

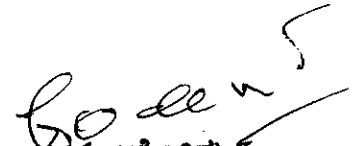
ಕರ್ನಾಟಕ ವಿಧಾನ ಪರಿಷತ್ತು

1	ಚುಕ್ಕೆ ಗುರುತಿಲ್ಲದ ಪ್ರಶ್ನೆ ಸಂಖ್ಯೆ	240
2	ಸದಸ್ಯರ ಹೆಸರು	ಶ್ರೀ ಕೆ.ಎ.ತಿಪ್ಪೇಸ್ವಾಮಿ (ನಾಮನಿರ್ದೇಶನ ಹೊಂದಿದವರು)
3	ಉತ್ತರಿಸಬೇಕಾದ ದಿನಾಂಕ	15.02.2023
4	ಉತ್ತರಿಸುವ ಸಚಿವರು	ಕಂದಾಯ ಸಚಿವರು

ಕ್ರ. ಸಂ	ಪ್ರಶ್ನೆ	ಉತ್ತರ					
ಅ)	ರಾಜ್ಯ ಸರ್ಕಾರ ಕಂದಾಯ ಇಲಾಖೆಯಿಂದ ಭೂಸರ್ವೆಯನ್ನು ಡ್ರೋನ್ ಮುಖೇನ ಕೈಗೊಳ್ಳಲು ಟೆಂಡರ್ ಆಹ್ವಾನಿಸಿದೆಯೇ?	ಆಹ್ವಾನಿಸಲಾಗಿರುತ್ತದೆ.					
ಆ)	ಹಾಗಿದ್ದಲ್ಲಿ ಈ ಟೆಂಡರ್‌ನಲ್ಲಿ ಅಡಕವಾಗಿರುವ ನಿಬಂಧನೆಗಳು ಮತ್ತು ಕಾರ್ಯ ವಿಧಾನಗಳು ಯಾವುವು ಮತ್ತು ಡ್ರೋನ್ ಸರ್ವೆ ಮುಖೇನ ಸರ್ವೆಕಾರ್ಯ ಮುಗಿಸಲು ಅಂದಾಜಿಸಿರುವ ಮೊತ್ತವೆಷ್ಟು?	Date of tender	E procur e ment Tender No	LOT	District in Lot	Area of Lot in Sq.km	Remarks
		07.04.2022	SSLR/STR/17016/9/2022,	LOT-1	6 Districts (Bidar, Bellary, Yadgir, Kalburgi, Chikkaballapur&Kolar)	34,378	Tender notification attached in CD
				LOT-2	7Districts (Mysore, Shivamogga , Haveri. Bagalkote, Dharwad, Udupi& D.Kannada)	39,429	
		23-09-2022	SSSLR /STR/ORI:11/2022-23 (Call-2)	LOT-1	3 Districts (Bengaluru Urban, Bangaluru Rural, Mandya)	8,610	Tender notification attached in CD
				LOT-2	2 Districts (Kolar ,Chikka ballapur)	8,493	
				LOT-3	2 Districts (Bellary; Vijaya nagar)	9,896	
				LOT-4	2 Districts (Davangere, Chitradurga)	12,900	
				LOT-5	2 Districts (Gadag, Koppal)	11,845	
				LOT-6	4 Districts ((Kodagu,	26,902	

				Chamaraj nagar, Chikkamagalur, Vijayapura)		
			LOT-7	4 Districts (-Yadgir, Bidar, Raichur, Kalburgi)	30,073	
	17-12-2022	SSLR/STR/ORI:12/2022-23	LOT-1A	4 Districts (Bagalkote, Dharwad, Udupi, D.Kannada)	19,275	Tender notification attached in CD
			LOT-1B	3 Districts (Mysore, Shimoga, Haveri)	20,154	
	03-01-2023	SSLR/DAAS/ORI/L OT2A/12/2022-23	LOT-2A	3 Districts (Bengaluru Urban, Bengaluru Rural, Mandya)	8,610	Tender notification attached in CD
ಈ ಯೋಜನೆಗೆ ರೂ. 363.00 ಕೋಟಿ ಅಂದಾಜು ವೆಚ್ಚಕ್ಕೆ ಸರ್ಕಾರದಿಂದ ಅನುಮೋದನೆ ನೀಡಲಾಗಿರುತ್ತದೆ.						
ಇ)	ಡ್ರೋನ್ ಮುಖೇನ ಸರ್ವೆ ಕೈಗೊಳ್ಳುವ ಸಂಸ್ಥೆಗಳು ಜಮೀನಿನ ರಿ-ಸರ್ವೆ ಮತ್ತು ಸೆಟ್ಲೆಮೆಂಟ್ ರೀತಿಯಲ್ಲಿ ಕಂದಾಯ ಮತ್ತು ಸರ್ವೆ ಇಲಾಖೆಯ ದಾಖಲೆಗಳಲ್ಲಿ ಸರ್ವೆಗೆ ಒಳಪಟ್ಟ ಜಮೀನಿನ ವಿವರಗಳನ್ನು ಇಂಡೀಕರಣ ಮಾಡಿ ದಾಖಲೆಗಳನ್ನು ವ್ಯವಸ್ಥಿತ ರೀತಿಯಲ್ಲಿ ಇಡಲು ನಿಬಂಧನೆ ವಿಧಿಸಲಾಗಿದೆ ಯೇ: (ಹಾಗಿದ್ದಲ್ಲಿ ಪೂರ್ಣ ಮಾಹಿತಿ ನೀಡುವುದು)		ಸರ್ಕಾರದ ಅಧಿಸೂಚನೆ ಸಂಖ್ಯೆ: ಆರ್‌ಡಿ 106 ಎಸ್‌ಎಸ್‌ಸಿ 2020 ದಿನಾಂಕ: 21.04.2022 ರನ್ವಯ ಕರ್ನಾಟಕ ಭೂಕಂದಾಯ ನಿಯಮಾವಳಿಗಳು 1966 ಕ್ಕೆ ಸೂಕ್ತ ತಿದ್ದುಪಡಿ ತರುವ ಮೂಲಕ ಡ್ರೋನ್ ಮುಖೇನ ಸರ್ವೆ ಕೈಗೊಳ್ಳುವ ಸಂಸ್ಥೆಗಳು ಡ್ರೋನ್ flying ಮತ್ತು ಚಿತ್ರವಟಗಳನ್ನು (ORI) ಸಿದ್ಧಪಡಿಸಿ ನೀಡಲು ನಿಬಂಧನೆಗಳನ್ನು ವಿಧಿಸಲಾಗಿದೆ. ಇನ್ನುಳಿದ ಹಂತಗಳನ್ನು ಸೆಟ್ಲೆಮೆಂಟ್ ರೀತಿಯಲ್ಲಿ ಕಂದಾಯ ಮತ್ತು ಸರ್ವೆ ಇಲಾಖೆಯ ದಾಖಲೆಗಳಲ್ಲಿ ಸರ್ವೆಗೆ ಒಳಪಟ್ಟ ಜಮೀನಿನ ವಿವರಗಳನ್ನು ಇಂಡೀಕರಣ ಮಾಡಿ ದಾಖಲೆಗಳನ್ನು ವ್ಯವಸ್ಥಿತ ರೀತಿಯಲ್ಲಿ ಸಿದ್ಧಪಡಿಸಿ ಅಂತಿಮಗೊಳಿಸುವ ಕಾರ್ಯವನ್ನು ಭೂಮಾಪನ ಇಲಾಖೆ ವತಿಯಿಂದ ಕೈಗೊಳ್ಳಲಾಗುತ್ತದೆ.			
ಈ)	ಈ ಯೋಜನೆಗೆ ಕೇಂದ್ರ ಸರ್ಕಾರದಿಂದ ದೊರೆತಿರುವ ಅನುದಾನ ಎಷ್ಟು? (ವರ್ಷಾವಾರು ಪೂರ್ಣ ಮಾಹಿತಿ ನೀಡುವುದು)		ಕೇಂದ್ರ ಸರ್ಕಾರದಿಂದ 2012-13ನೇ ಸಾಲಿನಲ್ಲಿ ರೂ. 24.51 ಕೋಟಿ ಅನುದಾನ ಬಿಡುಗಡೆಗೊಳಿಸಲಾಗಿದೆ.			

ಸಂಖ್ಯೆ: ಕಂಇ 37 ಎಸ್‌ಎಸ್‌ಸಿ 2023

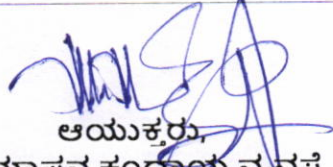

(ಆರ್.ಅಶೋಕ)
ಕಂದಾಯ ಸಚಿವರು

ವಿಧಾನ ಪರಿಷತ್

ಚುಕ್ಕೆ ಗುರುತಿಲ್ಲದ ಪ್ರಶ್ನೆ ಸಂಖ್ಯೆ	280(240)
ವಿಧಾನ ಪರಿಷತ್ ಸದಸ್ಯರ ಹೆಸರು	ಶ್ರೀ ಕೆ.ಎ.ತಿಪ್ಪೇಸ್ವಾಮಿ (ನಾಮ ನಿರ್ದೇಶನ)
ವಿಷಯ	ಭೂ ಸರ್ವೆಯನ್ನು ಡ್ರೋಣ್ ಮುಖೇನ ಕೈಗೊಳ್ಳುವ ಕುರಿತು
ಪ್ರಶ್ನೆ ದಿನಾಂಕ	03.02.2023
ಉತ್ತರಿಸಬೇಕಾದ ದಿನಾಂಕ	15.02.2023

ಕ್ರ. ಸಂ.	ಪ್ರಶ್ನೆ	ಉತ್ತರ					
ಅ)	ರಾಜ್ಯ ಸರ್ಕಾರ ಕಂದಾಯ ಇಲಾಖೆಯಿಂದ ಭೂ ಸರ್ವೆಯನ್ನು ಡ್ರೋಣ್ ಮುಖೇನ ಕೈಗೊಳ್ಳಲು ಟೆಂಡರ್ ಆಹ್ವಾನಿಸಿದೆಯೇ:	ಆಹ್ವಾನಿಸಲಾಗಿರುತ್ತದೆ.					
ಆ)	ಹಾಗಿದ್ದಲ್ಲಿ, ಈ ಟೆಂಡರ್ ನಲ್ಲಿ ಅಡಕವಾಗಿರುವ ನಿಬಂಧನೆಗಳು ಮತ್ತು ಕಾರ್ಯ ವಿಧಾನಗಳು ಯಾವುವು ಮತ್ತು ಡ್ರೋಣ್ ಸರ್ವೆ ಮುಖೇನ ಸರ್ವೆ ಕಾರ್ಯ ಮುಗಿಸಲು ಅಂದಾಜಿಸಿರುವ ಮೊತ್ತವೆಷ್ಟು:	Date of tender	E procurement Tender No	LOT	District in Lot	Area of Lot in Sq. km	Remarks
		07.04.2022	SSLR/STR/1701 6/9/2022,	LOT-1	6 Districts (Bidar, Bellary, Yadgir, Kalburgi, Chikkaballapur & Kolar)	34,378	RFP attached (page No. 01 to 127)
				LOT-2	7Districts (Mysore, Shivamogga, Haveri, Bagalkote, Dharwad, Udupi & D.Kannada)	39,429	
		23-09-2022	SSSLR/STR/ORI: 11/2022-23 (Call-2)	LOT-1	3 Districts(Bengaluru Urban, Bengaluru Rural, Mandya)	8,610	RFP attached (page No. 01 to 131)
				LOT-2	2 Districts (Kolar ,Chikkaballapur)	8,493	
				LOT-3	2 Districts (Bellary, Vijayanagar)	9,896	
				LOT-4	2 Districts(Davangere, Chitradurga)	12,900	
				LOT-5	2 Districts(Gadag, Koppal)	11,845	
				LOT-6	4 Districts(Kodagu, Chamarajnar, Chikkamagaluru, Vijayapura)	26,902	
				LOT-7	4 Districts(Yadgir, Bidar, Raichur, Kalburgi)	30,073	

		17-12-2022	SSLR/STR/ORI:1 2/2022-23	LOT-1A	4 Districts(Bagalkote, Dharwad, Udupi, D.Kannada)	19,275	RFP attached (page No. 01 to 129)
				LOT-1B	3 Districts (Mysore, Shimoga, Haveri)	20,154	
		03-01-2023	SSLR/DAAS/ORI /LOT2A/12/202 2-23	LOT-2A	3 Districts(Bengaluru Urban, Bengaluru Rural, Mandya)	8,610	RFP attached (page No. 01 to 129)
		ಈ ಯೋಜನೆಗೆ ರೂ. 363.00 ಕೋಟಿ ಅಂದಾಜು ವೆಚ್ಚಕ್ಕೆ ಸರ್ಕಾರದಿಂದ ಅನುಮೋದನೆ ನೀಡಲಾಗಿರುತ್ತದೆ.					
ಇ)	ಡ್ರೋನ್ ಮುಖೇನ ಸರ್ವೆ ಕೈಗೊಳ್ಳುವ ಸಂಸ್ಥೆಗಳು ಜಮೀನಿನ ರಿ-ಸರ್ವೆ ಮತ್ತು ಸೆಟ್ಲೆಮೆಂಟ್ ರೀತಿಯಲ್ಲಿ ಕಂದಾಯ ಮತ್ತು ಸರ್ವೆ ಇಲಾಖೆಯ ದಾಖಲೆಗಳಲ್ಲಿ ಸರ್ವೆಗೆ ಒಳಪಟ್ಟ ಜಮೀನಿನ ವಿವರಗಳನ್ನು ಇಂಡೀಕರಣ ಮಾಡಿ ದಾಖಲೆಗಳನ್ನು ವ್ಯವಸ್ಥಿತ ರೀತಿಯಲ್ಲಿ ಇಡಲು ನಿಬಂಧನೆ ವಿಧಿಸಲಾಗಿದೆಯೇ: (ಹಾಗಿದ್ದಲ್ಲಿ ಪೂರ್ಣ ಮಾಹಿತಿ ನೀಡುವುದು)	ಕರ್ನಾಟಕ ಭೂ ಕಂದಾಯ ಅಧಿನಿಯಮ 1964 ಮತ್ತು ಕರ್ನಾಟಕ ಭೂ ಕಂದಾಯ ನಿಯಮಾವಳಿಗಳು 1966 ರನ್ವಯ ನಿರ್ವಹಿಸಲಾಗುತ್ತಿದೆ.					
ಈ)	ಈ ಯೋಜನೆಗೆ ಕೇಂದ್ರ ಸರ್ಕಾರದಿಂದ ದೊರೆತಿರುವ ಅನುದಾನ ಎಷ್ಟು? (ವರ್ಷಾವಾರು ಪೂರ್ಣ ಮಾಹಿತಿ ನೀಡುವುದು)	ಕೇಂದ್ರ ಸರ್ಕಾರದಿಂದ 2012-13ನೇ ಸಾಲಿನಲ್ಲಿ ರೂ. 24.51 ಕೋಟಿ ಅನುದಾನ ಬಿಡುಗಡೆ ಗೊಳಿಸಲಾಗಿರುತ್ತದೆ.					


 ಆಯುಕ್ತರು,
 ಭೂಮಾಪನ ಕಂದಾಯ ವ್ಯವಸ್ಥೆ
 ಮತ್ತು ಭೂದಾಖಲೆಗಳು, ಬೆಂಗಳೂರು

NOTICE INVITING TENDER (NIT)

NoSSLR/STR/17016/9/2022

Date 07-04-2022

TENDER

HIRING OF DRONE OR AERIALSURVEYAS A SERVICE FOR ORI GENERATION FOR LARGE SCALE MAPPING

UNDER RESURVEY/SURVEY PROJECT AND SVAMITVA PROJECT
(Two-Cover Bidding Process via e-Procurement Portal)

1. The Government of Karnataka has taken up Drone/Aerial Based Resurvey of Agricultural Lands as well as the Residential Properties in both rural and urban areas in Karnataka as part of its Resurvey / Large Scale Mapping (LSM) Program.
2. Additionally, the Government of India has taken up the project of SVAMITVA which is drone based survey of the residential properties or the aabadi area in the rural area.
3. The Government of Karnataka, as part of its Large Scale Mapping and Resurvey Project through department of Survey Settlement and Land Records (SSLR) in partnership with Survey of India (SoI) has initiated the works in 5 full districts (Tumkur, Ramnagar, Hassan, Uttara Kannada and Belgavi) as well as the Bengaluru City. Large scale maps and the revised RTC's (Record of Right, Tenancy and Crop data) are to be generated for these areas using drone based image acquisition.
4. It is decided to expand the Resurvey & LSM and SWAMITVA activities to the remaining 26 districts in phases using high resolution images of 5cm or better Ground Sampling Distance (GSD).
5. As 5 cm GSD images can be generated either from drone based image acquisition or from conventional aerial photography using color digital cameras, Government of Karnataka has decided to expand the resurvey project for the remaining 26 districts using Aerial / Drone based image acquisition process in two phases.
6. In Phase 1, covered by this tender, 13 district drone/aerial survey shall be completed covering an area of about 73000 Sq KM. The Ortho Rectified Images (ORI) generated from this flying shall be used for generation of large scale topographic and Land Parcel Maps (LPM). The LPM's shall be used for generating the RTC and Property Records (PR) Cards.
7. Therefore, this tender for **HIRING OF DRONE OR AERIALSURVEYAS A SERVICE FOR ORI GENERATION FOR LARGE SCALE MAPPING (LSM)** for 13 districts covering total area of about 73000 Sq KM.
8. Karnataka State Remote Sensing Applications Centre (KRSAC), the state nodal agency of Remote sensing and GIS activities shall be the technical partner of the Survey Settlement and Land Records Department of Government of Karnataka. Survey of India shall also be technical advisor and coordinator working with the Govt of Karnataka for this project.
9. SOI / KRSAC shall define the methodology / process to be adopted including the QA / QC process and standard or accuracy parameters for data acceptance for this project and act as the technical and Implementation partner in the project.
10. As implementation partner, KRSAC/SOI shall supervise and provide the quality acceptance of the datasets generated by the service provider, as per the defined standard.

