office of The Divisional Forest Officer
Bokaro Forest Division
Block-A, Van Bhawan, Purulia Road, Chas, Bokaro-827013
E-mail: dfo-bokaro@gov.in, bokarodfo@gmail.com ***Phone/Fax No: +91-6542-265142***

REQUEST FOR PROPOSAL (RFP)

RFP No.: 06/2026-27

The Divisional Forest Officer, Bokaro Forest Division, Government of Jharkhand, invites proposals from eligible and experienced firms/consultants for the following assignment:

Selection of Technical Agency for Drone Based High Accuracy Survey/DGPS Survey/Boundary Pillar Installation for approximately 800 acres of land in Bokaro District.

The detailed Request for Proposal (RFP) document containing the scope of work, eligibility criteria, evaluation methodology, terms & conditions and bid submission procedure may be downloaded from the Department's official website https://forest.jharkhand.gov.in/.

Particulars	Schedule
RFP No.	06/2026-27
Bid Document Downloading	From https://forest.jharkhand.gov.in/
Date of Issue of RFP Document	18.11.2026 (10:00 AM)
Start Date for Receiving of Bid Offers	19.11.2026 (10:00 AM)
Pre-Bid Discussion	01.12.2026 (11:00 AM)
Last Date & Time for Submission of Bids	03.12.2026 (04:00 PM)
Opening of Technical Bids	05.12.2026 (11:30 AM)
Opening of Financial Bids	05.12.2026 (03:30 PM)

The Divisional Forest Officer reserves the right to accept or reject any or all proposals, wholly or partially, without assigning any reason whatsoever. Any corrigendum/addendum, if issued, shall be published only on the Department's official website.

Sd/-
Divisional Forest Officer
Bokaro Forest Division

GOVERNMENT OF JHARKHAND

DEPARTMENT OF FOREST, ENVIRONMENT & CLIMATE CHANGE

OFFICE OF THE DIVISIONAL FOREST OFFICER, BOKARO FOREST DIVISION

Van Bhawan,Chas, Bokaro, Jharkhand – 827001 Email: dfo-bokaro@gov.in & bokarodfo@gmail.com | Phone/Fax: +91-6542-265142

REQUEST FOR PROPOSAL (RFP)

RFP No – 06/2026-27

For

"Selection of Technical Agency for Drone Based High Accuracy Survey/DGPS Survey/Boundary Pillar Installation for approximately 800 acres of land in Bokaro District"

(For Publication in National & Regional Newspapers / IPRD Jharkhand)

Notice Inviting RFP No. 06/2026–27

Memo No.: _____ Dated: __.__.2026

The Divisional Forest Officer, Bokaro Forest Division, on behalf of the Government of Jharkhand and BSL invites sealed Proposals in two separate envelopes (Two-Cover System: Cover-A Technical Bid and Cover-B Financial Bid) from experienced, reputed, and technically capable Agencies / Companies / LLPs specializing in Drone (UAV) Photogrammetry, High-Accuracy DGPS Survey, and Geographic Information System (GIS) Mapping for the following assignment:

- **Name of Work:** Selection of Technical Agency for Drone-Based High-Accuracy Survey/ DGPS Survey, Cadastral Geo-Referencing, Boundary Demarcation, Encroachment Mapping, and Statutory Land Reconciliation of approximately 800 Acres of Unutilized Notified Forest Land Situated Outside Bokaro Steel Limited (BSL) Acquired Periphery in Bokaro Forest Division.
- **Financed & Funded By:** Bokaro Steel Limited (SAIL-BSL), in terms of the decision taken under the Chairmanship of the Chief Secretary, Government of Jharkhand on 21.07.2025, and Joint Minutes of Meeting (MoM) dated 12.09.2025.
- **Project Period:** 90 (Ninety) Calendar Days from the date of execution of Contract Agreement.
- **Cost of Tender Document (Non-Refundable):** Rs. 5,000/- (Rupees Five Thousand only) via Demand Draft drawn on any Nationalized/Scheduled Bank in favour of *Divisional Forest Officer, Bokaro Forest Division*, payable at Bokaro.
- **Earnest Money Deposit (EMD / Bid Security):** Rs. 1,50,000/- (Rupees One Lakh Fifty Thousand only) via Demand Draft or Bank Guarantee from a Nationalized/Scheduled Bank pledged in favour of *Divisional Forest Officer, Bokaro Forest Division*, payable at Bokaro, valid for 180 days.
- **Bidding Procedure & Selection:** Quality and Cost Based Selection (QCBS) assigning 70% weightage to Technical Score and 30% weightage to Financial Quote (70:30).
- **Availability of RFP Document:** The complete RFP document containing detailed Scope of Work, Technical Specifications, Eligibility Criteria, Instructions, Evaluation Methodology, and Submission Proforma can be downloaded from the official departmental website https://forest.jharkhand.gov.in/ from **18.11.2026** onwards.

Critical Dates & Schedule of Events

Sl. No.	Event / Information	Date & Time
1.	Date of Publication of Notice on Website & Newspapers	18.11.2026 at 10:00 Hrs
2.	Document Download Start Date	18.11.2026 at 11:00 Hrs
3.	Bid Submission Start Date	19.11.2026 at 10:00 Hrs
4.	Pre-Bid Discussion	01.12.2026 at 11.00 Hrs
5.	Last Date & Time for Submission of Bids (Physical Submission)	03.12.2026 up to 16:00 Hrs
6.	Opening of Cover-A (Technical Bids)	05.12.2026 at 11:30 Hrs
7.	Technical Presentation by Eligible Bidders	05.12.2026 at 12:00 Hrs
8.	Opening of Cover-B (Financial Bids)	05.12.2026 at 15:30 Hrs (for Technically Qualified Bidders)
9.	Bid Validity Period	180 Calendar Days from date of opening of Financial Bids
10.	Office / Address for Bid Submission	Office of the Divisional Forest Officer, Bokaro Forest Division, Van Bhawan, Chas, Bokaro Steel City – 827001

(Any addendum, corrigendum, or extension of dates will be uploaded only on https://forest.jharkhand.gov.in/. No individual communication shall be issued.)