11. KSRSAC / SOI shall establish the process of data submission and provide its approval for compliance submitted by the service provider as per the defined standards of each product(s) – for each stage.
12. The project area of 13 districts in this tender is divided in to 2 packages or LOTs. Bidders can quote for any one or both the package/LOT subject to meeting the pre-qualification and eligibility criteria mentioned in the ITB.
13. In the context explained above, Additional Director, Office of Commissioner, Survey, Settlement and Land Records, Revenue Department, Bengaluru invites bids in e-Procurement Portal of the Government of Karnataka from the eligible bidders for supply of following goods and services listed below:

Item No.	Description of Services	Area [#] (in Sq. Km)	Bid Security
1.	<u>HIRING OF DRONE OR AERIAL-SURVEY AS A SERVICE FOR ORI GENERATION FOR LARGE SCALE MAPPING</u> in 6 D ISTRICTS OF KARNATAKA*- PACKAGE or LOT 1	34,378SqKm	Bid Security Declaration Form as per Section IV
2	<u>HIRING OF DRONE OR AERIAL-SURVEY AS A SERVICE FOR ORI GENERATION FOR LARGE SCALE MAPPING</u> in 7 D ISTRICTS OF KARNATAKA* - PACKAGE or LOT 2	39,429Sq Km	Bid Security Declaration Form as per Section IV

* list of Districts covered are given in ITB

Area figures provided above is indicative. Final area & shape file will be provided to the Service Provider at the time of award.

Calendar of Events

The details of the Calendar of Events are as below:

Sl. No.	Description	Date	Time
1	Commencement of issue of Bid document through E-Procurement Portal of Government of Karnataka	07-04-2022	10AM
2	Last date for downloading of Bid document	22-04-2022	-
3	Last date and time for receipt of Bid	22-04-2022	5PM

4	Pre-Bid meeting (at Office of Commissioner SSLR, Bengaluru) e- mail id - sslrcso2022@gmail.com	16-04-2022	11AM
5	Opening of Bids (Technical)	25-04-2022	12PM onwards
6	Opening of Bids (Commercial – only of technically qualified bidders)	As per intimation given after technical evaluation.	-
7	Award of Contract	As per intimation given after financial evaluation.	-
8	Furnishing of Performance Security by the Successful Bidder	07-days from issue of LoI	
9	Signing of contract	Within 5-days of successful submission of PG	

1. Bidders may view and download the Bid document free of cost from the e-procurement portal of Government of Karnataka at <https://eproc.karnataka.gov.in>.
2. For participation in the bidding, it is mandatory for the bidder to obtain Class-III Digital Signature Certificate (DSC) from one of the authorized Certifying Authorities (CA) and then register with the Government of Karnataka e-procurement platform and submit bids by using their user ID and Digital Signature. Foreign bidders may obtain DSC from any Licensed Certifying Authority which has been recognized by the Controller of Certifying Authorities, Govt. of India as per details available at www.cca.gov.in. Bidders already possessing the Digital Signature issued from authorized CAs can use the same in this bid. Bidders should note that they are required to obtain separate DSCs for signing and encryption, issued by the same CA, for participating in the electronic bid submission.
3. A **pre-bid meeting** will be held at the Office of Commissioner Survey Settlement & Land Records, K R Circle, Opposite BESCO Head Office, Bengaluru, as per schedule given above, to clarify the issues and to answer questions on any matter that may be raised at that stage as stated in the bidding document.
4. Bid Processing Fee: Interested Tenderer who wish to participate shall pay tender processing fee through any of the 5 e-Payment options only:
 - a. Credit Card
 - b. Direct Debit
 - c. National Electronic Funds Transfer (NEFT)
 - d. Net banking
 - e. Over the Counter (OTC) – designated ICICI bank branches located across the country. Please note that payments submitted through cheque or de-

mand draft shall not be accepted. Further details regarding e-Payment; please refer to e-Procurement website –<https://eproc.karnataka.gov.in>

5. Only online submission of tenders is permitted. Therefore, tenders must be submitted online on website <https://eproc.karnataka.gov.in> as per deadline fixed in the Calendar of Tender above and the applicable date and time shall be as per server date and time. The bids will be opened online by the authorized officers as per schedule given in the Calendar above.
6. Due to technical configuration issues in eProcurement, the previous tender SSLR/STR/17016/9/2022 Date 2.3.2022 was cancelled and the same is being re-tendered herein. However, the Pre-Bid Clarification given in the original tender dated 2.3.2022 are valid. Hence, the pre-bid clarification issued for the tender SSLR/STR/17016/9/2022 dated 22-03-2022 shall also be considered as addendum to this tender.
7. Other details can be seen in the bidding documents.
8. The address for communication is as under:

Additional Director
Office of Commissioner,
Survey, Settlement & Land Records,
K R Circle, Opposite BESCO Head Office,

*Time and date of opening of Financial part of bid will be intimated after Technical acceptance of bid

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PART 1 –REQUEST FOR BIDS

SECTION I –INSTRUCTIONS TO BIDDERS [ITB]

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Section I. Instructions to Bidders

A. General

1. Scope of Bid

1.1 The Purchaser – Commissioner Survey, Settlement & Land Records, Revenue Department, Government of Karnataka, issues these Bidding Documents for the supply of Goods and Related Services incidental thereto as specified in Section V, Schedule of Requirements. The name, identification and number of lots (contracts) of this OPEN TENDER ENQUIRY (OTE) procurement are as follows

HIRING OF DRONE OR AERIALSURVEY AS A SERVICE FOR ORI GENERATION FOR LARGE SCALE MAPPING for about 73000[#] Sq KM area in 13 districts in Karnataka in TWO LOTS and the details specified in Section V Schedule of Requirement and as per Sub-section 3 Technical Specification.
Area figures provided above is indicative. Final area shape file will be provided to the Service Provider at the time of award.

The 13 districts in this Phase 1 tender are divided into two packages/LOTs as follows –

Drone/Aerial Survey – Package/LOT 1

S.No	District Name	Area in Sq km
1	Bidar	5448
2	Bellary	4252
3	Yadgir	5234
4	Kalaburagi	10951
5	Chikballapur	4524
6	Kolar	3969
TOTAL =		34378

Drone/Aerial Survey – Package/LOT 2

S.No	District Name	Area in Sq Km
1	Mysore	6854
2	Shimoga	8477
3	Haveri	4823
4	Bagalkot	6575
5	Dharwad	4260
6	Udupi	3880
7	Dakshina Kanna-da	4560
Total =		39429

	<p>The whole geographical of these 13 districts, in 2 packages/ LOTs shall be covered as part of drone/aerial flying under this tender</p> <p>The scope of work includes:</p> <ul style="list-style-type: none"> ➤ Flight Planning ➤ Provision of ground control points by Dual frequency GNSS receivers either in relative static positioning mode OR by using existing NRTK CORS with Dual frequency RTK rovers required for Drone / Aerial survey. ➤ Planning and execution of Drone/ Aerial Survey with Professional survey grade PPK enabled Drones or with aircraft fitted with Large Format Digital Cameras. <ul style="list-style-type: none"> • Mission planning • Data acquisition, • Data pre-Processing / geo-tagging, • Data Post processing with suitable software, • DSM and Ortho Rectified Image (ORI) ➤ QA/QC at each stage of work and for the whole work ➤ Data management including daily incremental backup, monthly full backup of data as per the back-up plan submitted by the Service Provider and approved by the Purchaser. ➤ Delivery of products (softcopy) as per list of deliverables and delivery instructions. <p>The Intended Completion Date is Twelve(12) months from the date of ‘Commencement of Service’.</p> <p>1.2 Throughout these Bidding Documents: the term “in writing” means communicated in written form (e.g. by mail, e-mail, fax, telex, distributed or received through the electronic-procurement system used by the Purchaser) with proof of delivery – including electronic delivery; The Purchaser shall use the electronic-procurement system specified in 7.1 to manage this Bidding process.</p> <p>if the context so requires, “singular” means “plural” and vice versa; and “day” means calendar day.</p>
<p>2. Source of Funds</p>	<p>2.1 The Employer/Purchaser, as defined in the BDS, intends to apply part of the funds approved for Drone/Aerial based Survey/Resurvey & Svamitva, towards the cost of the Project, as defined in the BDS, to cover eligible payments under the Contract for the Services to be performed as per bid document</p>
<p>3. Corrupt & Fraudulent Practices</p>	<p>3.1 It is the Government of India’s (GoI) & Government of Karnataka’s (GoK) policy to require that the highest standards of ethics are observed during the procurement and execution of</p>

contracts. In pursuance of this policy, the officials of Procuring Entities and the bidders / suppliers/ contractors/ sub-contractors/consultants/ service-providers involved in procurement process must abide by the Code of Integrity for Public Procurement (CIPP).

3.2 Code of Integrity for Public Procurement: Procuring authorities as well as bidders, suppliers, contractors and consultants/contractor should observe the highest standard of ethics and should not indulge in the following prohibited practices, either directly or indirectly, at any stage during the procurement process or during execution of resultant contracts:

- i) “Corrupt practice”: making offers, solicitation or acceptance of bribe, rewards or gifts or any material benefit, in exchange for an unfair advantage in the procurement process or to otherwise influence the procurement process or contract execution;
- ii) “Fraudulent practice”: any omission or misrepresentation that may mislead or attempt to mislead so that financial or other benefits may be obtained or an obligation avoided. This includes making false declaration or providing false information for participation in a tender process or to secure a contract or in execution of the contract;
- iii) “Anti-competitive practice”: any collusion, bid rigging or anti-competitive arrangement, or any other practice coming under the purview of The Competition Act,2002, between two or more bidders, with or without the knowledge of the Procuring Entity, that may impair the transparency, fairness and the progress of the procurement process or to establish bid prices at artificial, non-competitive levels;
- iv) “Coercive practice”: harming or threatening to harm, persons or their property to influence their participation in the procurement process or affect the execution of a contract;
- v) “Conflict of interest”: participation by a bidding firm or any of its affiliates that are either involved in the consultancy contract to which this procurement is linked; or if they are part of more than one bid in the procurement; or if the bidding firm or their personnel have relationships or financial or business transactions with any official of Procuring Entity who are directly or indirectly related to tender or execution process of contract; or improper use of information obtained by the (prospective) bidder from the Procuring Entity with an intent to gain unfair advantage in the procurement process or for personal gain; and
- vi) “Obstructive practice”: materially impede the Procuring Entity’s investigation into allegations of one or more of the above mentioned prohibited practices either by deliberately destroying, falsifying, altering; or by concealing of evidence material to the investigation; or by making false statements to investigators and/or by threatening, harassing or intimidating any party to prevent it from disclosing its

	<p>knowledge of matters relevant to the investigation or from pursuing the investigation; or by impeding the Procuring Entity’s rights of audit or access to information;</p> <p>3.3 The bidders shall submit, as part of Bidding Document, a signed declaration to the effect that they shall abide by the Code of Integrity for Public Procurement in Letter of Bid-Technical Part at Section IV(Bidding Forms).</p> <p>3.4 Without prejudice to and in addition to the rights of the Purchaser to other penal provisions as per the bid documents or contract, if the Purchaser comes to a conclusion that a (prospective) bidder (including members of Joint Venture/ Sub-Contractor)/contractor/supplier/consultant/service-provider, directly or through an agent, has violated this Code of Integrity in competing for the contract or in executing a contract, the Purchaser may take appropriate measures including one or more of the following:</p> <p>i) <u>If his bids are under consideration in any procurement,</u></p> <p>a) forfeiture or encashment of bid security;</p> <p>b) calling off of any pre-contract negotiations; and</p> <p>c) rejection and exclusion of the bidder from the procurement process.</p> <p>ii) <u>If a contract has already been awarded,</u></p> <p>a)cancellation of the relevant contract and recovery of compensation for loss incurred by the Purchaser;</p> <p>b) forfeiture or encashment of any other security or bond relating to the procurement;</p> <p>c) recovery of payments made by the Procuring Entity along with interest thereon at the prevailing rate;</p> <p>iii) <u>Provisions in addition to above,</u></p> <p>a) removal from the list of registered suppliers and banning/debarment of the bidder from participation in future procurements of the Procuring Entity for a period not less than one year;</p> <p>b) in case of anti-competitive practices, information for further processing may be filed by the Purchaser, with the Competition Commission of India;</p> <p>c)initiation of suitable disciplinary or criminal proceedings against any individual or staff found responsible.</p>
	<p>3.5 Furthermore, Bidders shall be aware of the provision stated in Clause 3 of the General Conditions of Contract.</p>
<p>4. Eligible Bidders</p>	<p>4.1 All bidders shall provide in SectionIV, Bidding Forms, a statement that the Bidder (including all subcontractors) is not associated, nor has been associated in the past, directly or indirectly, with the consultant or any other entity that has prepared the design,</p>

	<p>specifications, and other documents for the Project or being proposed as Project Manager for the Contract. A firm that has been engaged by the Employer to provide Consultant Services for the preparation or supervision of the procurement, and any of its affiliates, shall not be eligible to bid.</p> <p>4.2 Bidders shall not be under Ban/Blacklisting/Debarment for corrupt and fraudulent practices or for lack in performance by any Government/Semi-Government entity.</p> <p>4.3 A Bidder shall be a company registered under the Company Act of India. A Joint Venture is not accepted.</p> <p>4.4 NOT Applicable</p> <p>4.5 Any false declaration and non-compliance of the above would be a ground for immediate termination of the contract and further legal action in accordance with the laws.</p>
5. One Bid Per Bidder	<p>5.1 Each Bidder shall submit only one Bid. A Bidder who submits or participates in more than one Bid (other alternatives that have been permitted or requested) will cause all the proposals with the Bidder's participation to be disqualified.</p>
	<p>B. Contents of Bidding Document</p>
6. Sections of Bidding Documents	<p>6.1 The Bidding Documents consist of Parts 1, 2, and 3, which include all the Sections indicated below, and should be read in conjunction with any Addendum issued in accordance with ITB Clause 8.</p> <p>PART 1 Bidding Procedures Section I. Instructions to Bidders (ITB) Section II. Omitted Section III. Evaluation and Qualification Criteria Section IV. Bidding Forms</p> <p>PART 2 Supply Requirements Section V. Schedule of Requirements</p> <p>PART 3 Contract Section VI. General Conditions of Contract (GCC) Section VII. Special Conditions of Contract (SCC) Section VIII. Contract Forms</p>

	<p>6.2 The NOTICE INVITING BIDS issued by the Purchaser is not part of the Bidding Document.</p> <p>6.3 Unless obtained directly from the Purchaser, the Purchaser is not responsible for the completeness of the document, responses to requests for clarification, minutes of pre-bid meeting (if any), or Addenda to the Bidding Document in accordance with ITB 8. In case of any contradiction, documents obtained directly from the Purchaser shall prevail. The tender or bidding document is uploaded and available in e-Procurement Portal of the Government of Karnataka viz https://eproc.karnataka.gov.in</p> <p>6.4 The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Documents and to furnish with its Bid all information or documentation as is required by the Bidding Documents.</p>
<p>7. Clarification of Bidding Documents</p>	<p>7.1 The clarifications/updation/addendum/corrigendum before opening up of the tender shall be solely through the eProcurement Portal of Government of Karnataka viz https://eproc.karnataka.gov.in and the bid therein for this tender. A prospective Bidder requiring any clarification on the Bidding Documents may raise the same in the Pre-Bid Conference provided in the Calendar of Events. Clarifications requested through any other mode shall not be considered by the Purchaser. The Purchaser will respond to any request for clarification, provided that such request is received at least one day prior to the date of Pre-Bid Conference. Description of clarification sought and the response of the Purchaser shall be uploaded for information of all Bidders without identifying the source of request for clarification. Should the Purchaser deem it necessary to amend the Bidding Documents as a result of a clarification, it shall do so following the procedure under ITB Clause 8 and ITB Sub-Clause 22.2. It is the bidder's responsibility to check on the e-procurement system, for any addendum/amendment/ corrigendum to the bidding document. The clarifications/corrigendum/addendum or any communication shall be through the said eProcurement portal of Government of Karnataka viz https://eproc.karnataka.gov.in</p>
<p>8. Amendment of Bidding Documents</p>	<p>8.1 At any time prior to the deadline for submission of bids, the Purchaser may amend the Bidding Documents by issuing addendum. The addendum will appear on the e-procurement system.</p> <p>8.2 Any addendum thus issued shall be part of the Bidding Documents and shall be deemed to have been communicated to all the bidders.</p> <p>8.3 To give prospective Bidders reasonable time in which to take an addendum into account in preparing their bids, the Purchaser may, at its discretion, extend the deadline for the sub-</p>