Sd/-
Divisional Forest Officer
Bokaro Forest Division, Bokaro

DETAILED REQUEST FOR PROPOSAL (RFP) DOCUMENT

SECTION 1: GLOSSARY OF TERMS & ABBREVIATIONS

Abbreviation	Expanded Definition
AOI	Area of Interest (Approx. 800 Acres across designated Mauzas)
BSL	Bokaro Steel Limited (A Unit of Steel Authority of India Limited - SAIL)
CMV / MMV	Cadastral Map Vector / Management Map Vector
CS / RS	Cadastral Survey / Revisional Survey (Revenue Maps & Khatiyans)
DEM / DSM	Digital Elevation Model / Digital Surface Model
DFO	Divisional Forest Officer, Bokaro Forest Division
DGPS	Differential Global Positioning System
DGCA	Directorate General of Civil Aviation, Government of India
EMD	Earnest Money Deposit / Bid Security
FCA	Forest (Conservation) Act, 1980 / Van (Sanrakshan Evam Samvardhan) Adhiniyam
FPCP / FSCP	Forest Primary Control Point / Forest Secondary Control Point
FRJVC	Forest Revenue Joint Verification Committee
GNSS	Global Navigation Satellite System (GPS, GLONASS, Galileo, NavIC)
GSD	Ground Sampling Distance
JSAC	Jharkhand Space Applications Centre, Ranchi
MoM	Minutes of Meeting dated 12.09.2025 chaired by RCCF Bokaro
PBG	Performance Bank Guarantee
QCBS	Quality and Cost Based Selection (70% Technical : 30% Financial)
RINEX	Receiver Independent Exchange Format (Native GNSS RAW Observation logs)
RoR	Record of Rights (Khatiyan / Jamabandi records)
RTK / PPK	Real-Time Kinematic / Post-Processing Kinematic
SOP	Standard Operating Procedure issued vide FECCD Memo No. 3956 dt. 08.10.2024
UAV	Unmanned Aerial Vehicle (Survey-Grade Drone)

SECTION 2: INTRODUCTION, LEGAL MANDATE & BACKGROUND

2.1 Preamble & Historical Context

1. The Bokaro Steel Plant was established following multiple land notifications issued by the State Government across 1956, 1959, 1964, 1967, 1973–1977, and 1982. While ~45,000 acres were initially proposed for land acquisition, approximately 31,287 acres were acquired and handed over to Bokaro Steel Limited (SAIL).
2. The physical active boundary wall/periphery of BSL is demarcated by natural and infrastructure boundaries, namely:
    - The **Garga River**,
    - The **Damodar River**, and
    - The **Chandrapura–Muri Railway Line**.
3. Outside this functional boundary wall/periphery, substantial land parcels that were Notified Forest Lands under the Indian Forest Act, 1927, and originally transferred "in-principle" for industrial acquisition, have remained unutilized, vacant, and non-operational by BSL.
4. In the high-level meeting chaired by the Chief Secretary, Government of Jharkhand on 21.07.2025, it was resolved that unutilized forest land situated outside the acquired perimeter of BSL shall be re-surveyed, demarcated, and resumed/handed over back to the Forest Department. It was further mandated that **the entire expenditure of the survey, demarcation, and reconciliation exercise shall be borne by Bokaro Steel Limited (SAIL)**, which was consented to by the Chairman, SAIL.

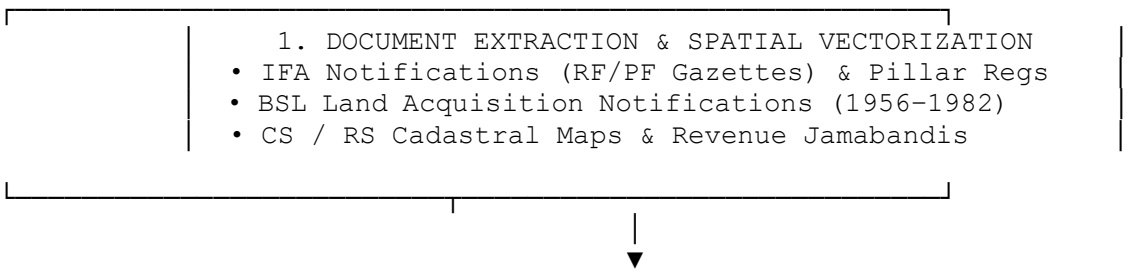
2.3 Statutory Compliance Framework

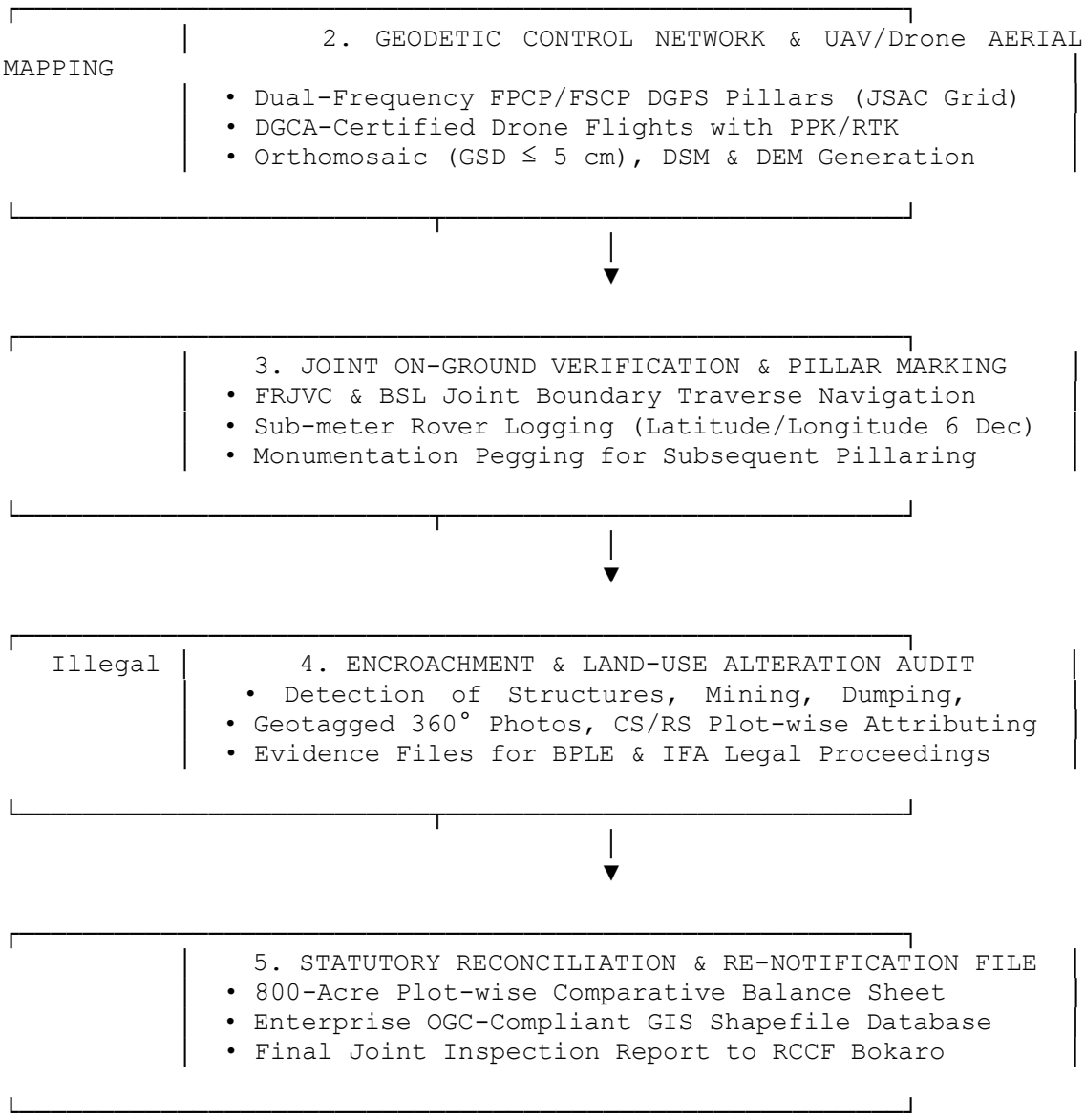
The survey, data capture, and geodatabase structuring under this RFP are governed by:

- Orders of the Hon'ble Supreme Court of India in W.P. (C) No. 202/1995 (*Lafarge matter*) requiring precision geo-referenced decision support systems for all forest lands.
- Standard Operating Procedure (SOP) approved by the State Cabinet, issued vide Memo No. 4/Yo. Bu./22-2019-3956 Va/Pa/Ranchi dated 08.10.2024 by the Department of Forest, Environment & Climate Change, Jharkhand.
- The Indian Forest Act, 1927, the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980, and the Bihar/Jharkhand Public Land Encroachment (BPLE) Act, 1956.

SECTION 3: DETAILED SCOPE OF WORK & TECHNICAL SPECIFICATIONS

The selected Technical Agency shall provide comprehensive, turnkey technical services to the Bokaro Forest Division and the Joint Forest-BSL Committee.





3.1 Task 1: Archival Record Collection, Scanning & Cadastral Vectorization

1. **Forest Records:** Collate original Indian Forest Act notifications, reserve/protected forest demarcation gazettes, Forest Pillar Registers, and Working Plan compartment maps from the Bokaro Forest Division.
2. **BSL Acquisition Records:** Procure certified acquisition plans, boundary coordinates, and notifications across 1956, 1959, 1964, 1967, 1973–1977, and 1982 from the Land Administration Cell of BSL and District Record Room.
3. **Revenue Maps:** Procure original Cadastral Survey (CS) and Revisional Survey (RS) 16-inch-to-the-mile revenue maps covering the designated Mauzas (Sijua, Godabali, Tantri, Khuntri, Mango (Part), Kenduadih, Satanpur, Tetulia) and any other villages that may be necessary as per field necessities of surveying unutilised Forest land.

4. **Vector Digitization:** Scan at ≥ 400 DPI optical resolution, rectify, mosaic, and vectorize all village maps. Build topology-clean Cadastral Map Vectors (CMV) and Management Map Vectors (MMV), linking every polygon to Plot Number, Khata, Thana Number, recorded tenant/BSL title, and classification.

3.2 Task 2: Geodetic Control Network & Drone-Based Photogrammetric Survey

1. **Primary Control:** Establish Forest Primary Control Points (FPCP) and Forest Secondary Control Points (FSCP) across the target forest tracts tied to Survey of India (SOI) Great Trigonometrical Survey (GTS) pillars or JSAC reference benchmarks.
2. **Observation Baseline:** Continuous observation using geodetic dual-frequency Multi-Constellation GNSS/GPS receivers for a minimum duration of 4 hours for FPCP and 1 hour for FSCP.
3. **UAV Aerial Flights:**
    - Deploy DGCA-certified, commercial survey-grade mapping drones (fixed-wing or heavy-lift multi-rotor) equipped with calibrated RGB sensors ≥ 24 MP, mechanical shutter).
    - All flight paths shall feature a minimum of 75% forward overlap and 70% lateral (side) overlap.
    - Provide Ground Control Points (GCPs) surveyed with static DGPS at a density not less than 1 GCP per 15 hectares to guarantee rigorous aerial triangulation.
    - Flight altitude must be calibrated to ensure a Ground Sampling Distance (GSD) of ≤ **5 cm { cm per pixel or sharper}**.
4. **Photogrammetric Output:** Compute dense 3D point clouds, Digital Surface Models (DSM), bare-earth Digital Elevation Models (DEM), and seamless ortho-rectified aerial mosaics (True Orthomosaic). Horizontal spatial accuracy must be < 10 cm RMSE, and vertical accuracy < 15 cm RMSE.

3.3 Task 3: Joint On-Ground Demarcation & Boundary Pillar Coordinate Fixation

1. **Overlay Analysis:** Overlay the vectorized Forest Notifications, BSL Acquired Boundary, Revenue CS/RS Vectors, and Drone Orthomosaics within a unified GIS environment (WGS 84 / UTM Zone 45N).
2. **FRJVC Field Guidance:** Deploy high-precision RTK GNSS field rovers to navigate the Joint Forest-BSL Committee along the outer peripheral boundary of the unutilized 800 acres.
3. **Point Capture:**
    - Fix every boundary change point, bend, corner, and intermediate boundary line at intervals not exceeding 50 meters, or as directed by the Joint Committee.
    - Collect static DGPS readings on each boundary pillar change point with a minimum occupation time of 15 minutes per point in differential RTK/PPK mode.
    - Coordinate precision must be recorded to a minimum of **6 decimal places** in degrees for Latitude and Longitude, with ellipsoidal height and elevation above Mean Sea Level (MSL) recorded in centimeters.
    - Capture raw GNSS observations in universal native **RINEX format (or any other compatible format agreed upon by DFO Bokaro)** with all error charts, PDOP logs ≤ 2.5, and dilution metrics.
4. **Physical Monumentation Marking:** Plant concrete-anchored wooden/iron survey pegs and mark bright fluorescent paint points at all approved boundary locations to directly facilitate Pillar Construction.

3.4 Task 4 : Installation of Concrete Forest Boundary Pillar

3.5 Task 5: Detailed Encroachment & Land-Use Alteration Inventory

If any encroachment, unauthorized possession, illegal construction, or alteration in land-use is observed during the survey, it must be thoroughly recorded and documented for legal action:

1. Identify all unauthorized structures, settlements, boundary walls, industrial dumping, brick kilns, agricultural conversions, or mining activities within the 800-acre forest land.
2. Map the boundary polygon of each encroached patch using RTK DGPS, recording its exact area in square meters and acres.
3. Compile an **Encroachment Register** containing:
    - Revenue Mauza, CS Plot No., RS Plot No., and Khata No.
    - Category of violation (Residential, Commercial, Industrial Dumps, Agriculture, Others).
    - Identity/name of unauthorized occupant, firm, or entity (where ascertainable on-ground).
    - Minimum four (4) geotagged, timestamped digital panoramic photographs taken from cardinal directions.