	<p>mission of bids, pursuant to ITB Sub-Clause 22.2</p> <p>8.4 The clarifications/corrigendum/addendum or any communication shall be through the said eProcurement portal of Government of Karnataka viz https://eproc.karnataka.gov.in</p>
	<p>C. Preparation of Bids</p>
<p>9. Cost of Bidding</p>	<p>9.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, and the Purchaser shall not be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.</p> <p>The Bidder, at the Bidder's own responsibility and risk, is encouraged to visit and examine the Site of required Services and its surroundings and obtain all information that may be necessary for preparing the Bid and entering into a contract for the Services. The costs of visiting the Site shall be at the Bidder's own expense.</p>
<p>10. Language of Bid</p>	<p>10.1 The Bid, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Purchaser, shall be written in Kannada or English language. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages into English language, in which case, for purposes of interpretation of the Bid, such translation shall govern.</p>
<p>11. Documents Comprising the Bid</p>	<p>11.1 The Bid shall comprise two Parts, namely the Technical Part and the Financial Part. These two Parts shall be submitted simultaneously.</p> <p>11.2 The Technical Part shall contain the following:</p> <ul style="list-style-type: none"> (a) Letter of Bid – Technical Part, in accordance with ITB Clause 12; (b) Bid Security, in accordance with ITB Clause 19.1, if required; (c) Alternative bids– Technical Part, if permissible, in accordance with ITB 13, the Technical Part of any Alternative Bid; (d) Written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB Clause 20.2; (e) Documentary evidence in accordance with ITB Clause 17 establishing the Bidder's qualifications to perform the contract if its bid is accepted; (f) Documentary evidence in accordance with ITB 17 establishing the Bidder's eligibility to bid;

	<p>(g) Documentary evidence in accordance with ITB Clauses 16, that the Services conform to the Bidding Documents; and</p> <p>(h) The following documents as part of the technical bid:</p> <ol style="list-style-type: none"> 1. Certification of incorporation of the bidder. 2. As e- procurement system is being used, there is no hard copy submission of bid. The relevant hard copies shall be brought at the time of technical evaluation and will be scrutinized as per need – including but not limited to the power of attorney, Bid Security Declaration Form, original affidavit regarding correctness of information furnished with bid document. 3. The bidder shall clearly confirm that all facilities (owned or leased or by procurement) including key and critical equipment as specified in section III exist with him for inspection and testing and these can be accessed by the Purchaser or his representative for inspection. 4. Technical schedules of services as required by technical specifications. 5. Qualification information including key personnel, Method Statement, Work Plan & Schedule as per section IV to meet employer technical specifications as per Section V to demonstrate substantial responsiveness of the Services. 6. The following details shall also be provided by Indian Bidders: <ol style="list-style-type: none"> a. Name, address, PAN and ward/circle where they are being assessed of the Directors of the Bidding Company. b. Company’s PAN and Income Tax clearance certificate and ward/circle where it is being assessed, c. Registration details of the company under GST, local and Central Sales Tax, and other laws as may be applicable. 7. The bidders from outside India shall provide the corresponding details of Income Tax registration, Social Security Number, details regarding Registration under goods & services tax (as may be applicable) etc. 8. The bidder shall disclose instance of previous past performance that may have resulted into adverse actions taken against the bidder during the last five years. 9. All documents required in Section III: Evaluation & Qualification Criteria <p style="text-align: center;">All Forms as required in Section IV</p>
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	<p>11.3 The Financial Part shall contain the following:</p> <ul style="list-style-type: none"> (a) Letter of Bid – Financial Part: prepared in accordance with ITB 12 and ITB 14; (b) Price Schedules: completed prepared in accordance with ITB 12 and ITB 14; (c) Alternative Bid - Financial Part; if permissible in accordance with ITB 13, the Financial Part of any Alternative Bid; and (d) Any other document required in the AITB. <p>11.4 The Technical Part shall not include any financial information related to the Bid price. Where material financial information related to the Bid price is contained in the Technical Part, the Bid shall be declared non-responsive.</p> <p>11.5 The Bidder shall furnish in the Letter of Bid, information on commissions and gratuities, if any, paid or to be paid to agents or any other party relating to this Bid.</p>
<p>12. Process of Bid Submission</p>	<p>12.1 The Letter of Bid – technical Part, Letter of Bid – Financial Part and Price Schedules shall be prepared using the relevant forms furnished in Section IV, Bidding Forms. The forms must be completed without any alterations to the text, and no substitutes shall be accepted except as provided under ITB 20.2. All blank spaces shall be filled in with the information requested. The submission shall be in the eProcurement Portal https://eproc.karnataka.gov.in.</p> <p>12.2 Entire Bid including the Letter of Bid and filled-up Price Schedules shall be submitted online on e-procurement system specified in ITB 7.1. Details and process of online submission of the tender and relevant documents are given in the website mentioned above. Scanned copies of documents listed in clauses 11 and 12.3 should also be uploaded on this website.</p> <p>12.3 Submission of Original Documents: The bidders are required to separately bring during the technical scrutiny/evaluation (i) written confirmation authorizing the signatory of the Bid to commit the Bidder as per ITB Clause 11.2(d); (ii) original bid security declaration form in approved form; and (iii) original affidavit regarding correctness of information furnished with bid document.</p>
<p>13. Alternative Bids</p>	<p>13.1 The alternative bid shall not be considered.</p>
<p>14. Bid Prices and Dis-</p>	<p>14.1 The prices and discounts quoted by the Bidder in the Letter</p>

<p>counts</p>	<p>of Bid – Financial Part and in the Price Schedules shall conform to the requirements specified below:</p> <p>14.2 All lots (contracts) and items must be listed and priced separately in the Price Schedules.</p> <p>14.3 The price to be quoted in the Letter of Bid – Financial Part, in accordance with ITB 12.1, shall be the total price of the bid, excluding any discounts offered.</p> <p>14.4 The Bidder shall quote any discounts and indicate the methodology for their application in the Letter of Bid – Financial Part in accordance with ITB 12.1.</p> <p>14.5 Prices quoted by the Bidder shall be fixed during the Bidder’s performance of the Contract and not subject to variation on any account. A bid submitted with an adjustable price quotation shall be treated as nonresponsive and shall be rejected, pursuant to ITB 31.</p>
	<p>14.6 Not applicable</p>
	<p>14.7 The Bidder, at the Bidder’s own responsibility and risk, is encouraged to visit and examine the locations of required Services and its surroundings and obtain all information that may be necessary for preparing the Bid and entering into a contract for the Services. The costs of visiting the locations of required Services and its surroundings shall be at the Bidder’s own expense.</p> <p>14.8 Prices shall be quoted in the eProcurement Portal viz https://eproc.karnataka.gov.in as specified in the Price Schedule included in Section IV, Bidding Forms. Prices shall be entered in the following manner:</p> <p>(i) Bidder shall fill in rates and prices for all items of the Services described in the Specifications, and listed in the Activity Schedule in Section V, Schedule of Requirements. Items for which no rate or price is entered by the Bidder will not be paid for by the Employer when executed and shall be deemed covered by the other rates and prices in the Activity Schedule</p> <p>(ii) All duties, taxes, and other levies payable by the Service Provider under the Contract, or for any other cause, as of the date 28 days prior to the deadline for submission of Bids, shall be deemed to have been included in the total Bid price submitted by the Bidder.</p> <p>14.9 Deemed Exemption Benefits Bidders may like to ascertain availability of tax/duty exemption benefits, if any. They are solely responsible for obtaining such benefits, which they have considered in their bid and in case of failure to receive such benefits for rea-</p>

	<p>sons whatsoever, the Purchaser will not compensate the bidder.</p> <p>Where the bidder has quoted taking into account such benefits, it must give all information required for issue of necessary Certificates in terms of the Government of India's relevant Notification along with its bid as proforma stipulated in Section IV Bidding Forms.</p> <p>If the Bidder has considered the Deemed Export Benefits in its bid, the Bidder shall confirm and certify that the Purchaser will not be required to undertake any responsibilities of the deemed export scheme or the benefits available during contract execution except issuing the required certificates. Bids which do not conform to this provision or any condition by the Bidder which makes the bid subject to availability of deemed export benefits or compensation on withdrawal of or any variations in the deemed export benefits scheme will make the bid non responsive and hence liable to rejection.</p>
15. Currencies of Bid & Payment	15.1 The Bidder shall quote the Price in Indian Rupees only.
16. Documents Establishing the Eligibility and conformity of the Services	16.1 To establish the conformity of the Non-Consulting Services to the bidding document, the Bidder shall furnish as part of its Bid the documentary evidence that Services provided conform to the technical specifications and standards specified in Section V, Schedule of Requirements.
	16.2 Standards for provision of the Non-Consulting Services are intended to be descriptive only and not restrictive. The Bidder may offer other standards of quality provided that it demonstrates, to the Employer's satisfaction, that the substitutions ensure substantial equivalence or are superior to those specified in the Section V, Schedule of Requirements.
17. Documents Establishing the Eligibility & Qualifications of the Bidder	17.1 To establish Bidder's eligibility in accordance with ITB 4, Bidders shall complete the Letter of Bid – Technical Part, included in Section IV, Bidding Forms.
	17.2 The documentary evidence of the Bidder's qualifications to perform the contract if its bid is accepted shall establish to the Purchaser's satisfaction: that the Bidder meets each of the qualification criteria specified in Section III, Evaluation and Qualification;
	17.3 All Bidder shall provide in Section IV, Bidding Forms, a preliminary description of the proposed methodology work plan and schedule
18. Period of Validity	18.1 Bids shall remain valid for the period of 90-days after the

<p>of Bids</p>	<p>bid submission deadline date prescribed by the Purchaser in accordance with ITB 22.1. A bid valid for a shorter period shall be rejected by the Purchaser as non-responsive.</p> <p>18.2 In exceptional circumstances, prior to the expiration of the bid validity period, the Purchaser may request bidders to extend the period of validity of their bids. The request and the responses shall be made in writing. If a Bid Security is requested in accordance with ITB Clause 19, it shall also be extended for a corresponding period. A Bidder may refuse the request without forfeiting its Bid Security. A Bidder granting the request shall not be required or permitted to modify its bid, except as provided in ITB Sub-Clause</p>
<p>19. Bid Security</p>	<p>19.1 The Bidder shall furnish as part of the Technical Part of its bid, a Bid Security/EMD (Earnest Money Deposit) Declaration Form included in Section IV Bidding Forms..</p> <p>19.2 Not used.</p> <p>19.3 The Bid Security/EMD shall be in the amount shall be Rs 30 Lakhs per package/LOT and denominated in Indian Rupees or a freely convertible currency, and shall:</p> <ul style="list-style-type: none"> (a) Out of EMD of Rs 30 Lakhs Per LOT, Rs 5 Lakhs shall be paid through the eProcurement Portal of Government of Karnataka as permitted therein. (b) The rest of EMD of Rs 25 Lakhs per LOT shall be paid as Bank Guarantee from a Scheduled Commercial Bank having turnover not less than Rs 5000 Crores in the previous financial year. The Bank Guarantee shall be substantially in the format prescribed in this regard and uploaded in e-Procurement Portal as part of the Technical Bid. (c) be substantially in accordance with one of the forms of Bid Security/EMD included in Section IV, (d) Bidding Forms, or other form approved by the Purchaser prior to bid submission; (e) be payable promptly upon written demand by the Purchaser in case the conditions listed in ITB Clause 19.7 are invoked; (f) be submitted within 3 working days from the last date of submission of bids to the tender inviting authority for technical evaluation in its original form; copies will not be accepted; (g) Remain valid for a period of 45 days beyond the original validity period of the 3-months bids that is shall remain valid for 135 days or beyond that as per any period of extension of bid validity, if so requested under ITB Clause 18.2. (h) Absence of submission of BG for EMD in original

	<p>shall lead to disqualification of bids and shall not entitle to any refund of amount paid in e-procurement portal towards EMD.</p> <p>(i) Rs 30 Lakh EMD shall be paid for each LOT separately. In case of EMD is not paid in full and cumulative for packages/LOTs applied for, the purchaser shall decide on the package/LOT to be considered for evaluation at its own discretion.</p> <p>19.4 If a Bid Security/EMD is required in accordance with ITB Sub-Clause 19.1, any bid not accompanied by a substantially responsive Bid Security shall be rejected by the Purchaser as non-responsive.</p> <p>19.5 MSME companies can't claim for waiver of EMD / performance security as this is a critical and high value tender.</p> <p>19.6 The Bid Security/EMD of the unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder's signing the contract and furnishing the Performance Security pursuant to ITB Clause 44.</p> <p>19.7 The Bid Security/EMD of the successful Bidder shall be returned as promptly as possible once the successful Bidder has signed the contract and furnished the required performance security.</p> <p>19.8 The Bid Security/EMD may be forfeited:</p> <p>(a) if a Bidder</p> <p>(iii) withdraws its bid during the period of bid validity specified by the Bidder in the Letter of Bid (Technical Part and/or Financial Part), except as provided in ITB Sub-Clause 18.2; OR</p> <p>(iv) does not accept the correction of errors in pursuant to ITB 35, OR</p> <p>(b) if the successful Bidder fails to:</p> <p>(i) sign the Contract in accordance with ITB Clause 43; or</p> <p>(ii) Furnish a Performance Security in accordance with ITB Clause 44.</p> <p>19.9 Not used.</p> <p>19.10 The Employer may declare the Bidder ineligible to be awarded a contract in case of forfeiture of Bid Security/EMD and will be suspended for the period of 5 years from being eligible to submit Bids/Proposals for contract with the Procuring Entity.</p>
<p>20 Format and Signing of Bid</p>	<p>20.1 The Bidder shall prepare the Bid as per details given in ITB</p> <p>20.2 The bid shall be signed by a person duly authorized to sign</p>

	<p>on behalf of the Bidder. The authorization shall consist of a written confirmation as per this tender document and shall be uploaded along with the bid in eProcurement portal viz https://eproc.karnataka.gov.in.</p> <p>20.3 Not Applicable</p> <p>20.4 Corrections if any in the bid can be carried out by editing the information before electronic submission on e-procurement portal.</p>
	D. Online Submission of Bids
21 Preparation of Bids	<p>21.1 Bids, both Technical and Financial Parts, shall be submitted online on the e-procurement system viz https://eproc.karnataka.gov.in. Detailed guidelines for viewing bids and submission of online bids are given on the website. The NOTICE INVITING BIDS under this Project is published on this website. Any citizen or prospective bidder can logon to this website and view the NOTICE INVITING BIDS and can view the details of goods for which bids are invited. A prospective bidder can submit its bid online; however, the bidder is required to have enrolment/registration in the website, and should have valid Digital Signature Certificate (DSC) obtained from any authorised certifying agency of Government of India (for class of DSC Class III). The bidder should register in the website using the relevant option available. Then the Digital Signature registration has to be done with the e-token, after logging into the website. The bidder can then login the website through the secured login by entering the password of the e-token & the user id/ password chosen during registration. After getting the bid schedules, the Bidder should go through them carefully and submit the specified documents, along with the bid; otherwise the bid will be rejected.</p> <p>21.2 The completed bid comprising of documents indicated in ITB 11, should be uploaded on the e-procurement portal along with scanned copies of requisite certificates as are mentioned in different sections in the bidding document and scanned copy of the bid security.</p> <p>21.3 All the documents are required to be signed digitally by the bidder. After electronic on line bid submission, the system generates a unique bid identification number which is time stamped as per server time. This shall be treated as acknowledgement of bid submission.</p> <p>21.4 Physical, Email, Telex, Cable or Facsimile bids will be rejected as non-responsive.</p>

<p>22 Deadline for Submission of Bids</p>	<p>22.1 Bids must be uploaded online no later than the date and time specified in this tender.</p> <p>22.2 The Purchaser may, at its discretion, extend the deadline for the submission of bids by amending the Bidding Documents in accordance with ITB Clause 8, in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended. All such extensions shall be communicated only through eProcurement Portal viz https://eproc.karnataka.gov.in</p>
<p>23 Late Bids</p>	<p>23.1 The electronic bidding system would not allow any late submission of bids after due date & time as per server time.</p>
<p>24 Withdrawal, Substitution, and Modification of Bids</p>	<p>24.1 Bidders may modify their bids by using appropriate option for bid modification on the e-procurement portal, before the deadline for submission of bids. For this the bidder need not make any additional payment towards the cost of bid document. For bid modification and consequential re-submission, the bidder is not required to withdraw his bid submitted earlier. The last modified bid submitted by the bidder within the bid submission time shall be considered as the bid. For this purpose, modification/withdrawal by other means will not be accepted. In online system of bid submission, the modification and consequential re-submission of bids is allowed any number of times. A bidder may withdraw his bid by using appropriate option for bid withdrawal, before the deadline for submission of bids, however, if the bid is withdrawn, re-submission of the bid is allowed as per eProcurement portal policy and system in this regard.</p> <p>24.2 Bids requested to be withdrawn in accordance with ITB Sub-Clause 24.1 shall not be opened and dealt with as per eProcurement portal system.</p> <p>24.3 No bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Letter of Bid (Technical Part and/or Financial Part) or any extension thereof.</p>
<p>25 Public Opening of Technical Parts of Bids</p>	<p>25.1 The Purchaser shall publicly open Technical Parts of all bids received by the deadline, at the date, time and place specified in this tender, in the presence of Bidder's designated representatives and anyone who chooses to attend, and this could also be viewed by the bidders online. The Financial Parts of the bids shall remain unopened in the e-procurement system, until the subsequent public opening, following the evaluation of the Technical Parts of the Bids. In all cases, original documents</p>

	<p>submitted as specified in ITB 12.3 shall be first scrutinized, and Bids that do not comply with the provisions of ITB 12.3 will be declared non-responsive and will not be opened. Thereafter, bidder's names, and such other details as the Purchaser may consider appropriate will be notified online as Technical Part bid opening summary.</p> <p>In the event of the specified date of bid opening being declared a holiday for the Purchaser, the bids will be opened at the appointed time and location on the next working day.</p> <p>25.2 The electronic summary of the bid opening will be generated and uploaded online. The Purchaser will prepare and upload the Technical Evaluation of the bids in the eProcurement Portal. Only Technical Parts of Bids, alternative bids - Technical Parts if permitted in ITB 13 that are opened at Bid opening shall be considered further for evaluation.</p>
	<p align="center">E. Evaluation of Bids – General Provisions</p>
<p>26 Confidentiality</p>	<p>26.1 Information relating to the examination, evaluation, comparison, and post-qualification of bids, and recommendation of contract award, shall not be disclosed to bidders or any other persons not officially concerned with such process until information on Contract Award is communicated to all Bidders in accordance with ITB 42.</p> <p>26.2 Any effort by a Bidder to influence the Purchaser in the examination, evaluation, comparison, and post-qualification of the bids or contract award decisions may result in the rejection of its Bid.</p> <p>26.3 Notwithstanding ITB Sub-Clause 26.2, from the time of bid opening to the time of Contract Award, if any Bidder wishes to contact the Purchaser on any matter related to the bidding process, it should do so in writing.</p>
<p>27 Clarification of Bids</p>	<p>27.1 To assist in the examination, evaluation, comparison of the bids and post-qualification of the Bidders, the Purchaser may, at its discretion, ask any Bidder for a clarification of its Bid including breakdown of prices in the Activity Schedule, and other information that the Employer may require. Any clarification submitted by a Bidder in respect to its Bid, that is not in response to a request by the Purchaser shall not be considered. The Purchaser's request for clarification and the response shall be in writing. No change, including any voluntary increase or decrease, in the prices or substance of the Bid shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Purchaser in the Evaluation of the bids, in accordance with ITB</p>

	<p>Clause 35.</p> <p>27.2 If a Bidder does not provide clarifications of its bid by the date and time set in the Purchaser’s request for clarification, its bid may be rejected.</p>
28 Deviations, Reservations, Omissions	<p>28.1 During the evaluation of bids, the following definitions apply:</p> <p>(a) “Deviation” is a departure from the requirements specified in the Bidding Documents;</p> <p>(b) “Reservation” is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Documents; and</p> <p>(c) “Omission” is the failure to submit part or all of the information or documentation required in the Bidding Documents.</p>
29 Nonconformities, Errors and Omissions	<p>29.1 Provided that a Bid is substantially responsive, the Purchaser may waive any nonconformities or omissions in the Bid which do not constitute a material deviation, reservation or omission.</p> <p>29.2 Provided that a Bid is substantially responsive, the Purchaser may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities or omissions in the Bid related to documentation requirements. Such omission shall not be related to any aspect of the price or substance of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.</p> <p>29.3 Provided that a Bid is substantially responsive, the Purchaser shall rectify quantifiable nonmaterial nonconformities related to the Bid Price. To this effect, the Bid Price shall be adjusted, for comparison purposes only, to reflect the price of a missing or non-conforming item or component in the manner specified below –</p> <p>The adjustment shall be based on the Average Price of the item or component as quoted in other substantially responsive Bids, subject to a maximum of the estimated price of the item. If the price of the item or component cannot be derived from the price of other substantially responsive Bids, the Purchaser shall use its best estimate.</p>
30 Evaluation of Technical Parts	<p>30.1 In evaluating the Technical Parts of each Bid, the Purchaser shall use the criteria and methodologies listed in ITB 31, ITB 32, and Section III, Evaluation and Qualification Criteria. No other evaluation criteria or methodologies shall be</p>

	permitted.
31 Determination of Responsiveness	<p>31.1 The Purchaser’s determination of a bid’s responsiveness is to be based on the contents of the bid itself as defined in ITB 11.</p> <p>31.2 A substantially responsive Bid is one that meets the requirements of the Bidding Documents without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that:</p> <p>(a) If accepted, would</p> <p>(i) affect in any substantial way the scope, quality, or performance of the Non- Consulting Services specified in the Contract; or</p> <p>(ii) limit in any substantial way, inconsistent with the Bidding Documents, the Purchaser’s rights or the Bidder’s obligations under the Contract; or</p> <p>(b) If rectified would unfairly affect the competitive position of other bidders presenting substantially responsive bids.</p> <p>31.2.1 Bids from Agents, without proper authorization from the manufacturer as per Section IV, shall be treated as non-responsive.</p> <p>31.3.1 The Purchaser shall examine the bids to confirm that all documents and technical documentation requested in ITB Clause 11 have been provided, and to determine the completeness of each document submitted.</p> <p>31.3.2 The Purchaser shall examine the bid to confirm that the Bidder has accepted all terms and conditions specified in GCC and the SCC without material deviations or reservations. Deviations from or objections or reservations to critical provisions such as those concerning Performance Security (GCC Clause 3.9). Correction of Defects and Lack of Performance Penalty (GCC Clause 7.1), Force Majeure (Clause 2.5), Applicable law (GCC Clause 1.2) and Taxes & Duties (GCC Clause 1.8) will be deemed to be a material deviation. The Purchaser’s determination of a bid’s responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence.</p> <p>31.4 If a bid is not substantially responsive to the Bidding Documents, it shall be rejected by the Purchaser and may not subsequently be made responsive by the Bidder by correction of the material deviation, reservation, or omission.</p>

<p>32 Qualification of the Bidders</p>	<p>32.1 The Purchaser shall determine, to its satisfaction, whether all eligible Bidders, whose Bids have been determined to be substantially responsive to the bidding document, meet the Qualification Criteria specified in Section III, Evaluation and Qualification Criteria.</p> <p>32.2 The determination shall be based upon an examination of the documentary evidence of the Bidder’s qualifications submitted by the Bidder, pursuant to ITB 17. The determination shall not take into consideration the qualifications of other firms such as the Bidder’s subsidiaries, parent entities, affiliates, subcontractors (other than specialized subcontractors if permitted in the bidding document), or any other firm(s) different from the Bidder).</p> <p>32.3 If a Bidder does not meet the qualifying criteria specified in Section III, Evaluation and Qualification Criteria, its Bid shall be rejected by the Purchaser and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.</p> <p>32.4 Only Bids that are both substantially responsive to the bidding document, and meet all Qualification Criteria shall have the Financial Parts of their Bids opened at the second public opening</p>
<p>33 Public Opening of Financial Parts</p>	<p>33.1 Following the completion of the evaluation of the Technical Parts of the Bids, and approval of Competent authority, the Purchaser shall notify in writing those Bidders who have failed to meet the Qualification Criteria and/or whose Bids were considered non-responsive in the Technical Evaluation giving them the following information in the form of a Proceedings:</p> <ul style="list-style-type: none"> (a) their Technical Part of Bid failed to meet the requirements of the bidding document; (b) their Financial Part of the Bid shall not be opened; and (c) notify them of the date and time for public opening of the Financial Parts of the Bids. Financial Parts of the bids shall not be opened earlier than three (3) days from the communication of technical evaluation results to the bidders. <p>33.2 The Purchaser shall, simultaneously, notify in writing those Bidders whose Technical Parts have been evaluated as substantially responsive to the bidding document and met the</p>

	<p>Qualification Criteria, advising them of the following information:</p> <ul style="list-style-type: none"> (a) their Bid has been evaluated as substantially responsive to the bidding document and met the Qualification Criteria; (b) their Financial Part of Bid will be opened at the public opening of Financial Parts; (c) Notify them of the date and time of the second public opening of the Financial Parts of the Bids, as specified in this tender. <p>The opening date should allow Bidders sufficient time to make arrangements for attending the opening. The Financial Part of the Bid shall be opened publicly in the presence of Bidders' designated representatives and anyone who chooses to attend, and this could also be viewed by the bidders online on eProcurement portal viz https://eproc.karnataka.gov.in. The bidder's names, the Bid prices, the total amount of each bid, including any discounts and Alternative Bid – Financial Part, and such other details as the Purchaser may consider appropriate will be notified online via eProcurement portal viz https://eproc.karnataka.gov.in by the Purchaser at the time of bid opening.</p> <p>In the event of the specified date of bid opening being declared a holiday for the Purchaser, the bids will be opened at the appointed time and location on the next working day.</p> <p>33.4 The electronic summary of the bid opening will be generated and uploaded online. The Purchaser will also prepare minutes of the Bid opening, including the information disclosed and upload the same for viewing online. Only Financial Part of Bids, Financial Parts of Alternative Bids and discounts that are opened and read out at Bid opening shall be considered further for evaluation.</p>
<p>34 Evaluation of Financial Parts</p>	<p>34.1 To evaluate the Financial Part of each Bid/LOT, the Purchaser shall consider the following:</p> <ul style="list-style-type: none"> (a) evaluation will be done as per the Financial Bid document; and the Bid Price as quoted in accordance with ITB 14; (b) Not used; (c) Not Used

	<p>(d) Not used;</p> <p>(e) Nt Used</p> <p>34.2 Not used</p> <p>34.3 Not Applicable</p> <p>34.4 Not used</p> <p>34.5 Omitted</p> <p>34.6 Employer reserves the right to accept or reject any variation, deviation, or alternative offer. Variations, deviations, and alternative offers and other factors, which are in excess of the requirements of the bidding documents or otherwise result in unsolicited benefits for the Employer will not be taken into account in Bid evaluation.</p>
35 Correction of Arithmetical Errors	35.1 The e-procurement system automatically calculates the total amount from unit rates and quantities and the system also automatically populates the amount in words from the amount in figures and therefore there is no scope of discrepancy and need for arithmetic correction.
36 Conversion to Single Currency	36.1 Not applicable.
37 Preference	Omitted
38 Comparison of Financial Parts	38.1 The Purchaser shall compare the evaluated prices of all substantially responsive bids to determine the lowest-evaluated bid for each LOT in accordance with ITB Clause 34.
39 Purchaser's Right to Accept Any Bid, and to Reject Any or All Bids	39.1 The Purchaser reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to Bidders. In case of annulment, all documents submitted and specifically, bid securities, shall be promptly returned to the Bidders.
	F. Award of Contract
40 Award Criteria	40.1 Subject to ITB 39.1, the Purchaser shall award the Contract to the Bidder whose bid has been determined to be the lowest evaluated bid and is substantially responsive to the Bidding Documents, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily.
41 Purchaser's Right to Vary Quantities	41.1 At the time the Contract is awarded, the Purchaser reserves the right to increase or decrease the quantity originally speci-

<p>at Time of Award</p>	<p>fied in Section V, Schedule of Requirements, provided this does not exceed the 25%, and without any change in the unit prices or other terms and conditions of the bid and the Bidding Documents.</p>
	<p>41.2 If the quantity has not been increased at the time of the awarding the contract, the purchaser reserves the right to increase, the quantity originally specified in Section V. Schedule of Requirements, provided this does not exceed 25%, and without any change in the unit prices or other terms and conditions of the bid and the Bidding Documents, during the currency of the contract.</p>
	<p>41.3 Further, during the execution of the contract in case any bid winner of a LOT fails to execute the project as per this tender document and agreement signed pursuant thereto and the same leads to cancellation of the contract, then the Purchaser reserves the right, pending finalization of such a cancelled contract in a new tender, to assign the cancelled LOT to the BID winner of the other LOT in this tender; who shall duly execute the such an assigned work of the cancelled LOT until the cancelled LOT is awarded to a bid winner in a new tender. Such in-between assignment shall be on same terms and conditions (including the payments) as per the contractor's own agreement and the contract.</p>

<p>42 Notification of Award, Publication of Award & Recourse to Unsuccessful Bidders</p>	<p>42.1 Prior to the expiration of the period of bid validity, the Purchaser shall notify the successful Bidder, in writing, that its Bid has been accepted. The notification letter (hereinafter called “Letter of Acceptance”) shall specify the sum that the purchaser will pay in consideration of the supply of Goods (hereinafter called “the Contract Price”).</p> <p>42.2 At the same time the Purchaser shall publish in eProcurement Portal of Government of Karnataka – viz https://eproc.karnataka.gov.in or on the Purchaser’s website with free access, or in the official gazette, the results identifying the bid and lot numbers and the following information: (i) name of each Bidder who submitted a Bid; (ii) bid prices as read out at bid opening; (iii) name and evaluated prices of each Bid that was evaluated; (iv) name of bidders whose bids were rejected and the reasons for their rejection; and (v) name of the successful Bidder, and the price it offered, as well as the duration and summary scope of the contract awarded. Provided the same may be informed through a suitable Proceedings of the Purchaser.</p> <p>42.3 The Purchaser shall promptly respond in writing to any unsuccessful Bidder who, after Publication of contract award, requests in writing the grounds on which its bid was not selected.</p> <p>42.4 Until a formal Contract is prepared and executed, the notification of award shall constitute a binding Contract.</p> <p>42.5 Upon the successful Bidder’s furnishing of the performance security and signing the Contract Form pursuant to ITB Clause 43, the Purchaser will promptly notify each unsuccessful Bidder and will discharge its bid security, pursuant to ITB Clause 19.5</p> <p>42.6 If after notification of award, a bidder wishes to ascertain the grounds on which its bid was not selected, it should address its request to the Tender Accepting Authority as per KTPP Act. The Employer will respond suitably in writing to the unsuccessful Bidder.</p>
<p>43 Signing of Contract</p>	<p>43.1 Promptly after notification, the Purchaser shall send the successful Bidder the Contract Agreement.</p> <p>43.2 Within fifteen (15) days of receipt of the Contract Agreement, the successful Bidder shall sign, date, and return it to the Purchaser.</p>
<p>44 Performance Security</p>	<p>44.1 Within twenty-one (21) days of the receipt of notification of award from the Purchaser, the successful Bidder, if required, shall furnish the Performance Security in accordance with the GCC, using for that purpose the Performance Security Form included in Section VIII Contract forms, or another Form ac-</p>

	<p>ceptable to the Purchaser. Failure of the successful Bidder to submit the above-mentioned Performance Security or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security.</p>
<p>45 Adjudicator</p>	<p>45.1 The Adjudicator shall be a person that is nominated by Principal Secretary Revenue Department, Government of Karnataka under the Contract, and paid a suitable fee, plus reimbursable expenses. If the Bidder disagrees with this proposal, the Bidder should so state in the Bid. If, in the Letter of Acceptance, the Purchaser has not agreed on the appointment of the Adjudicator, the Adjudicator shall be appointed by the Appointing Authority designated in the Special Conditions of Contract at the request of either party.</p>

SECTION III. EVALUATION AND QUALIFICATION CRITERIA

This Section complements the Instructions to Bidders. It contains the criteria that the Purchaser shall use to evaluate a bid and determine whether a Bidder qualifies in accordance with criteria specified in this bidding document. No other criteria shall be used.

Contents

1. Evaluation Criteria (ITB 34)
2. Multiple Contracts (ITB 30.4)
3. Qualification Requirements (ITB 32.1)

1. Evaluation Criteria (ITB 34)

The Employer shall determine the Most Advantageous Bid, which is the Bid of the Bidder whose Technical Parts have been evaluated as substantially responsive to the bidding document and met the Qualification Criteria and whose Bid has been determined to be the lowest evaluated cost after considering total prices of all items of the Services described in the in Specifications, and listed in the Activity Schedule in Section V, Schedule of Requirements and all duties, taxes, and other levies payable by the Service Provider under the Contract.

Evaluation of the Bidder's Technical Proposal will include an assessment of the Bidder's technical capacity to mobilize key equipment and personnel for the contract consistent with its proposal regarding work methods, scheduling, and material sourcing in sufficient detail and fully in accordance with the requirements stipulated in Section V, Schedule of Requirements.