3.6 Task 6: Statutory Land Reconciliation & Boundary Schedules

1. Prepare a definitive **Land Reconciliation Statement** for the ~800 acres across Mauza Sijua, Godabali, Tantri, Khuntri, Mango (Part), Kenduadih, Satanpur,Tetulia, any other villages that may be necessary as per field necessities of surveying unutilised Forest land,itemizing:
    - Area originally notified as Reserved/Protected Forest under Indian Forest Act.
    - Area covered under BSL acquisition notifications (1956 to 1982).
    - Area enclosed within the active BSL operational boundary wall (Garga River–Damodar River–Railway Line).
    - Area lying outside active BSL operations and physically available for resumption.
    - Area under encroachment or disputed occupancy.
    - Net unencumbered forest area to be formally transferred.

SECTION 4: DELIVERABLES, WORK SCHEDULE & PENALTY

4.1 Mandatory Project Deliverables

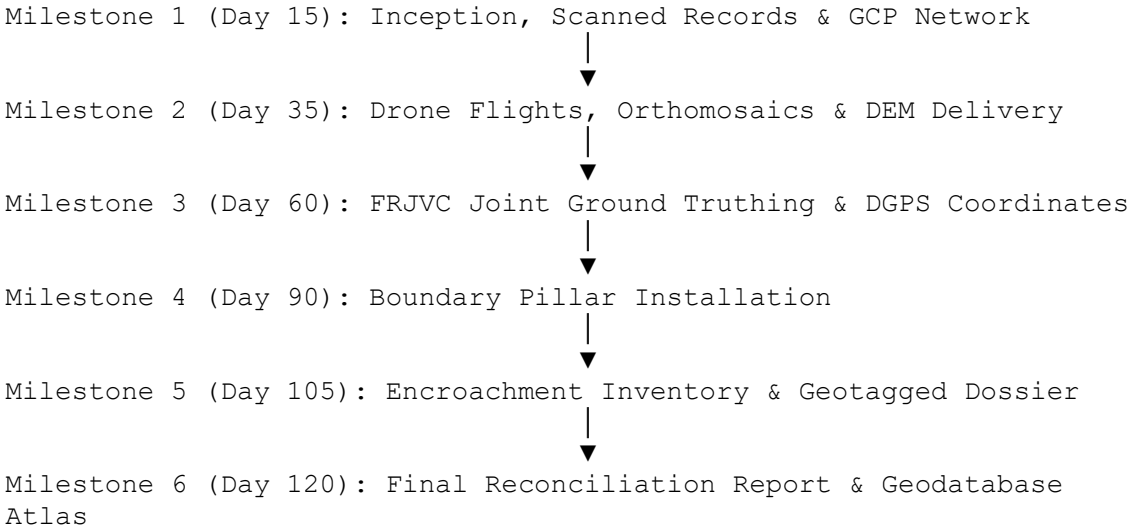
All spatial deliverables shall conform to OGC standards, structured on standard geo-database schemas:

1. **D1: Inception Report & Vector Repository (Day 15):** Complete compilation of scanned and rectified CS/RS revenue maps, historical BSL notifications, forest gazettes, and established Ground Control Network (FPCP/FSCP) validation report.
2. **D2: UAV Aerial Orthomosaics & Digital Elevation Models (Day 35):** Seamless ortho-rectified imagery (GSD ≤ 5 cm}), DEM, and DSM data in GeoTIFF format covering the 800 acres and immediate buffer zones.
3. **D3: Verified DGPS Boundary Logs & Pillar Demarcation Schedules (Day 60):** Raw RINEX logs, post-processed coordinate sheets (8 decimal places), field survey sheets countersigned by FRJVC members, and precise coordinates for pillar erection under Tender 2.
4. **D4: Boundary Pillar Installation (Day 90)** on ground as per pegging and Jharkhand Forest Department standards.
5. **D5: Encroachment & Land-Use Alteration Dossier (Day 105):** Comprehensive plot-wise inventory of all illegal possessions, accompanied by high-resolution geotagged photographs, encroachment polygons.

6. **D6: Final Joint Land Reconciliation Report & GIS Database (Day 120):**
    - Final Comprehensive Land Reconciliation Report submitted to RCCF Bokaro.
    - Enterprise ESRI File Geodatabase / Open-Source GeoPackage containing topologically clean layers: Forest Notification, BSL Acquired Boundary, Active Wall Boundary, CS/RS Cadastral, Drone Orthomosaic, Boundary Pillars, and Encroachments.
    - 8 (Eight) Hardbound sets of Color Boundary Atlases printed on A0/A1 polyester-coated sheets at 1:2,000 scale, duly signed by Joint Committee members.
    - 3 (Three) encrypted USB solid-state drives containing all raw, intermediate, and final vector/raster datasets.

(Note – In case of any discrepancies the Cadastral Survey data will take precedence)

4.2 Implementation Schedule & Milestones



4.3 Penalty Clause & Liquidated Damages

1. **Strict Timeline:** In terms of the MoM dated 12.09.2025, the survey, pillar positioning, and reconciliation report must be finalized within **120 Calendar Days (3 Months)**. Time is the essence of this contract.
2. **Liquidated Damages:** If the agency fails to achieve project milestones within the stipulated timeframe due to reasons attributable to the agency, liquidated damages shall be levied at the rate of **0.5% (zero point five percent) of the total contract value per week of delay**, subject to a maximum cap of **5% (five percent)** of the total contract value.
3. **Persistent Default:** If delay exceeds 4 (four) weeks beyond the scheduled 90 days, the DFO Bokaro reserves the unconditional right to terminate the contract, encash the Performance Bank Guarantee, blacklist the firm from participating in future government tenders across Jharkhand for three (3) years, and execute the remaining works at the risk and cost of the defaulting agency.

SECTION 5: BIDDER ELIGIBILITY & PRE-QUALIFICATION CRITERIA

The bidder must be a single entity (Company registered under the Companies Act, 1956/2013 or LLP registered under the LLP Act, 2008). **Consortium, Joint Venture, or Sub-contracting of any type is strictly prohibited.**

5.1 Minimum Qualifying Thresholds

Sl. No.	Criterion	Mandatory Requirement	Supporting Document Required
1.	**Legal Entity**	Operating for a minimum of 5 (five) completed years in DGPS survey, Drone mapping, and GIS consultancy as on 31.03.2026.	Certificate of Incorporation / Registration, MoA/AoA, or LLP Agreement.
2.	**Financial Capacity**	Average Annual Financial Turnover of at least **Rs. 1.00 Crore** (Rupees One Crore only) purely from DGPS Survey, Drone Photogrammetry, and GIS Services during the last 3 financial years (FY 2023–24, 2024–25, and 2025–26).	Audited Balance Sheets, P&L Accounts, and CA Certificate with UDIN (Form 4).
3.	**Net Worth**	The bidder must possess a **Positive Net Worth** as on 31.03.2026.	Net Worth Certificate from Statutory Auditor with UDIN.
4.	**Domain Experience**	Must have successfully surveyed a cumulative area of **not less than 2,000 Hectares** of forest land / government land using High-Accuracy DGPS / Drone Photogrammetry for Forest Departments, Government Agencies, or PSUs in India during the last 7 years.	Work Orders along with Client-signed Completion Certificates (Form 5).
5.	**Equipment Ownership**	Must possess direct ownership of at least **5 (Five) sets of Multi-Constellation RTK DGPS / GNSS Receivers** (with data collectors) AND at least **2 (Two) Survey-Grade Drones (UAVs)** equipped with RTK/PPK payload and valid DGCA Type Certificate and UIN.	Invoices, OEM Serial Numbers, Insurance certificates, and DGCA UIN registration records (Form 8).
6.	**Technical Personnel**	Minimum **10 (Ten) qualified technical personnel** (DGPS Surveyors, Drone Pilots with DGCA Remote Pilot Licenses, Photogrammetry Specialists, and GIS Analysts) on regular payroll for at least 12 months.	EPF Electronic Challan Receipts (ECR), employee lists with qualifications and PF numbers (Form 7).
7.	**Quality Accreditation**	Valid **ISO 9001:2015** certification for Geoinformatics, DGPS Survey, and UAV Photogrammetry services.	Valid ISO Certificate copy.
8.	**Statutory Filings**	Valid PAN, GST Registration, EPFO Registration, and ESIC Registration.	Copies of PAN, GST, EPF, ESIC, and latest filed returns (GSTR-3B / ITR).
9.	**Non-Blacklisting**	The firm must not have been debarred, blacklisted, or penalized by any Central/State Government, Forest Department, or PSU as on the bid due date.	Notarized Affidavit on non-judicial stamp paper of Rs. 100/- (Form 10).

SECTION 6: INSTRUCTIONS TO BIDDERS & SUBMISSION PROCEDURE

6.1 Preparation & Sealing of Bids

1. Bids must be submitted in a **Two-Cover System** enclosed in a single large outer envelope:
    - **Envelope 1 (Cover-A: Technical Bid):** Shall contain original DD for Tender Cost (Rs. 5,000/-), original EMD (Rs. 1,50,000/-), signed copy of the RFP document with all addenda, and Forms 1 through 10 with all evidentiary documents. The envelope must be sealed and super-scribed: "COVER-A: TECHNICAL BID - RFP NO. 06/2026-27"
    - **Envelope 2 (Cover-B: Financial Bid):** Shall contain only the completed and sealed **Form F-1 (Financial Proposal Submission Form)**. The envelope must be sealed and super-scribed: "COVER-B: FINANCIAL BID-RFP NO. 06/2026-27"
    - **Outer Master Envelope:** Both sealed envelopes (Cover-A and Cover-B) must be placed inside a master envelope, sealed securely, and super-scribed: “Selection of Technical Agency for Drone Based High Accuracy Survey/DGPS Survey for 800 acres of land in Bokaro District” RFP NO. 06/2026-27" "DO NOT OPEN BEFORE 05.12.2026 AT 11:30 HRS"
2. The outer envelope must clearly state the full Name, Registered Office Address, Contact Number, and Email ID of the Bidder.
3. The bid shall be addressed to: **The Divisional Forest Officer, Bokaro Forest Division, Van Bhawan, Chas, Bokaro Steel City, Bokaro, Jharkhand, PIN: 827001.**
4. Mode of Delivery: Physical submission by Registered Post, Speed Post, Courier, or dropped directly into the Tender Box at the DFO Office, Bokaro. Late submissions shall be rejected.

SECTION 7: BID EVALUATION METHODOLOGY & AWARD OF WORK

A Tender Evaluation Committee constituted by the Competent Authority shall evaluate the bids using a **Quality and Cost Based Selection (QCBS) system (70% Technical : 30% Financial)**.

7.1 Stage 1: Scrutiny of Pre-Qualification Criteria

Cover-A will be opened on 05.12.2026 at 11:30 Hrs. Bidders fulfilling all mandatory eligibility thresholds in Section 5 shall qualify for Technical Evaluation.

7.2 Stage 2: Technical Evaluation Matrix (Total Marks: 100)

Sl. No.	Evaluation Parameter	Max Score	Marking Basis
1.	Quality Accreditation	5	• Valid ISO 9001:2015: 5 Marks • Non-certified: 0 Marks
2.	JSAC / State Remote Sensing Center Empanelment	5	• Empaneled with JSAC / State RS Centre: 5 Marks • Not Empaneled: 0 Marks
3.	Financial Soundness (Turnover in Survey/GIS)	15	• Average Turnover ≥ {Rs. 3.00 Crores}: 15 Marks • Rs. 1.00 Crore to 3.00 Crores: 10 Marks • Below Rs. 1.00 Crore: Disqualified

Sl. No.	Evaluation Parameter	Max Score	Marking Basis
4.	**Cumulative Area of Forest / Govt Land Surveyed**	**25**	• Area > 10,000 Hectares: 25 Marks • 5,000 to 10,000 Hectares: 20 Marks • 2,000 to 5,000 Hectares: 15 Marks • Below 2,000 Hectares: Disqualified
5.	**Technical Staff Strength on Payroll**	**10**	• More than 20 Qualified Surveyors/GIS staff: 10 Marks • 10 to 20 Qualified Surveyors/GIS staff: 7 Marks • Less than 10: Disqualified
6.	**Hardware & Equipment Fleet Ownership**	**10**	• ≥ 10 DGPS Sets} + 3 Survey Drones: 10 Marks • 5 to 9 DGPS Sets + 2 Survey Drones: 7 Marks • Below minimum: Disqualified
7.	**Operational Infrastructure in Jharkhand**	**5**	• Fully functional registered/branch office in Jharkhand: 5 Marks • Outside Jharkhand: 0 Marks
8.	**Technical Presentation & Execution Methodology**	**25**	Presentation before Tender Committee evaluating: • Drone flight planning & GSD optimization (5 Marks) • Handling complex BSL boundary & historical notifications (5 Marks) • Encroachment mapping & legal evidence generation (5 Marks) • Quality Control protocols and 90-day time-tracking mechanism (10 Marks)
Total		**100**	**Minimum Technical Qualifying Score (ST) = 60 Marks**

*Bidders securing an aggregate technical score (ST) of **60 Marks or higher** shall be declared Technically Qualified.*