2. Multiple Contracts (ITB 30.4)

Not applicable

Qualification Criteria (ITB 32.1)

The Purchaser shall assess each Bid against the following Qualification Criteria Requirements for selection of agency for hiring of drone/Aerial Surveyas a service for ORI generation for large scale mapping:

- A. The Bidder's Assets (equipment and technically qualified manpower)
- B. Bidder's Credentials (Turn Over & Work Experience)
- C. Methodology, Work Plan and Organization Staff Plan in response to the Terms of Reference:

A. The Bidder's Assets

The quantification of instruments/resources required for evaluation of bid capacity are given **per package/LOT**. The bidders who wish to apply for more than one package/LOT shall meet the requirements, cumulatively and should be substantiated in the bids submitted. In case a bidder has bid for both the LOTs but does not meet the requirements of both the LOTs taken together; but meets requirements of a single LOT, then in such a case the PURCHASER reserves complete right to qualify the bidder – subject to satisfying other technical qualification conditions – in any one of the two LOTs at Purchaser's discretion. Bidder shall have no say or control over the same.

The qualification criteria of the Instruments related GPS / Drone / Aircraft with sensors can be met by the bidder along with his authorized sub-contractor. The numbers mentioned are the preliminary requirements that should be available with the bidder or its authorized sub-contractor at the time of bidding and will be used for technical evaluation of bid. The ownership of the instruments should be with the bidder or its authorized its sub-contractor only.

The bidder shall however give the detailed implementation plan separately for each LOT that he bids as part of the technical bid describing the actual number of instruments that they will deploy for project execution. The proposed additional number of instruments / equipment's / manpower resources, if any shall be explained in details with per sqkm / per day outputs that are estimated. The detailed implementation plan that is mandatory to be submitted as part of the Technical Bid must include month wise square kilometer of the ORI genera-

tion. The same shall be correlated with the deployment of the resources mentioned in the implementation plan. This shall be mandatory criteria in technical evaluation. An unsatisfactory or unscientific implementation plan shall lead to rejection of the bid at the technical evaluation stage itself.

The bidder shall also explain the process and plan of engaging such requisite quantities as per the implementation plan. The declaration stating the additional quantity of resources (instrument / manpower, computing resources etc) that are required to complete the project within the scheduled time shall be submitted by the bidder with the schedule plan detailing the source of supply of such resources and their technical details. The schedule plan of such increase in resources should be linked and substantiated in the implementation plan which shall be used as a key factor in evaluating the bidders capability of understanding the project scope and its capacity in ensuring the deliverables, on time. The failure to give a proper implementation plan showing completion of the work within 12-months period shall lead disqualification of the bidder in the technical evaluation. Further, failure to deliver output every month as per the said implementation plan shall be treated as a critical breach of the contract and shall result in cancellation of the award apart from delay penalties in payments.

a) Instrument and Software-

a. Aerial data Acquisition Platform

• Professional survey grade PPK enabled UAS/Drone –

Bidder must have minimum 10 nos. of Professional survey grade PPK enabled UAS/Drone with associated camera for achieving at least 5 cm GSD at the time of submission of bid.

- Supporting documents should consist of copy of the valid proof of ownership of each drone to be engaged for providing services along with its Unique Identification Number (UIN) of each drone.

• Aircraft with Large Format Digital Camera– 2nos of aircraft with large format digital camera and associated accessories required for carrying out aerial survey to achieve at least 5 cm GSD. details of aircraft with sensors and its ownership need to be submitted.

Bidders are expected to complete 1000 sqkm area of flying per week (per package). The details of number of drone/aircraft and sensors which shall be used for completing the project and the desired output should be planned and detailed in the implementation plan as part of the technical bid.

b. GNSS receiver

- Minimum 10 units of Dual frequency GPS instruments Capable of tracking and logging Multi frequency & multi constellation signals OR RTK rovers.

c. Aerial Data Processing

- The bidder must achieve on average of not less than 1000Sq KM per week (per package) of ORI generation and prove his capacity to do so during the technical evaluation of the bid by way of per day drone or aerial data acquisition and the number of drone/aircrafts that would be deployed. Details of source of deployment – equipment and funds availability for the same shall be mentioned.
- The bidder shall detail the plan on the following, **package or LOT wise**
 - Completion of acquisition in terms of number of instruments and per day coverage
 - Number of days planned along with number of instruments. The monsoon days / high wind days, cloud cover, etc shall be considered and mentioned in the proposal – for each geographical area / package.

- The implementation plan shall give full clarity on the number of instruments proposed with the estimated targets per day / activity with respect to the methodology proposed and the reasons.
- The number of days of pre-processing of the acquired data for making them ready for generation of DSM and ORI data. Pre-processing includes GPS data processing, project / block set-up, Block adjustment, stereo – model generation etc

d. Workstations for Data Processing: minimum 15nos, per package

- Bidder must have minimum 15 Middle level Workstations and for the rest, as per the implementation plan, the undertaking can be submitted by the bidder OR an agreement with the MEITY empanelment cloud provider in case service provider chooses to process and store data in cloud. Such agreement should clearly describe the storage, processing resources, timelines etc
- The workstation proposed shall have the following minimum configuration
 - RAM – 16 GB
 - Processor Speed – As necessary
 - Internal storage – 1 TB
 - Graphics card – Nvidia Quadro 4 1 GB or equivalent
 - Monitor Size – 19 inches or better

e. Network Storage System: 02(two) no. of Minimum 50TB(in RAID 5 configuration) OR An agreement with the MEITY empanelment cloud provider in case service provider chooses to process and store data in cloud.

f. Servers: minimum 02nos and during the actual implementation as per the Implementation Plan submitted during the technical evaluation. The proposed server configuration shall have the following minimum configuration.

- RAM – 64 GB
- Processor Speed - As necessary
- Internal storage – 1 TB

g. Software Suite for generation of DSM / ORI

- Should have minimum 10 no Software for data processing like Px4D / UAS master / AGI etc. per package for drones and any of the industry standard photogrammetry software suite (LPS, DAT/EM, Inpho etc). During the actual implementation this shall be as per the Implementation Plan submitted during the technical evaluation. The proposed estimates on number of system, output that can be achieved per system and the plan of completion of project should be explained in the implementation plan, in detail – as part of technical bid.

b) Manpower:

The minimum Qualification and number of key- personnel proposed to be deployed in the Project should be as follows. The numbers stated are the minimum required for qualification. Bidder/Service provider shall deploy sufficient additional resources as per Detailed Implementation Plan submitted as part of the technical bid for each LOT as are required to meet the delivery timelines during actual execution.

For the purpose of this Bid Document for each package/LOT, Key Personnel shall include:

- a. Project Manager: At least 01 (one), Project Manager with minimum 3 years in working projects of similar nature & complexity.
- b. Pilot: Minimum 10 (ten) with Remote Pilot License / Certificate as per Drone Rules 2021 and updated from time to time.
- c. Operator: Post-processing for generation DSM and ORI : At least 20(Twenty)technical persons having minimum three years' experience in post-processing in projects of similar nature & complexity on its payroll at the time of submission of technical bid.
- d. Ground Controller: At least 10(five),technical persons having minimum two years' experience in GNSS observations and computation/processing, on its payroll at the time of submission of technical bid.
- e. System Manager cum Data Manager: At least 01 (one),technical person having minimum 3 years of experience in system management & Data Management in Data Production Centre, on its payroll at the time of submission of technical bid
- f. QA/QC Expert: Minimum 5 (five) person having at least five years' experience in post-processing of data in projects of similar nature & complexity, on its payroll at the time of submission of technical bid.

B. Bidder's Credentials:

(a) Financial Capability

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

- a. The Minimum required AVERAGE annual turnover for the last five (5) Financial Year, i.e. 2016-17 to 2020-21 should be INR 30(Thirty) Crore or an equivalent amount in other currency. The bidder should also submit the concerned documents in support of the above to the satisfaction of the purchaser.
- b. Capacity to have a cash flow: The bidder must provide a letter from a reputed Nationalized / Scheduled Bank stating the availability of liquid assets and/or credit facilities exclusively for the contract of value less than INR 5(five) crore.

Notes:

- a. The financial turnover will be taken as given under the head "Income" in audited Profit and Loss Account and excluding non-recurring income, income from other sources and stock. It is clarified that the Financial Turnover means relevant revenue as recorded in the Income side of Profit and Loss Account. It does not mean Profit.
- b. Closing stocks in whatsoever manner should not form part of turnover.
- c. The Bidder should furnish Annual Financial Turnover for each of the last 5 Financial Years in tabular form and give reference of the document (with page no.) relied upon in support of meeting the Qualification Criterion.
- d. The Bidder should submit self-attested copy of Auditor's Report along with Balance Sheet and Profit and Loss Statement along with Schedules for the relevant Financial Year in which the minimum criterion is met. Provisional audit reports or certified statements will not be accepted.

- e. If the Audited Balance Sheet for the immediately preceding year is not available in case of tender opened before 30th Sept., audited Balance Sheets, Profit and Loss Statements and other financial statements of the five Financial Years may be adopted for evaluating the credentials of the Bidder.

(b) Work Experience:

- (i) The experience required to be demonstrated by the Bidder should include as a minimum that he has executed during the last 5 years the following:

Bidder must have experience as service provider in the provision of at least one service contract in Drone/ Aerial Survey and its data processing of similar nature and complexity and the said single contract having a minimum value of Rs **1 Crore** in the last 5 years. The Service Contract cited must necessarily include all activities viz. acquisition of raw data by Drone, post-processing of data for creation of DSM/ORI.

OR

Bidder must have experience as service provider in the provision of upto 5 service contracts in Drone/ Aerial Survey and its data processing of similar nature and complexity and the cumulative value of these contracts together should not be less than Rs. **1 Crore** in the last 5 years. These Service Contracts taken together must necessarily include all activities viz. acquisition of raw data by Drone, post-processing of data for creation of DSM / ORI.

Notes:

- a. Only such works shall be considered where physical completion of entire work is over or commissioning of work has been done, whichever is earlier.
- b. The Bidder should submit the details of such similar completed works as per the format enclosed.
 - Name and address of client with contact details as email address/ Phone No.
 - Contract No. and Date.
 - Scheduled completion date and actual completion date.
 - Details of Complaint, if any, received from the purchaser about the performance of the Equipment/items.
- c. Works carried out by another Service Provider on behalf of the Bidder on a back to back basis will not be considered for satisfaction of the Qualification Criterion by the Bidder.
- d. Credential certificates issued by Government Organizations / Semi Government Organizations of Central or State Government; or by Public Sector Undertakings/ Autonomous Bodies of Central/State Government or their subsidiaries / by Public Ltd. Companies listed in Stock exchange in India or Abroad or subsidiaries of such companies shall only be accepted for assessing the eligibility of a Tenderer. Certificates issued by one of the aforesaid organizations as a lead member (having equity stake of 51% or more) of a Joint Venture (JV) for a work executed for the JV, will also be acceptable. In case of PPP projects, if the bidder has executed a work for a concessionaire who is one of the aforesaid organizations, then the certificate issued by such concessionaire or by the public authority concerned, will also be acceptable.
- e. The cutoff date shall be 31/01/2022.

- (iii) The bidder should provide profile of their company including its Infrastructure, technical manpower and their expertise.
- (iv) The bidder or OEM must have office and firm arrangement in Karnataka to provide support as well as comprehensive management of work.
- (v) The bidder should submit the details of agreements entered into with various manufacturers/partners for the equipment and providing services and their experience to meet the qualification & experience criterion for the turn-key solution.
- (vi) Changes in the make / model of the instruments, if any shall be acceptable, only if the proposed changes are better than the current make / model mentioned and approved as Detailed Implementation Plan as the part of the Technical Bid. This shall be substantiated by the bidder and accepted by the technical evaluation committee appointed by the purchaser.
- (vii) It is the bidder's responsibility of completing all activities of the project within the scheduled time as per the RFP.
- (viii) A change in the sub-contractor is NOT allowed without intimation to the purchaser. Any changes to the sub-contractor can be accepted only if the proposed sub-contractor meet all the qualification criteria mentioned in the RFP. Every change (inclusion / exclusion) of the sub-contractor will lead to deduction of 2% of overall contract fee to the bidder.

SECTION IV BIDDING FORMS

Table of Forms

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1A. LETTER OF BID– TECHNICAL PART

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

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

No alterations to the text except as provided in ITB20.2, shall be permitted and no substitutions shall be accepted except as provided in ITB 12.]

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

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

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

To:

Commissioner,
Survey, Settlement & Land Records,
Revenue Department,
Government of Karnataka,
K R Circle,
Bengaluru – 560 001

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Documents, including Addenda No. issued in accordance with ITB 8: *[insert the number and issuing date of each Addenda]*;
- (b) We meet the eligibility requirements and have no conflict of interest in accordance with ITB 4;
- (c) We are submitting our bids for HIRING OF DRONE OR AERIAL SURVEY AS A SERVICE FOR ORI GENERATION FOR LARGE SCALE MAPPING for **Package 1 / Package 2 / Package 1 & 2.** **(Strikeout whichever is not relevant)**
- (d) We have not been suspended nor declared ineligible by the Purchaser/any Government/Semi-Government entity in the Purchaser's country in accordance with ITB 4.2;
- (e) We offer to supply in conformity with the Bidding Documents and in accordance with the Delivery Schedules specified in the Schedule of Requirements the following Services and deliverables as per the tender document;
- (f) Our bid shall be valid for the period of time specified in ITB Sub-Clause 18.1, from the date fixed for the bid submission deadline in accordance with ITB Sub-Clause 22, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (g) If our bid is accepted, we commit to obtain a performance security in accordance with the Bidding Documents;

- (h) We are not participating, as a Bidder or as a subcontractor, in more than one bid in this bidding process; *[one bid for each/both of the two LOTS is permitted]*;
- (i) We, along with any of our subcontractors, suppliers, consultants, manufacturers, or service providers for any part of the contract, are not subject to, and not controlled by any entity or individual that is subject to, a temporary suspension or a debarment imposed by the Government of Karnataka or Govt of India. Further, we are not ineligible under the Purchaser's Country laws or official regulations.
- (j) We confirm that Principal Secretary to Government, Revenue Department be appointed as the Adjudicator in case of dispute as per this tender document.
- (k) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed;
- (l) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive;
- (m) We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in any type of fraud and corruption; and we will strictly observe the laws against fraud and corruption in force in India namely, "Prevention of Corruption Act 1988."
- (n) We, along with all our sub-contractors, undertake to abide by the Code of Integrity in public Procurement of Government of India,

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

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

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

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

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

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

1B. LETTER OF BID- FINANCIAL PART

The Bidder must submit the FINANCIAL BID only in the eProcurement Portal of the Government of Karnataka and in the forms and space made available therein.

Note: ANY DISCLOSURE OF FINANCIAL BID IN ANY FORM OTHER THAN THROUGH eProcurement's Financial Bid Form or AT ANY OTHER STAGE SHALL LEAD TO DISQUALIFICATION OF THE BIDDER

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

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

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

To:

Commissioner,
Survey, Settlement & Land Records,
Revenue Department,
Government of Karnataka,
K R Circle,
Bengaluru – 560 001

We, the undersigned Bidder have submitted the Financial Bid in eProcurement Portal of Government of Karnataka. In this regard we make the following additional declarations:

- (a) We understand that this is a tender through eProcurement portal of Government of Karnataka viz <https://eproc.karnataka.gov.in> and the financial bid shall be filled up therein and will be evaluated accordingly. Other than in eProcurement Portal at no other place or form the financial bid shall be disclosed or given.
- (b) Our bid shall be valid for the period of time specified in ITB Sub-Clause 18.1, from the date fixed for the bid submission deadline in accordance with ITB Sub-Clause 22, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (c) No commissions, gratuities, or fees have been paid or are to be paid with respect to the bidding process or execution of the Contract:
- (d) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed.

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

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

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

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

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

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

2. BIDDER INFORMATION FORM

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

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

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

Page _____ of _____ pages

1. Bidder's Legal Name <i>[insert Bidder's legal name]</i>
2. Bidder's Registration Number: <i>[insert Registration number]</i>
3. Bidder's Year of Registration: <i>[insert Bidder's year of registration]</i>
4. Bidder's Legal Address in Country of Registration: <i>[insert Bidder's legal address in country of registration] (All communication by post shall be sent to this address)</i>
5. Bidder's Authorized Representative Information Name: <i>[insert Authorized Representative's name]</i> Address: <i>[insert Authorized Representative's Address]</i> Telephone/Fax numbers: <i>[insert Authorized Representative's telephone/fax numbers]</i>
Email Address: <i>[insert Authorized Representative's email address]</i>
6. Attached are copies of original documents of: <i>[check the box(es) of the attached original documents]</i> <input type="checkbox"/> Articles of Incorporation or Registration of firm named in 1. <input type="checkbox"/> GST Registration. <input type="checkbox"/> Included are the organizational chart, a list of Board of Directors, and the beneficial ownership

2A. BIDDER SUB-CONTRACTOR'S INFORMATION FORM

[The Bidder shall fill in this Form for each Sub-Contractor Partner separately in accordance with the instructions indicated below. No alterations to its format shall be permitted and no substitutions shall be accepted.]