7.3 Stage 3: Financial Evaluation & Combined QCBS Scoring

1. Cover-B (Financial Bid) of technically qualified bidders will be opened publicly on 05.12.2026 at 15:30 Hrs.
2. Financial bids must quote a firm, lump-sum rate for the entire scope of work covering the ~800 acres and rate for installation of boundary pillars.
3. Evaluation will be based on the Total Lump-Sum Quote excluding GST.
4. The lowest responsive financial quote (Fm) for whole exercise excluding pillaring will receive a Financial Score (SF-1) of **30 marks**. The financial scores of all other responsive bidders will be calculated as: SF-1 = (Fm / F) x 30. *Where Fm is the lowest evaluated price, and F is the price quoted by the bidder under review.*
5. The lowest responsive financial quote (Fm) for pillaring exercise will receive a Financial Score (SF-2) of **10 marks**. The financial scores of all other responsive bidders will be calculated as: SF-2 = (Fm / F) x 10. *Where Fm is the lowest evaluated price, and F is the price quoted by the bidder under review.*
6. **Composite Score (H):** H = (ST x 0.60) + (SF-1 x 0.30) + (SF-2 x 0.10) *The bidder securing the highest composite score (H1) will be selected for award of contract.*

SECTION 8: FINANCIAL TERMS, PERFORMANCE SECURITY & CONTRACTUAL COVENANTS

8.1 Source of Funds

All project expenditures shall be funded by Bokaro Steel Limited (SAIL) pursuant to the decisions of the Chief Secretary dated 21.07.2025 and the Joint MoM dated 12.09.2025. Disbursals shall be executed through the DFO, Bokaro Forest Division upon verification and certification of milestones.

8.2 Staggered Payment Schedule

Milestone	Activity & Deliverable Completed	Disbursal Percentage
Milestone 1	Acceptance of Inception Report, collection of CS/RS maps, BSL acquisition notifications, and geodetic establishment of the FPCP/FSCP Ground Control Network.	**10%** of Section 10 (Item No. 1)
Milestone 2	Completion of UAV photogrammetric flights, processing of ortho-mosaics (≤ 5 cm GSD), DSM/DEM, and vectorization of boundary layers.	**30%** of Section 10 (Item No. 1)
Milestone 3	Completion of joint on-ground verification with FRJVC and BSL team, logging of all RTK DGPS change points, and submission of RINEX logs.	**30%** of Section 10 (Item No. 1)
Milestone 5	Acceptance of the Encroachment Dossier, geotagged evidence log	**15%** of Section 10 (Item No. 1)
Milestone 6	Final acceptance of Enterprise Geodatabase, printed Boundary Atlases (8 Sets), Joint Land Reconciliation Report, and approval by RCCF Bokaro.	**15%** of Section 10 (Item No. 1)
Milestone 4	Installation of RCC Boundary Pillars	**As per achievement and as per** Section 10 (Item No. 2)

8.3 Performance Bank Guarantee (PBG)

Within 15 (fifteen) days of receiving the Letter of Award (LoA), the successful bidder shall furnish a Performance Bank Guarantee equal to **10% (ten percent) of the total contract value** issued by any Nationalized or Scheduled Commercial Bank, valid for 12 months.

8.4 Intellectual Property & Confidentiality

All aerial photogrammetry datasets, drone raw imagery, DGPS RINEX files, spatial layers, maps, cadastral vector databases, and reconciliation reports generated under this contract are the exclusive intellectual property of the Department of Forest, Environment & Climate Change, Government of Jharkhand. The agency shall not disclose, duplicate, transfer, or publish any data without prior written authorization from the DFO, Bokaro.

8.5 Dispute Resolution & Arbitration

All disputes arising out of the interpretation, execution, or breach of this agreement shall first be referred to mutual conciliation before the Regional Chief Conservator of Forests, Bokaro. If unresolved, disputes shall be referred to the sole arbitration of an Arbitrator appointed by the Principal Chief Conservator of Forests (HoFF), Jharkhand, governed under the Arbitration and Conciliation Act, 1996. The venue of arbitration shall be Ranchi/Bokaro.

8.6 Legal Jurisdiction

Courts having civil jurisdiction at Bokaro, Jharkhand, shall have exclusive jurisdiction over all legal disputes arising under this tender.

SECTION 9: BID SUBMISSION PROFORMA & STANDARD FORMS

FORM 1: TENDER SUBMISSION COVERING LETTER

(To be printed on Bidder's Official Letterhead)

Date: __.__.2026 **Ref. No.:** _____

To,

The Divisional Forest Officer,
Bokaro Forest Division,
Van Bhawan, Chas,
Bokaro Steel City, Bokaro,
Jharkhand – 827001.

Sub: "Selection of Technical Agency for Drone Based High Accuracy Survey/DGPS Survey for 800 acres of land in Bokaro District" RFP No. 06//2026–27

Sir,

1. Having examined the complete Request for Proposal (RFP) document, including all Addenda/Corrigenda, we, the undersigned, offer to execute the entire turnkey assignment in full conformity with the specified terms and conditions.
2. We enclose herewith the required Tender Fee of **Rs. 5,000/-** via Demand Draft No. _____, dated __.__.2026, drawn on _____ Bank.
3. We enclose herewith the required Bid Security (EMD) of **Rs. 1,50,000/-** via Bank Guarantee / Demand Draft No. _____, dated __.__.2026, issued by _____ Bank, valid for 180 days.
4. We confirm that our proposal is unconditional, that our bidding firm meets all eligibility and technical criteria in full, and that we have not been blacklisted or debarred by any government department or authority.
5. We acknowledge that the Forest Department is not bound to accept the lowest or any bid received.

Yours faithfully,
(Authorized Signatory)

Name: _____

Designation: _____

Name of Agency: _____

Seal / Stamp:

FORM 2: POWER OF ATTORNEY / LETTER OF AUTHORIZATION

(To be printed on Bidder's Official Letterhead / Non-Judicial Stamp Paper)

We, M/s. _____ *(Name of the Company/LLP)*, having our registered office at _____, hereby authorize **Mr./Ms. _____**, *(Designation)*, whose specimen signature is attested below, to act as our true and lawful Attorney to represent the organization, sign, execute, and submit all bid documents, clarify technical issues, and bind the firm in all contractual obligations concerning RFP No. 06/2026–27.

All acts, deeds, and submissions executed by our said representative shall be deemed lawful and binding on the organization.