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

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

Page _____ of _____ pages

1. Bidder's Legal Name <i>[insert Bidder's legal name]</i>
2. Bidder's Sub-Contractor Member's Name <i>[insert Subcontractor Member legal name]</i>
3. Bidder's Sub-Contractor Registration: <i>[insert Sub-Contractor Member's Registration]</i>
4. Bidder's Sub-Contractor Member's Year of Registration: <i>[insert Bidder's Sub-Contractor Member's year of registration]</i>
5. Bidder's Sub-Contractor Member's Address in Country of Registration: <i>[insert Bidder's Sub-Contractor Member's address in country of registration]</i>
6. Bidder's Sub-Contractor Member's Authorized Representative Information Name: <i>[insert Sub-Contractor Member's Authorized Representative's name]</i> Address: <i>[insert Sub-Contractor Member's Authorized Representative's Address]</i> Telephone/Fax numbers: <i>[insert Sub-Contractor Member's Authorized Representative's telephone/fax numbers]</i> Email Address: <i>[insert Sub-Contractor Member's Authorized Representative's email address]</i>
7. Attached are copies of original documents of: <i>[check the box(es) of the attached original documents]</i> <input type="checkbox"/> Articles of Incorporation (or equivalent documents of constitution or association), and/or registration documents of the legal entity named above. <input type="checkbox"/> GST Registration. <input type="checkbox"/> Included are the organizational chart, a list of Board of Directors, and the beneficial ownership

8. Activity to be performed by the sub-contractor in this project (*Encircle the items from the below list for which the sub-contractor will perform the role*)

- a. Drone Data Acquisition with GPS Control
- b. Aerial Image Acquisition with GPS Control
- c. DGPS Control Survey

3. QUALIFICATION INFORMATION

1. Individual Bidders

1.1 Constitution or legal status of Bidder: *[attach copy]*

Place of registration: *[insert]*

Principal place of business: *[insert]*

Power of attorney of signatory of Bid: *[attach]*

1.2 Total annual volume of Services performed in five years, in INR, Convert to INR if internationally traded currency is specified in the work order submitted as proof: *[insert]*

1.3 Services performed as prime Service Provider on the provision of Services of a similar nature and volume over the last five years. The values should be indicated in the same currency used for Item 1.2 above. Also list details of work under way or committed, including expected completion date.

Project name	Country in which the project is executed	Name of employer and contact person	Type of Services provided	year of completion	Value of contract (in INR)	% completed (in terms of payment received)

1.4 Major items of Service Provider's Equipment proposed for carrying out the Services. List all information requested below. Refer also to Section III 3(a). *(include separate row for each make / model of the instrument)*

Item of equipment	Availability Proposal				Proposed total Quantity to be used for the project
	Make & Model & ID Number	Owned by bidder / Sub contractor	Nos.	Age/ Condition	
(a) Professional survey grade PPK enabled UAS/Drone OR Large format digital Aerial Camera and Aircraft detail					
(b) Dual Frequency GNSS receivers/RTK rover					
(c) Middle level Work-					

stations					
(d) Network Storage system					
(g) Backup Device (Minimum 50 TB)					
(h) Servers					
(i) Software of Mission planning & data acquisition					
(j) Post processing software for DSM & ORI					

Note: - Pl refer Section III for minimum requirement of equipment's. Proof of ownership of the equipment's should be submitted

1.5 Qualifications and experience of key personnel proposed for administration and execution of the Contract. Attach biographical data. Refer also to Section III 3(b) and GCC Clause 4.1.

Table 1.5(a)

Sl. No.	Title of Position	Minimum required as per RFP	No of Persons proposed	Average years of experience in proposed position
1	Project Manager	1		
2	Pilot and Co Pilot	10		
	Operator – Pre-Processing and Block Setup	10		
3	Operator – Post-processing of DSM & ORI	20		
4	GNSS Surveyor	10		
5	System Manager cum Data Manager	1		
6	Expert QA/QC	5		

b) Details of Proposed Positions (Names):

Table 1.5(b)

Include separate row for each staff to be considered as part of qualification criteria. (Detailed CV of each staff to be enclosed)

Sl. No.	Title of Position	Name of the Person	Qualification	Experience	Bidder / Sub contractor name
1	Project Manager	1			
2	Pilot and Co Pilot	10			

	Operator – Pre-Processing and Block Setup	10			
3	Operator – Post-processing of DSM & ORI	20			
4	GNSS Surveyor	10			
5	System Manager cum Data Manager	1			
6	Expert QA/QC	5			

c) **Resume of every Proposed Personnel should be enclosed as per format given below:**

Table 1.5(c)

Title Position as per Table 1.5(b): _____

[e.g. for Project Manager, Pilot, Supervisor, Operator, System Manager & QA/QC Expert etc]

Name of Bidder:	
Position:	
Personnel Information	Name: _____ Date of Birth: _____
	Professional Qualification: _____
	General of Experience: _____
	Experience in Proposed Position: _____
Present	Name of Employer: _____ Address of Employer: _____
	Telephone: _____ Contact (Manager/Personnel officer) _____
	Fax: _____ E-mail: _____
	Job Title: _____ Years with present employer _____

Summarize professional experience over the last 10 years, in reverse chronological order. Indicate particular technical and managerial experience relevant to the project.		
S.No.	Period (From-To)	Details of experience in Drone Survey work
1		Company : _____ Project Name : _____ Brief description of project : _____ Position (in which worked) : _____ Details of work handled : _____

2		Company : Project Name : Brief description of project : Position (in which worked) : Details of work handled :
3		Company : Project Name : Brief description of project : Position (in which worked) : Details of work handled :

1.6 Proposed subcontracts and firms involved. Refer to GCC Clause 3.5 and 4.1.

Sections of the Services	Subcontractor (name and address)	Experience in providing similar Services
(a)		
(b)		
(c)		

1.7 Financial reports for the last five years: balance sheets, profit and loss statements, auditors' reports, etc. List below and attach copies.

1.8 Evidence of access to financial resources to meet the qualification requirements: cash in hand, lines of credit, etc. List below and attach copies of support documents. We certify/confirm that we comply with eligibility requirements as per Section III

1.9 Name, address, and telephone, email, and facsimile numbers of banks that may provide references if contacted by the Employer.

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

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

- (a)
- (b)

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

1.12 Proposed Program (service work method and schedule). Descriptions, drawings, and charts, as necessary, to comply with the requirements of the bidding documents. Refer also to ITB 17.3.

2. Joint Ventures NOT PERMITTED

3. Additional Requirements 3.1 Bidders should provide any additional information required in the Bid.

4. METHOD STATEMENT

[Bidder shall provide information and write-up as per points listed below. The bidder shall furnish the sufficient details in respect of all headings/sub-headings and documentary evidences as per format given below.

1. DRONE/AERIAL DATA ACQUISITION & POST-PROCESSING

A) Technology: Details of Technology for data Acquisition using Drone / Aerial Survey using Large Format Digital Camera:

- i. Workflow showing various stages of work and their inter-dependencies.
- ii. Details of Processes at every stage viz. planning, mission/flight planning, actual execution
- iii. Details of approvals / clearance that need to be obtained for data acquisition and processing. The bidders understanding on the security clearance process need to be established.
- iv. Best Practices that will be adopted at each stage
- v. Details of manual/semi-automatic/automatic QA/QC measures to be taken during/at end of each stage.
- vi. Brief write up based on information provided on above points justifying the adequacy of processes and practices to meet the technical specifications stipulated in bid document. (fundamental & supplementary accuracy)

B) Equipment: Make, model and specifications of key equipment's viz. aerial survey platform OR UAS/DRONE, On-board and base GNSS receivers, On-board IMU, Camera/Sensors for raw data acquisition, hardware & software to be used for flight planning, flight monitoring, and justification of equipment to meet the technical specifications stipulated in bid document

C) Details of Previous Work:

- i. Key Specifications of similar work executed by the bidder listed in section III in which Drone/ Aerial survey Technology has been. References to be cited of Indian & International Projects (from bidder's own experience)
- ii. Brief write-up based on information provided above clearly bringing out how by suitable modifications(if any) to the Flying/Acquisition parameters the specifications stipulated in this bid document shall be met requirements of this Project

2. PROVISION OF GROUND CONTROL POINTS

Full use of the established CORS station by Survey of India for Karnataka should be done to get the best out the said infrastructure. Further and in conjunction with that –

- i. Density & distribution of Ground Stations to be established for correction to onboard GNSS
- ii. Equipment to be used for Observations
- iii. Hardware & Software to be used for computation
- iv. Description of observation methods
- v. Description of computation method
- vi. Density and distribution of check-points for Internal QA/QC in order to meet the Fundamental & Supplemental accuracy stipulated in Section V

3. POST PROCESSING

- (i) Details of Hardware & IT Infrastructure to be set up in Production Centre justifying its adequacy to handle and store raw Data, key intermediate data, data under process and Processed Data/deliverables.
- (ii) Software to be used for Post-Processing for generating DSM & ORI
- (iii) Workflow showing various stages of Post-Processing and their interdependencies
- (iv) Best Practices that will be adopted at each stage
- (v) Details of manual/semi-automatic/automatic QA/QC measures to be taken
- (vi) Brief write-up based on information provided above justifying the adequacy of hardware, software, methods & processes proposed to meet the specifications stipulated in the bid-document

5. WORK PLAN & SCHEDULE

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

1. Resource Deployment

- i. Activity wise Effort Estimate viz. Raw Data Acquisition, Provision of Ground Control, Pre-processing and Block setup, Generation of ORI and DEM.
- ii. Activity wise expected out-turns
- iii. Manpower resources proposed based on effort estimate calculation & expected out-turns for all the activities
- iv. Details of resource deployment for Internal QA/QC by the bidder shall also be provided.
- v. Number of shifts proposed
- vi. Quantity of equipment (Drone fitted with on-board GNSS, Camera), instruments, hardware and software for every activity.

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

3. Bidder shall provide details of resource deployment in similar services performed by them in previous projects to justify that the proposed work plan from their previous experience

4. The work-plan, schedule and resource deployment has to be submitted separately for different lots/phase/districts clearly bringing out the details of resources/works that are clubbed (if any).

5. The implementation plan need to be explained in detail. The table below need to be filled and submitted by the bidder.

- Mention quantity (in numbers) and the estimated area (in Sq Km) that would be completed in a month, explicitly.
- On the timelines, please colour the cells. The numbers and colours mentioned are indicative. The bidder needs to calculate and update them, appropriately.
- The descriptive explanation of Implementation Plan should clearly reflect the estimates per day / week and month - for each activity. The Plan of scaling of resources and equipment's should be clear so that it reflects the proper understanding of the project, practical timelines and understanding of field realities.
- In case of procurement of new equipment's or instruments like drones / GPS devices etc, the timelines for such procurements and its delivery for project implementation should be considered. The same should be properly reflected and mentioned in the plan

- Clarity in the implementation plan - in terms of resources, estimates, field conditions and deliverables shall be reviewed critically. The understanding of the bidder on the complexities will be reviewed based on it. If clarity is not provided in the implementation plan, the bids will not be considered as technically qualified.
- The human resources / equipment's that would be deployed should meet the qualification / experience and the specification mentioned in the RFP.
- Penalties will be levied for delay in submission of proposed deliverables, every month.
- Every month delay in submission of Deliverables (colour balanced ortho mosaic) will lead to penalty of 2% per week based on the quantities (in Sqkm) that was not delivered for the month as per plan. For the penalty, the amount will be computed based on per Sqkm area cost quoted by the bidder.
- Every Delivery (either grids / tiles) shall be having minimum area of 100 Sqkm, exclusive of overlapping region. Overlaps of 50 m on all sides of tiles / villages shall be provided for DSM and ortho mosaic.
- The QA / QC process should be explained in detail and clearly. Methods of achieving the accuracy and the parameters / process that would be adopted for verification and acceptance shall be detailed.

Price Schedule Forms

*[The Bidder shall fill in these Price Schedule Forms in accordance with the instructions indicated. The list of line items in column 1 of the **Price Schedules** shall coincide with the List of Goods and Related Services specified by the Purchaser in the Schedule of Requirements.]*

HIRING OF DRONE OR AERIAL SURVEY AS A SERVICE FOR ORI GENERATION FOR LARGE SCALE MAPPING UNDER RESURVEY/SURVEY PROJECT AND SVAMITVA PROJECT

6. PRICE BID for LOT _____

Date: _____ OTE No: _____

SI No	Description	Unit of Payment	Total Area	Unit price per Sq KM	Total Price	GST and other taxes payable per item if Contract is awarded		Total Price
1	2	3	4	5	6 = (col 5*6)	7 (Percentage)	8 (Actual amount of GST & Taxes)	9 = Col. 6+8
1	Drone or Aerial Survey based Generation and delivery of Ortho-Rectified Images (ORI) \, duly meeting the specifications and conditions specified in the tender document - including all costs associated with the same for – Package 1	Per Square Kilometer of final output delivered and accepted (excluding buffer area)	34378 Sq KM					
2	Drone or Aerial Survey based Generation and delivery of Ortho-Rectified Images (ORI) \, duly meeting the specifications and conditions specified in the tender document - including all costs associated with the same for – Package 2	Per Square Kilometer of final output delivered and accepted (excluding buffer area)	39429 Sq Km					

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

NB: The cost of setting up Production Centre and mobilization , deployment and use-rate of equipment, h/w, s/w, other costs associated with Preparation of site wages/salary of manpower deployed and all other expenses incurred shall be deemed to be included in above price bid

The above bid format is indicative and shall not be submitted as part of technical bid. The commercial bid format shall be filled and submitted as per the e-procurement portal of Govt of Karnataka. The cost quoted shall be inclusive of all taxes. The tax components shall be detailed separately, as per the provisions in the e-procurement portal

8. BID SECURITY DECLARATION FORM

To,

Commissioner,
Survey, Settlement & Land Records,
Revenue Department,
Government of Karnataka,
K R Circle,
Bengaluru – 560 001

Dear Sir,

Ref: Your OTE document No _____ dated _____

We, the undersigned, declare that:

We, M/s.....(herein referred as bidder)¹ understand that, according to bid document, bids must be supported with a Bid Securing Declaration as part of the EMD, therefore in addition to submission of the EMD (Rs 5 Lakhs through e-Procurement Portal and additional Rs 25 Lakhs in the form of a Bank Guarantee from a Scheduled Commercial Bank as per conditions laid in this RFP), bidder give the declaration that:-

Bidder will automatically be, in addition to forfeiture of the EMD of Rs 30 Lakhs, suspended from being eligible for bidding in any contract with any of the Government of Karnataka, for a period of 2 years from the date of debarment, if bidder are in breach of any of the following obligation(s) under the bid conditions:-

(a) If a Bidder withdraws the proposal or increases the quoted prices after opening of the Proposal and during the period of Bid validity period or its extended period, if any.

(b) In case of a successful Bidder, if the Bidder fails to sign the Agreement in accordance with the terms and conditions (including timelines for execution of the Agreement) of this Bid Document or fails to furnish the Performance Bank Guarantee in accordance with the terms and conditions (including time lines for furnishing PBG) of this Bid Document.

(c) During the Bid process, if a Bidder indulges in any act as would jeopardize or unnecessarily delay the process of bid evaluation and finalization.

(d) if the Purchaser comes to a conclusion that bidder (including members of Joint Venture/ Sub-Contractor)/ contractor/ supplier/ consultant/ service-provider), directly or through an agent, has violated Code of Integrity in competing for the contract.

Bidder understand that this declaration shall expire if Bidder is not the successful Bidder and on receipt of purchaser's notification of the award to another Bidder; or thirty days after the validity of the Bid; whichever is earlier.

(Signature)

Authorized Signatory

Name : _____

Designation: _____

Office Seal: _____

Place: _____

Date: _____

BID SECURITY/EARNEST MONEY DEPOSIT (EMD) - BANK GUARANTEE

[Guarantor letterhead or SWIFT identifier code]

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

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

To:

The Commissioner
Survey, Settlement & Land Records Department,
K R Circle, Opposite BESCOM Head Office,
Bengaluru

WHEREAS _____ *[name and address of Bidder]* (hereinafter called "the Applicant") has undertaken, in pursuance of Tender No. SSLR/STR/17016/9/2022 dated 7-April-2022 to participate in the bidding process for *HIRING OF DRONE OR AERIALSURVEYAS A SERVICE FOR ORI GENERATION FOR LARGE SCALE MAPPING* (hereinafter called "the tender");

AND WHEREAS it has been stipulated by you in the said tender that the Applicant shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as part of Earnest Money Deposit (EMD) for compliance with his obligations in accordance with the tender;

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

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Applicant, up to a total of _____ *[amount of guarantee¹]* _____ *[in words]*, such sum being payable in the types and proportions of currencies in which the EMD for tender is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of _____ *[amount of guarantee]* as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

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

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

This guarantee shall be valid until (i.e.) remain valid for a period of 45 days beyond the original validity period of the 3-months bids that is shall remain valid for 135 days or beyond that as per

¹ *An amount shall be inserted by the Guarantor, representing the amount based on the number of packages being quoted by the bidder as EMD as specified in the tender and denominated in Indian Rupees.*

any period of extension of bid validity, if so requested including any warranty obligations², and any demand for payment under it must be received by us at this office on or before that date.