Specimen Signature of Authorized Representative:

_____

Countersigned by:

(Managing Director / Partner / Head of Organization)

Name: _____

Seal of Company:

FORM 3: BIDDER PROFILE & GENERAL INFORMATION

Sl. No.	Field	Details to be Entered by Bidder
1.	Legal Name of Bidding Organization	
2.	Corporate Status (Company / LLP)	
3.	Date and Year of Incorporation / Establishment	
4.	Registered Office Address	
5.	Address of Operational Office in Jharkhand	
6.	Contact Telephone / Mobile Numbers	
7.	Official Email ID & Website URL	
8.	Permanent Account Number (PAN)	
9.	Goods and Services Tax Registration Number (GSTIN)	
10.	EPF Registration Code & ESIC Registration Number	
11.	Directorate General of Civil Aviation (DGCA) Drone RPAS Registration Status	
12.	Name, Designation & Phone of Authorized Representative	

(Provide certified copies of PAN, GSTIN, EPF, ESIC, and Incorporation Certificates)

FORM 4: FINANCIAL TURNOVER & NET WORTH STATEMENT

(To be certified by a practicing Chartered Accountant with UDIN)

This is to certify that we have verified the books of accounts of **M/s. _____**, having its registered office at _____, and confirm the following financial performance:

Financial Year	Total Gross Turnover (in INR)	Specific Turnover from DGPS Survey, Drone Photogrammetry & GIS (in INR)	Net Worth (in INR)
2023–24			
2024–25			
2025–26			
Average (3 Yrs)			—

*It is further certified that the Net Worth of the organization as on 31.03.2026 is **Positive**.*

CA Firm Name: _____ Chartered Accountant Signature & Stamp: _____ Membership Number: _____ Firm Registration Number (FRN): _____ UDIN (Mandatory): _____

FORM 5: SIMILAR WORK EXPERIENCE CREDENTIALS

(Details of DGPS / Drone Forest & Land Demarcation Projects executed in the last 7 years)

Sl. No.	Client Organization / State Forest Dept	Project Name & Description of Works	Total Area Surveyed (in Hectares)	Work Order No. & Date	Completion Date	Total Contract Value (Rs.)
1.						
2.						
3.						
4.						

(Attach copies of Work Orders and Client Completion / Performance Certificates signed by an officer not below the rank of DFO / Executive Engineer / GM)

FORM 6: KEY TECHNICAL PERSONNEL ROSTER

(To be supported by EPF Challan filings & CVs)

Sl. No.	Name of Professional	Proposed Role (DGPS Lead / Drone Pilot / GIS Specialist)	Academic Qualification	Years of Experience	EPF UAN Number
1.		Project Team Leader	M.Tech / M.Sc Remote Sensing		
2.		Senior DGPS Geodesist	B.E. / Diploma Civil / Geomatics		
3.		DGCA Certified Drone Pilot	DGCA Remote Pilot License Holder		
4.		Cadastral Revenue Expert	Ex-Amin / Revenue Specialist		
5.		Senior GIS Database Specialist	M.Sc / MCA GIS Analyst		
6–10.		Field DGPS Surveyors (5 Nos)	Diploma / ITI Surveyors		

FORM 7: SURVEY HARDWARE & INFRASTRUCTURE OWNERSHIP

(Minimum 5 DGPS Sets and 2 Survey-Grade Drones)

Sl. No.	Equipment Category	Make & Model	RTK / Constellation Capabilities	Serial Number	OEM Registration ID	DGCA UIN (For Drones)
1.	DGPS Receiver Set 1		Dual Freq GNSS (NavIC/GPS/GLONASS)			—
2.	DGPS Receiver Set 2		Dual Freq GNSS			—
3.	DGPS Receiver Set 3		Dual Freq GNSS			—
4.	DGPS Receiver Set 4		Dual Freq GNSS			—
5.	DGPS Receiver Set 5		Dual Freq GNSS			—
6.	Survey Drone (UAV) 1		PPK/RTK Mechanical Shutter			
7.	Survey Drone (UAV) 2		PPK/RTK Mechanical Shutter			

(Attach purchase invoices, calibration certificates, OEM registration printouts, and DGCA UIN registration cards)

FORM 8: TECHNICAL APPROACH, METHODOLOGY & WORK PLAN

(The bidder shall provide a concise, maximum 5-page narrative detailing):

1. Step-by-step methodology for executing the 800-acre survey across Sijua, Godabali, Tantri, Khuntri, Mango, Kenduadih, Satanpur, and Tetulia Mauzas.
2. UAV flight parameters, forward/lateral overlaps, Ground Control Point (GCP) networking, and GSD optimization to achieve ≤ 5 cm resolution.
3. Field protocol for navigating the Joint Forest-BSL Team and logging RINEX observations.
4. Procedure for detecting, documenting, and preparing legal evidence portfolios for encroachments and unauthorized land use.
5. Detailed 90-day milestone Gantt chart showing resource deployment.

FORM 9: NOTARIZED NON-BLACKLISTING & LITIGATION AFFIDAVIT

(On Rs. 100/- Non-Judicial Stamp Paper, duly Notarized)

I, _____, S/o _____, aged about ____ years, residing at _____, in the capacity of _____ *(Designation)* of **M/s. _____**, do hereby solemnly affirm and state as under:

1. That the bidder organization has never been debarred, blacklisted, suspended, or penalized by the Ministry of Environment, Forest & Climate Change (MoEFCC), the Jharkhand Forest Department, or any other Central/State Department or PSU.
2. That there are no ongoing criminal cases, insolvency proceedings, or contract abandonment actions against our directors, partners, or firm.
3. That all statements, documents, and technical credentials submitted under RFP No. 06/2026–27 are genuine, authentic, and verifiable. If any document is found fraudulent, the department shall forfeit our EMD and proceed with penal prosecution.

Deponent Verification: Verified at Bokaro on this __ day of _____ 2026 that the contents of this affidavit are true and correct to the best of my knowledge. *(Notary Public Stamp & Seal)*

FORM 10: CHECKLIST OF DOCUMENTS IN TECHNICAL BID (COVER-A)

Sl. No.	Mandatory Document	Attached (Yes/No)	Page Reference No.
1.	Cost of Tender Document (DD of Rs. 5,000/-)		
2.	Earnest Money Deposit (EMD of Rs. 1,50,000/-)		
3.	Form 1: Signed Tender Submission Letter		
4.	Form 2: Power of Attorney / Authorization		
5.	Form 3: General Bidder Information & Legal Registration		
6.	Form 4: CA Turnover & Positive Net Worth Certificate with UDIN		
7.	Form 5: Work Orders & Completion Certificates > 2,000 Ha		
8.	Form 6: Technical Personnel List & EPF Challan copies		
9.	Form 7: Ownership Proof of 5 DGPS + 2 Drones with DGCA UIN		
10.	Form 8: Approach, Methodology & Work Plan		
11.	Form 9: Notarized Affidavit of Non-Blacklisting		
12.	Valid ISO 9001:2015 Certificate		
13.	PAN, GST, EPF, and ESIC Registration Certificates		
14.	Entire RFP document signed & sealed on every page by Bidder		

SECTION 10: PRESCRIBED FINANCIAL BID FORMAT (COVER-B)

FORM F-1: FINANCIAL PROPOSAL SUBMISSION FORM

(To be sealed strictly in Envelope Cover-B. Any mention of price in the Technical Envelope shall cause summary disqualification)

Tender Reference: RFP No. 06/2026–27 **Name of Work:** "Selection of Technical Agency for Drone Based High Accuracy Survey/DGPS Survey for 800 acres of land in Bokaro District"

To,
The Divisional Forest Officer,
Bokaro Forest Division,
Van Bhawan, Chas, Bokaro Steel City,
Bokaro, Jharkhand – 827001.

Sir,

Having examined the detailed scope of work, technical specifications, and site conditions across Mauza Sijua, Godabali, Tantri, Khuntri, Mango (Part), Kenduadih, Satanpur,Tetulia and others we hereby quote our firm, lump-sum price for the turnkey execution of the assignment as follows:

Item No.	Description of Scope of Work	Lump-Sum Amount in Figures (INR)	Lump-Sum Amount in Words (INR)
1.	**Total Lump-Sum Consultancy Fee** for the end-to-end execution of secondary archival collation, UAV photogrammetry (GSD ≤ 5 cm), DGPS control network, joint on-ground truthing with FRJVC/BSL, logging of pillar change-point coordinates, comprehensive encroachment inventory, preparation of 800-acre land reconciliation matrices, draft re-notification schedules, and supply of 8 sets of Hardbound Atlases & Enterprise Geodatabase as specified in the RFP.	Rs. _____	Rupees _____
2.	**Installation cost of RCC Pillars per pillar**	Rs. _____	Rupees _____
3.	**Goods and Services Tax (GST)** payable at prevailing statutory rate and as per bill.		

Commercial Covenants & Declarations:

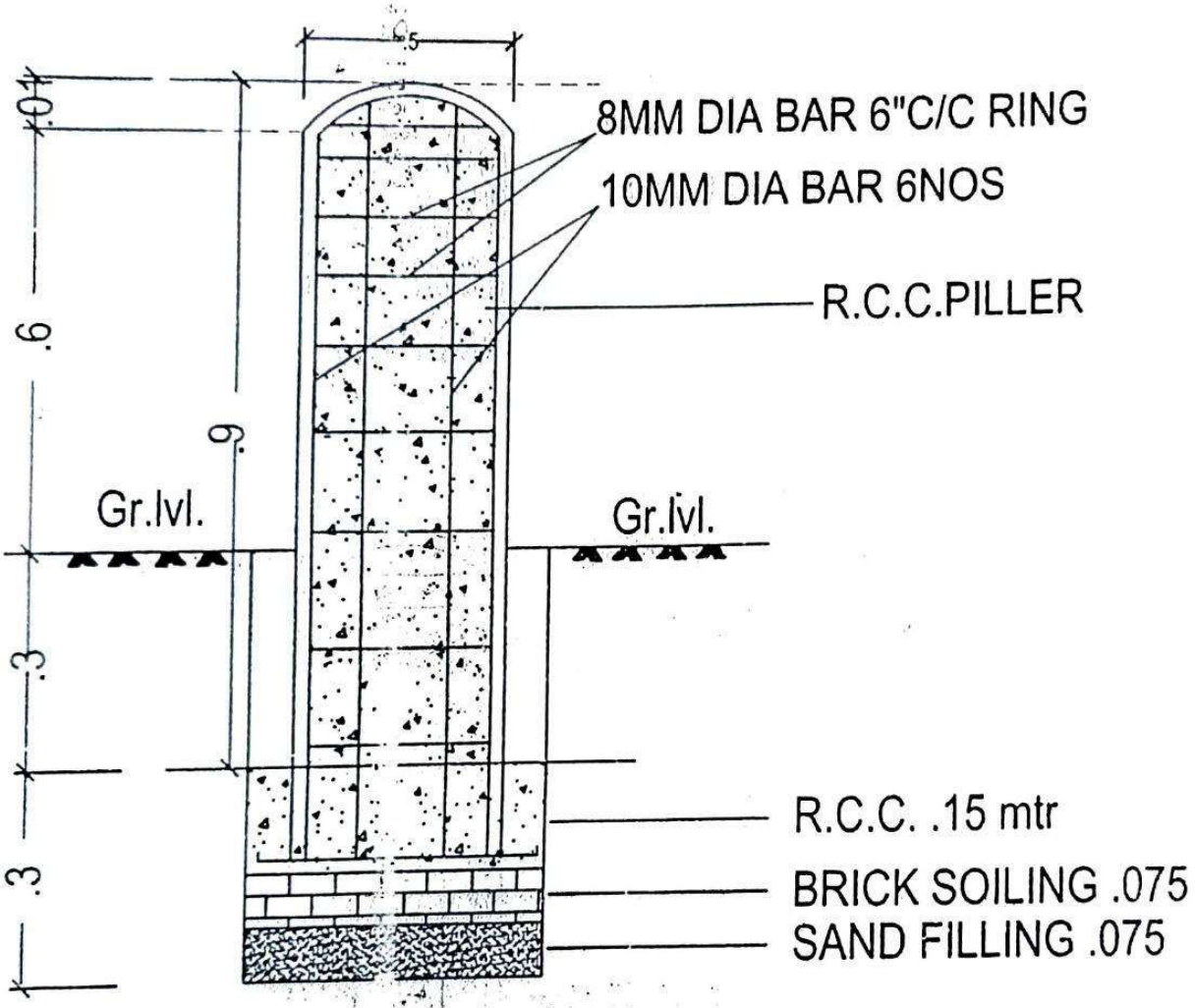
1. We understand that financial bid evaluation shall be conducted strictly on the **Total Lump-Sum Consultancy Fee (Item No. 1)**, exclusive of GST.
2. The quoted price is firm, fixed, and inclusive of all costs, including personnel salaries, drone operations, DGCA clearance fees, DGPS instrumentation, travel, boarding, lodging, map procurement, survey pegging, printing of atlases, and software processing. No extra claim, escalation, or out-of-pocket allowance will be admissible.
3. In case of any discrepancy between the price quoted in figures and words, the amount written in words shall govern.

Authorized Signatory:

Signature: _____
Name: _____
Designation: _____
Company Name: _____

Official Stamp / Seal:

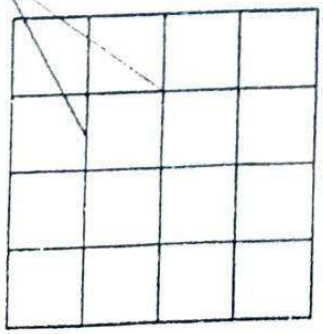
[END OF REQUEST FOR PROPOSAL DOCUMENT]

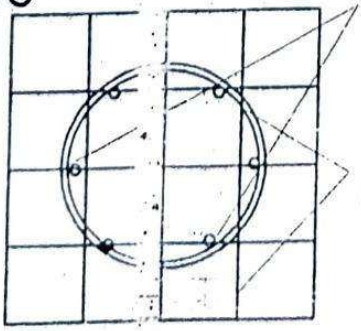


CROSS SECTION OF PILLER

UNIT IN METER

8MM DIA RING 6"C/C





DETAIL OF JALLI

PLAN OF PILLER

DESIGNED BY-

ARCHITECT GROUP

HARIHAR SINGH ROAD,MORADABAD

Mob. No- 9430301756