Signature and seal of the guarantor _____

Name of Bank _____

Address _____

Date _____

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

² Completion date as described in ITB Clause 18.2

9. PROFORMA FOR PERFORMANCE STATEMENT

[Please see ITB Clause 36.2 and Section III-Evaluation and Qualification Criteria]

Proforma for Performance Statement (for a period of last five years)

Bid No. _____ Date of opening _____ Time _____ Hours
 Name of the Firm _____

<u>Order placed by (full address of Client)</u>	<u>Order No. and date</u>	<u>Description of services and quantity of ordered in terms of area</u>	<u>Value of order (in INR)</u>	<u>Date of completion of service</u>		<u>Remarks indicating reasons for late delivery, if any</u>	<u>Attach a certificate from the concerned employer for satisfactory performance of service contract</u>
				As per contract	Actual		
1	2	3	4	5	6	7	8

Signature and seal of the Bidder _____

Note:

1. In support of having completed above works, attach self-attested copies of the completion certificate from the owner/client or Executing Agency / Consultant appointed by owner / Client indicating the name of work, the description of work done by the Bidder, date of start, date of completion (contractual & actual) and contract value as awarded and as executed by the Bidder. "Contract Value" shall mean gross value of the completed work including cost of materials supplied by the owner/client but excluding those supplied free of cost.
2. Credential certificates issued by Government Organizations/ Semi Government Organizations of Central or State Government; or by Public Sector Undertakings/Autonomous Bodies of Central/State Government or their subsidiaries / by Public Ltd. Companies listed in Stock exchange in India or Abroad shall only be accepted for assessing the eligibility of a Tenderer. Certificates issued by one of the aforesaid organizations as a lead member (having equity stake of 51% or more) of a Joint Venture (JV) for a work executed for the JV, will also be acceptable. In case of PPP projects, if the bidder has executed a work for a concessionaire who is one of the aforesaid organizations, then the certificate issued by such concessionaire or by the public authority concerned, will also be acceptable.
- 3 Information must be furnished for works carried out by the Bidder in his own name or proportionate share as member of a Joint Venture. In the latter case details of contract value including extent of financial participation by partners in that work should be furnished.
- 4 If a Bidder has got a work executed through a Subcontractor on a back to back basis, the Bidder cannot include such a work for his satisfying the Qualification Criterion even if the Client has issued a Completion Certificate in favour of that Bidder.
- 5 Use a separate sheet for each partner in case of a Joint Venture.
- 6.Only similar works completed during the last 5 years prior to the last stipulated date for submission of Bid, which meet the Qualification Criterion need be included in this list.

PART 2 - SUPPLY REQUIREMENTS

SECTION V – SCHEDULE OF REQUIREMENTS

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1.LIST OF GOODS AND DELIVERY SCHEDULE

Deleted

2. ACTIVITY SCHEDULE

1. The flying and ORI generation shall be done district wise and within the district, taluk-wise and within the taluk – village wise/ Gridwise.
2. The district wise, taluk wise and village wise flying and ORI handover plan should be done, as per the implementation plan.
3. The Activity Schedule shall be as per Detailed Implementation Plan included in the technical bid and as finalized as part of the signing of the Contract with the Bid Winner.
4. In 12-months the complete flying and delivery of all deliverables for all the villages in all the districts in the LOT shall be completed. The Activity Schedule shall be accordingly drawn up.
5. Every delivery should be accompanied with its QA/QC report, as detailed in the bid/implementation plan.

3. TECHNICAL SPECIFICATIONS

1. General:

Aerial image acquisition using Drone Survey or Aerial survey shall be carried out for of the defined packages or LOTs with a GSD of 5cm or better.. Data will be captured with reference to control network already established by CORS Network/SoI GCP's in State of Karnataka. To achieve the required accuracy, the bidder will have to establish ground control points and check points prior to flying.

The following data will be provided to the Service Provider:

- Area of Interest (AOI) in shp and kmz format
- Static Observation Data of CORS stations/SoI GCP's for post processing OR
- Facility of NRTK (Network RTK) if RTK rovers are used.

Broadly, the Service Provider would need to provide the following services:

- (i) Provision of Ground controls for Base stations as per requirements of project to achieve the required accuracy and also for check points.
- (ii) Procuring necessary clearances from DGCA & Ministry of Defense, other agencies of Government of India for flying over the AOI to acquire Drone data, Imagery etc.
- (iii) Compliance of Requirements for Operation of Civil Remotely Piloted Aircraft System (RPAS) issued by Ministry of Civil Aviation, Government of India as per the Drone Act 2021 dated 25th August 2021. In case of Aerial survey using aircraft fitted with Large Format Digital Camera, the standard conditions defined by Ministry of Defence for conduct of aerial survey / photography using aircraft /UAV's dated 28th Dec 2018 shall be followed.
- (iv) The purchaser shall provide all necessary letters and authorization to the service provider. It is the responsibility of the service provider to obtain the necessary clearance for aerial surveys for all authorities concerned.
- (v) Preparation of Mission planning
- (vi) Post-processing of Drone / aerial survey captured data to produce the following:
 - a. Digital Surface Model (DSM)
 - b. Ortho Rectified Images (ORI) and submitting as seamless color balanced mosaic for the project area.
- (vii) Conducting Quality Control/Quality Assurance (QC/QA) to establish correctness at each stage.
- (viii) Validating horizontal and vertical accuracy through independent means
- (ix) Compliance with other product requirements such as file naming, datum and projection, units, etc
- (x) Delivery of raw data, other products and supporting reports

2. Scope of Work

a. Clearances for flying

The Service Provider is responsible to obtain necessary clearances from Director General of Civil Aviation, Ministry of Defence and other agencies of Government of India or concerned State Government as may be required to complete the job of flying over the AoI, acquire image data using Drone / Aerial Survey etc. The purchaser would provide necessary documentation; however, getting clearance would be the entirely the responsibility

of the Service Provider. Scope of this activity shall include operational requirements for Civil Remotely Piloted Aircraft System (RPAS) as per Drone Rules 2021 notified by Ministry of Civil Aviation, dated 25th August 2021 and also in obtaining Unique Identification Number (UIN), and the type certificate, Insurance etc.

b. Mission Planning

The flight path shall cover the desired area completely including enough cross flight lines to eliminate shadowing and allow for proper quality control. Flight line forward overlap should be 80% & side overlap should be 70% or greater, as required for Drone and for large format aerial cameras it shall be 60 % and 40%, to ensure that there are no data gaps between the usable portions of the swaths. In the highrise areas, the overlap has to be increased so that the most nadir pictures are used for ortho generation which shall have minimal tilt from high altitude buildings / trees. Data collections in high relief terrain should have greater overlap. Any data with gaps between the geometrically usable portions of the swaths will be rejected.

c. Ground Control Survey

The Service Provider must use ground control network already established by SOI or CORS Network to establish the ground control for the base stations for drone / aircraft based aerial survey flying activities. The proposed control network should be provided to KRSAC for its approval prior to commencement of work. The control network points shall be surveyed using GNSS of dual frequency (L1 and L2) and multi-channel capability with on-the-fly ambiguity resolution and be able to log GPS data at 1-second epochs or better. Sufficient no. of check points must also be made with reference to existing ground control network or CORS network to check the accuracy of ORI.

d. Data Acquisition

The Service Provider will acquire high-resolution 5 cm GSD or better images using drone or Large format digital cameras as per the technical specifications with forward overlap of 80% & side overlap of 70% / 60% forward overlap and 40% side overlap or greater, respectively. The Service Provider must use ground control already established with reference to SOI GCP library or CORS network for the base stations for drone / aerial flying activities.

e. Post-Processing

The Service Provider will provide high-resolution 5 cm GSD or better ORI and DSM of 25 cm or better to achieve the desired ortho image accuracy after post processing of drone / aerial data. The accuracy the ORI will be checked using the check points. The Service Provider will ensure Proper versioning, file naming. The naming convention shall be defined by KRSAC (as per LGD code, in case of villages OR K-GIS Grid codes) and management of data in various Production Cycles.

f. Quality Control/ Quality Assurance

Quality Control/Quality Assurance (QC/QA) of the Drone or aerial data and/or derived data at various stages of Project including validating horizontal and vertical accuracy as per specifications laid down in RFB will be the responsibility of the Service Provider. The purchaser may perform additional QC/QA testing. This shall include (a) Carrying out corrections as per Quality Audit Report and security vetting report provided by

KRSAC/SOI (b) Facilitating quality audit, stage approvals , security vetting and final acceptance tests by KRSAC/SOI

3.0 TECHNICAL SPECIFICATION:

1. SPECIFICATIONS OF UAS/DRONE BASED SYSTEM

Technical Specifications			
S.No.	Description	Required Specification without operator	Bidder's Offered Specifications / Compliance /Deviation Statement (to be filled up by BIDDER)
1.	UAS Type	Up to the service provider	
2.	Mission	Surveying and Mapping /Professional Grade	
3.	(i) Landing &Takeoff	Vertical Take Off and Landing (VTOL)	
4.	MaximumTakeoff weight (MTOW)	Up to the service provider	
5.	Flight Height above Ground Level	Maximum of 120m AGL with Terrain tracing Capability	
6.	Endurance or Max flight time	Minimum 40Minutes	
7.	Sensor or Camera	One high resolution RGB camera with minimum resolution 20 MP or more. Drone camera should capture the image in fix mode.	
8.	GNSS Grade	Both PPK/RTK Enabled onboard GNSS alongwith Base(Master) GNSS receiver with L1 & L2 frequencies capable to achieve accuracies stipulated in bid-document.	
9.	Nominal Coverage at 120 m (400 ft) Forward Overlap : 80 % Side Overlap :70%	1sq kmwith less than 5cm GSD	
10.	Operational wind Speed	Minimum 8 m/s or higher	
11.	Ground Sampling Distance (GSD)	5cm or better	

12.	Average X,Y accuracy	<10cm(95% of total checked values(absolute accuracy) should be less than 10 cm)	
13.	Average Z accuracy	< 20 cm(95% of total checked values (absolute accuracy) should be less than 20 cm)	
14.	Battery Type	Li-Po/Li-ion or more efficient, international Standard Compliant	
15.	Emergency Recovery Mode	Ability to return back to launch pad or home position with landing accuracy of 1 meter or better in case of communication failure, low battery/power and high wind (more than operational wind speed) etc.	
16.	Onboard storage	Minimum 64 GB or more (Expandable)	
17.	Security	128 bit encryption	
18.	Flight planning & control software	<p>A navigation software package that enables the user to plan and perform complex flight patterns for different surveying applications (Corridor and Area mapping) and should allow the combination of telemetry data with the recorded images/data. The software should feature the functions that enable to plan, fly and prepare the data for post processing for different applications.Package should include at least following features:</p> <ul style="list-style-type: none"> • Flight Plan editor & monitoringFlight book • Photo count display during flight • Should permit use of 3D data for flight planning in hilly/rolling terrain. Should have the interface to insert SRTM data and K-GIS DEM data other than default • Real time tracking and live data Preview • Link loss time should be flexible/Drone pilot centric so that he/she can fix the same on the 	

		<p>basis of flight duration.</p> <ul style="list-style-type: none"> • Should have the capability of flight/mission planning of adjacent villages/polygon (more than one village/polygon) simultaneously at once before commencement of flight simultaneously and also automatic navigation of Drone after completion of one polygon to another planned polygon without specific command of Pilots. • Should have one software for both flight planning & Geo-tagging and should have optimal input for GNSS coordinates • Should have capability of recording more than one flight data without being downloading the same after each flight. All the flight data can be downloaded at once after closing the everyday work. • Should have capability to store each day data of different flights separately • The geo-tagged images should provide the INS data along with the coordinates for input into the image processing software • On board GNSS observation file should be available separately. Drone camera should capture photos of mission polygon only with specified overlap i.e it should not capture unwanted photos while moving from one flight line to another in particular mission polygon. 	
19.	Data Link	Communication data link complying with International standard and certification. Frequencies used should not interfere with other users allocated frequency spectrum	

20.	Communication distance between GCS and flying Drone/UAV	Upto VLOS as per CAR guidelines	
21.	Operational Temperature	-5 to +50°C	
22.	The UAV/RPAS provided by bidder shall also be equipped with the following serviceable components/ equipment	i. GNSS for horizontal and vertical position fixing	
		ii. Autonomous Flight Termination System or Return Home (RH) option	
		iii. Flashing anti-collision strobe lights	
		iv. No permission – No Take-off (NPNT) compliant for APP based real time tracking. NPNT Hardware and Firmware shall be tamper proof.	
		v. Fire resistant identification plate inscribed with UIN	
		vi. Flight controller with flight data logging capability	
		vii. SSR transponder (Mode 'C' or 'S') or ADS-B out equipment (if intended to operate beyond 400 feet/120 m AGL)	
		viii. Barometric equipment with capability for remote sub-scale setting	
		ix. Geo-fencing capability	
		x. Detect and Avoid capability	
		xi. Manufacture Serial Number	
		xii. 360 degree collision avoidance system	
23.	DGCA Guideline	i. The Professional Survey Grade unmanned Aerial Vehicle /Drone shall have all necessary permits and should be registered with DGCA as per (or conform to) the latest Drone Rules 2021 notified by Ministry of Civil Aviation dated 25 th August 2021. Obtaining type certificate, flying approval in various zones as per the digital sky platform, , DGCS clearance for import, DGFT license for	

		import, security clearance or any other clearance along with obtaining DAN No./UIN for the drones shall rest with service provider. SSLR shall act only as facilitator. UAV survey operations to be carried out in the field shall also conform to the above mentioned DGCA standards. The Professional Survey Grade UAV/Drone shall also be capable of qualifying EMI/EMC test ii. The operator provided should have undergone proper training, should have proper clearances and permits/licenses to operate UAV as per (or conform to) the latest Drone Rules 2021 and other guidelines as and when issued by DGCA in future.	
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2. SPECIFICATION FOR AIRCRAFT WITH LARGE FORMAT DIGITAL CAMERA

Technical Specifications			
S.No.	Description	Required Specification without operator	Bidder's Offered Specifications / Compliance / Deviation Statement (to be filled up by BIDDER)
24.	Aircraft Type	Up to the service provider (fixed wing / Rotary (Helicopter))	
25.	Mission	Professional large format aerial photography for large scale mapping	
26.	Flight Height above Ground Level	upto 10,000 ft. GSD of aerial image acquired shall be 5cm or better	
27.	Endurance or Max flight time	Minimum 4 hrs	
28.	Sensor or Camera	Large format digital camera which can acquire upto 2 cm GSD of image.	
29.	Focal Length	50 cm or above	

30.	Channels	4 band – R, G,B, NIR	
31.	Pan sharpened Ratio	1 : 4 or better (ex 1: 3)	
32.	Flying height	Upto 5000 ft	
33.	Ground Coverage per flight/frame	Coverage of more than 750 m in swath @ 5 cm GSD when flown at 1000 m height	
34.	GNSS Grade	Both PPK/RTK Enabled onboard GNSS alongwith Base(Master) GNSS receiver with L1 & L2 frequencies capable to achieve accuracies stipulated in bid-document.	
35.	Mount	Gyro stabilized mount with IMU with 20 Hz minimum	
36.	Ground Sampling Distance (GSD)	5cm or better	
37.	Average X,Y accuracy	<10cm(95% of total checked values(absolute accuracy) should be less than 10 cm)	
38.	Average Z accuracy	< 20 cm(95% of total checked values (absolute accuracy) should be less than 20 cm)	
39.	Onboard storage	Minimum 2 TB or more (Expandable)	
40.	Security	128 bit encryption	
41.	Flight planning & control software	<p>A navigation software package that enables the user to plan and perform complex flight patterns for different surveying applications (Corridor and Area mapping) and should allow the combination of telemetry data with the recorded images/data. The software should feature the functions that enable to plan, fly and prepare the data for post processing for different applications.Package should include at least following features:</p> <ul style="list-style-type: none"> • Flight Plan editor & monitoringFlight book • Photo count display during flight • Should permit use of 3D data for flight planning in 	

		<p>hilly/rolling terrain. Should have the interface to insert SRTM data and K-GIS DEM data other than default</p> <ul style="list-style-type: none"> • Real time tracking and live data Preview • Should have the capability of flight/mission planning of adjacent villages/polygon (more than one village/polygon) simultaneously at once before commencement of flight simultaneously. • Should have software for both flight planning & processing of GPS / IMU to derive the better accurate Photo orientation parameters and co-ordinates. • Processing software (block set-up) shall be able to import the data and generate the blocks / tie points as part of triangulation adjustment. • Should have capability of recording more than one flight data without being downloading the same after each flight. All the flight data can be downloaded at once after closing the everyday work. • Should have capability to store each day data of different flights separately • The geo-tagged images should provide the INS data along with the coordinates for input into the image processing software • On board GNSS observation file should be available separately. 	
42.	Operational Temperature	-5 to +50°C	

2. SPECIFICATION OF DRONE OR AERIAL SURVEY DATA ACQUISITION

Coverage	1. Area finalized & approved by SSLR / KRSAC with 50 m buffer surrounding the AOI polygon.
Collection condition	2. Sun angle - no less than 30 degree to minimize shadow. 3. The project site has relief changes due to built-up area therefore photograph should be captured at high sun angle to avoid shadows due to these high relief formations. 4. Cloud free with minimal smoke, smog, fog and dust. 5. To avoid breaks within individual flight lines. 6. Open space should be chosen for the flight and landing of drone to avoid endanger to public or property.
Outturn	It is expected that Service provider will carry out drone flying in average 05 villages / grids per day ready Service Provider is expected to complete aerial data acquisition for over 1000 Sqkm in a week.

3. SPECIFICATION OF PROVISION OF GROUND CONTROL POINT

Sl No.	Description	Specifications
1.	GNSS Control Point	<p>1. Installation of Control Points for Drone / Aerial Survey Using existing ground control network of CORS Network or GCP library, I base Control Points for Drone flying shall be established. Density of these control points will be finalized by Service Provider in consultation with Survey of India to achieve stipulated accuracy of Drone survey.</p> <p>The following points shall be kept in mind while selecting control point locations:</p> <ul style="list-style-type: none"> • Clear of HT/LT lines, radio / mobile towers, high frequency dish antennas, radar etc. • Free from multipath problems associated with tall features in the vicinity. • Free from foliage • Free from major obstructions / obstacles • Easily accessible to the survey team. • Open to sky with a clear view towards sky at 15-degree angle with horizontal plain. • Marker numbering scheme shall be finalized in consultation with Survey of India before start of work.
		<p>1. Scheme and schedule of observation</p> <ul style="list-style-type: none"> • Base control points must be located on pillars/permanent structures. • The Service Provider shall prepare a scheme i.e network of base control stations along with the proposed

		<p>flight plan, in advance and get it approved from KRSAC/SOI. The network shall be presented on satellite imagery. This should also contain description of proposed base control stations.</p> <ul style="list-style-type: none"> • When observation scheme containing location of base control stations which is adequately connecting to Existing ground control points forming a network is approved by KRSAC, the Service Provider shall submit schedule of observation indicating tentative date and time of observation at base control stations specifying their locations.
		<p>Establishment and Observation of base control points</p> <ul style="list-style-type: none"> • Base control stations shall be engraved neatly for their identification and will be painted by filling of engraving with contrast color paint. Unique ID of Point and date information are to be engraved. Necessary jungle clearance and approach to site for proper execution of work wherever required shall have to done by the Service Provider at no extra cost. • Utilizing existing GCP Ground Control Points or CORS network provided by Survey of India can be considered which shall enable to achieve the adjusted coordinates from the GNSS measurement. Such coordinates shall meet the accuracy requirements, specified in this RFP. • The pre-target points shall be established in each of the proposed locations of GCP which shall be neatly painted with contrasting colours with respect to the terrain. These points shall be uniquely seen on the drone / aerial survey photographs. • Dual frequency GNSS receivers with the required accessories and software in Static mode are to be used for observations. The GNSS used shall be multi channels. A minimum of 6 healthy satellites should be available during entire duration of observation. The GNSS receivers should not be older than three years from the date of award of contract. Compatible GNSS instrument and accessories of LEICA /Trimble/ASTECH/Spectraprecision/Topcon/Hemisp here or of any other reputed brand having similar specifications only shall be used so as to achieve the required accuracy. Chinese models of any brand shall not be allowed to use. Observations taken with Geometric Dilution of Precision (GDOP) exceeding 4 should not be considered. During observations, satellite mask angle should be above 15 degree. • Using digital camera of at least 10 mega pixels, Service Provider shall take photograph of each Ground

		Control points after finalizing writing etc. and submit it to Survey of India in digital form with proper indexing and labeling.
		<p>Establishment of Check Points</p> <ol style="list-style-type: none"> 1. Utilizing existing GCP Ground Control Points or CORS network provided by Survey of India whose adjusted coordinates are available, minimum 5 check points in each village polygon shall be provided by GNSS observation either in static or RTK mode. Check points shall be uniformly distributed in village polygon. 2. Check Points shall be made on conspicuous points be easily identifiable in images procured through Drone Survey. 3. Check points shall be engraved neatly for their identification and will be painted by filling of engraving with contrast color paint. Unique ID of Point are to be written. 4. Check points are to be post pointed in image in digital form and submit it to SoI / KRSRAC alongwith processed coordinate in .xls sheet. 5. Using digital camera of at least 10 mega pixels, Service Provider shall also take photograph of each Check point after finalizing writing etc. and submit it to Survey of India in digital form with proper indexing and labeling. <p>All the GCP's and the Check points shall be pre-targetted so that the points are clearly visible on the photograph.</p> <p>The Pre-targets shall be painted with contrasting colour as that of the terrain so that those points are clearly visible and seen on the drone / aerial surveyed photograph</p>
	Datum	GNSS data (Raw) for all Base station and Check Points will be processed in The World Geodetic Datum 84 (WGS-84). Heights shall be Ellipsoidal height.
		GNSS data (Raw and Processed) for all Base station and Check Points are to be provided in RINEX format (Receiver Independent Exchange Format) and GPS observation log sheets, raw and processed data sheet should be provided in PDF format or Excel spread-sheet if data is captured digitally.

3. SPECIFICATION OF ORTHO RECTIFIED IMAGE

	Description	Specifications
1	Coverage	As per AoI with 100 m buffer all around.
2	GSD	5 cm or better
4	Bands	RGB (Three band natural color imagery)
8	Image format	Uncompressed GeoTIFF and/or lossless Compressed JPEG2000 or ECW format
9	Horizontal accuracy	<= +/- 10 cm 95% confidence interval (1.96 x RMSE) A checklist shall be submitted for each grid / project area on the accuracies achieved against the surveyed check and control points.
10	Imagery Product	Seamless mosaic covering the project area and non-overlapping, edge matched.
11	Radiometric Resolution	Minimum 8 bit per band in accordance with chosen image format. In case of 4 band data, all band data should be part of ortho mosaic.
12	Delivery Dates	As per the project timeframe. Raw photograph to be submitted with Raw Drone data and processed Ortho Rectified Image
13	Horizontal Datum	The World Geodetic Datum 84 (WGS-84)
14	Map Projection	The coordinate system for all deliverables is the Universal Transverse Mercator (UTM).
15	Vertical Datum	All deliverables specified below as ellipsoidal will be in terms of the WGS-84 reference frame.
16	Survey Control	<ol style="list-style-type: none"> 1. Geo-tagging and Ortho-image generation: It is expected that On board GNSS/IMU and base Ground Control GNSS data established for aerial survey be used for Geo-tagging and ortho rectified image production.. 2. Supplemental ground control i.e (5 Check Points per village polygon or K-GIS grid) should be submitted that with purchaser for independent check of Ortho rectified image. 3. All raw survey control data used or derived from this contract must be supplied to purchaser to ensure independent Quality Assurance (QA) of the survey operations, and for possible use in other surveys requiring these. It is therefore essential that all base ground stations are permanently marked in accordance with the Survey of India standards. 4. The primary ground control and check point surveys must be referenced to the survey of India references. 5. As part of the ortho images, positional Accuracy report needs to be submitted along with every deliverable with respect to all GCP and check points. The overall accuracy shall not be more than the accuracy specified in this document.
17	Orthorectification	<ol style="list-style-type: none"> 1. The digital surface model shall be created after block adjustment through automatic mode.

		<ol style="list-style-type: none"> 2. The digital surface model shall be reviewed digitally and visually. Any anomalies and errors in the data should be removed and smoothed which can generate the ortho photo without distortion and meeting the accuracy requirements. 3. The DSM generated across models / project areas shall not have more than 20 cm height variation. 4. Stereomodel created in post processing from aerial imagedata shall be used for rectification process. 5. DEM / DTM is not the requirement under this RFP. However, the government shall generate the DEM/DTM and the contours at a later stage, as needed. 6. However, for generating the ortho photo and mosaic process, digitization of seamlines / breaklines if any shall be digitised which shall ensure the creation of accurate ortho photos with no distortions on the buildings outlines. 7. The rectification process shall use the suitable technique to ensure high accuracy and image quality. 8. The mosaicking process shall minimize image distortions and smearing and produce a seamless edge-matched product. 9. Processes will be used during ortho-rectification to avoid the presences of warped and misaligned above ground transportation features. 10. Orthorectified Image shall be tonally balanced prior to generation of an image mosaic. Relative join (misalignment) of transportation features between adjacent image chips/tiles shall be within the tolerance defined by the horizontal positional accuracy requirement set out above. 11. The rectification process shall involve a solution of the appropriate photogrammetric equations for each pixel in the output image. It is not preferable to solve photogrammetric equations at anchor points only and then warp the content of the original image between the anchor points. 12. The service provider will describe its approach for ortho-rectification and get it approved from purchaser.
18	Radiometry	<ol style="list-style-type: none"> 1. All images should be clear and sharp in detail with no light streaks, static marks, scratches, ice effect or other noticeable blemishes. The imagery should be free from defects, such as out-of-focus imagery, and should not contain inconsistencies in tone and/or density. The ortho-rectified image should be free from tilt and relief displacement. To ensure con-

		sistency, the imagery should be radiometrically and geometrically corrected to enable adjacent files to be displayed simultaneously without obvious distinctions between them.
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4. FINAL DELIVERABLES AND DATA SUPPLY SPECIFICATIONS

	Description	Specifications
1	File naming	File naming as defined by KRSAC / SSLR which shall be shared with the service provider
2	GNSS Data for occupations of I base-stations and Check Points	<ol style="list-style-type: none"> 1. GNSS data (Raw and Processed) for all Base station and Check Points to be provided in RINEX format (Receiver Independent Exchange Format). 2. GPS observation log sheets should include the following details: <ol style="list-style-type: none"> a. Survey mark id b. Occupation time & date c. Antenna height measurements d. Instrument /antenna types & serial numbers <p>The GPS observation log sheets, raw and processed data sheet should be provided in pdf format and/or Excel spreadsheet.</p>
3.	Raw Aerial Data	Raw aerial surveyed data/images along with fly log, on board GNSS/IMU data
4.	Block Adjustment	<ol style="list-style-type: none"> 1. The village / grid wise block adjustment shall be carried out using all photographs. 2. Adjacent block photographs shall be included in each block on overlapping areas 3. Common photographs shall be included in each of the overlapping areas of blocks. 4. The adjustment results shall be submitted and taken approval from SoI / KRSAC before proceeding with the DSM / ortho image generation.
5.	Ortho Rectified Images	<ol style="list-style-type: none"> 5. Post Processed ORI of each village in ECW / JP2000 format with GSD 5 cm or better and Horizontal accuracy shall be 10 cm or better 6. Digital surface Model with accuracy 20 cm or better 7. Seamlines / breaklines used, if any for generating orthoimages shall be submitted. 8. The QC report of positional accuracy against the measured control and check points shall be submitted. The format of QC report shall be shared to the service provider during start of the project.
6.		<ol style="list-style-type: none"> 1. All deliverables must conform to the projection, datum, and coordinate system specified in the tender document. File sizes cannot exceed 1 gigabyte, unless otherwise specified by the SoI. Each file must be organized to facilitate data manipulation and pro-

		cessing.
	Data Delivery Reports	<p>A delivery report describing the contents of the data supplied with every data delivery (interim, staged, final).</p> <ol style="list-style-type: none"> 1. Collection Report : Drone data collection report detailing mission planning and flight logs will be submitted. 2. Survey Report: A survey report detailing the collection of all ground control including the following will be submitted: <ul style="list-style-type: none"> • Base Ground Control points • Check points 3. Post Processing Report: Post Processing Report detailing GNSS data, Drone image processing, DSM And ORI generation will be submitted. Any breaklines / DTM if generated for the generation of ORI shall also be part of the report. 4. QA/QC Report: A QA/QC report, detailing procedures for analysis, accuracy assessment and validation of the following will be submitted. <ul style="list-style-type: none"> • GNSS ground control Point data (Absolute vertical accuracy/relative vertical accuracy) • Drone image processing, • DSM and ORI generation
7	Delivery Media	<ol style="list-style-type: none"> 1. Data should be delivered on External Hard Drives. External hard drives will be retained by KRSRAC/SOI. 2. Data deliveries should be clearly labeled with name of Service Provider, date of supply and list of contents.
8	Report Formats	All reports are to be provided in Word (.doc/.docx) format, Excel spreadsheet (.xls/.xlsx) or appropriate digital format as approved by SSLR.

5. PROJECT PLANNING AND REPORTING SPECIFICATIONS AND QUALITY ASSURANCE SPECIFICATIONS

Quality Control/Quality Assurance (QC/QA) of the Drone derived data is primarily the responsibility of the Service Provider. The Survey of India may perform additional QC/QA testing if needed. Pragmatic QA specifications would need be agreed by the Service Provider with the Survey of India (SoI) in regard to intermediate steps of Drone data acquisition and post-processed Drone data. The derived products will be evaluated for spatial accuracy and general conformation to prescribed requirements.

6. QUALITY ASSURANCE REPORT SPECIFICATIONS FOR ORI

I FOR ORTHO RECTIFIED IMAGE		
Sl. no	Description	Specifications
1	Horizontal accuracy and GSD	(a) Horizontal accuracy shall be 10 cm or better (b) GSD 5cm or better
3	Procedure	<ol style="list-style-type: none"> 1. Visual inspection of the mosaic to check blurred imagery, improper colour balancing, colour bleeding and shadow details, edge mis-matches. Orthorectified Images should be clear and sharp in detail with no light streaks, static marks, scratches, ice effects or other noticeable blemishes. The ORI should be free from defects, such as out-of-focus image/photo, and should not contain inconsistencies in tone and/or density. The ORI should have no distortions and smearing and should be seamless edge-matched and of highest quality. 2. No building edges shall have distortions posing difficulty in mapping the building / property edges. 3. Horizontal accuracy of the Ortho rectified image of all village polygon will be checked using GNSS coordinated of Check Points. 4. Should more than 5% of the ORI that are subjected to external QC fail to meet the specifications laid down in Tender Document, all products will be returned to the service provider for further QA to identify the extent and cause of the problems so established. The service provider will be expected to rectify these problems, and (where necessary to comply with the specification) make new products at his own cost. 5. DSM on overlapping areas shall not have more than 10 cm variation in elevation. The accuracy of DSM generated and used for ortho rectification shall not be less than 25 cm in height in areas of buildings and ground features. 6. The mapping of land ownership boundary lines is the objective of the project and the ORI images shall not have any obstruction / distortion and quality errors. If present, the complete project / block area shall be rejected and shall be reflowed and submitted.
II FOR GROUND CONTROL POINT		
Sl. no	Description	Specifications
1.	Horizontal Accuracy	2.5 cm or better For both I base Stations and Check Points
2.	Procedure	The accuracy of the ground control points (I base stations & Check Points) will be checked by Network Adjustment Report/Post Processing Report submitted by service provider as deliverables. KRSRSAC may process

		<p>the GNSS data of Base station Base station and Check Points provided in RINEX format for independent check.</p> <p>Should more than 5% of the GNSS data that are subjected to external QC fail to meet the specifications the service provider is expected to rectify these problems, and (where necessary to comply with the specification) make fresh GNSS observation at his own cost to achieve the required accuracy.</p>
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Format for Data Deliverables

- Orthoimage of 5 cm GSD - in uncompressed Tiff and/or lossless compression in ECW / JP2000 format
- DSM to be given as point cloud in LAS format. In case of grid format, 1 m grid shall be used
- DTM / Breaklines if generated for the generation of ortho images in ESRI 3D Shape file format / geo-database format
- GPS Control point data – RINEX formats wherever static data processing is observed. In case of Processing with CORS, the process reports matching to the accuracy requirements should be submitted.
- All report in Microsoft Excel / Word format. The same to be submitted in PDF format, as well.

Note

- Processing shall be done with in the premises of SSLR / KRSRAC in case of aerial survey using large format camera / Drone.
- In case of premises of the bidder, the work shall be done under the supervision of officers of SSLR.
- Copy of the raw or processed data in any form shall not be retained by the service provider.
- All data (raw, processed and its derivatives) shall be the property of Government of Karnataka which shall be managed by KRSRAC, the authorised agency.
- Data to be handed over in HDD, village / grid wise, as defined by SSLR / KRSRAC
- The storage of HDD by KRSRAC/SSLR shall be in the state data centre or in Cloud storage established by GoK.

8. RESPONSIBILITIES

Service Provider Responsibilities

- a) The Service Provider will have the responsibility for obtaining clearance from GoI agencies for flying over the survey area, acquiring and processing aerial data acquisition from Drone / Aircraft fitted with Lrgee format Camera data including QA/QC, and delivery of raw and processed products to Survey of India.

- b) The Service Provider shall set up a local office in Bengaluru for coordinating flying and data acquisition, and processing, and interaction with the SSLR / SoI / KSRSAC. Necessary infrastructure for office and technical work will be created in the local office.
- c) The Service Provider will have the responsibility to ensure compliance of DGCA issued guidelines for Requirements for Operation of Civil Remotely Piloted Aircraft System (RPAS)
- d) Register with CORS system of SOI for carrying out the GPS processing on behalf of the government
- e) Carrying out the Drone / aerial survey and carryout the GPS surveys, data processing as per the terms of RFP and deliver the products meeting the quality conditions mentioned in the RFP.

SSLR Responsibilities

- Provide necessary documentation for obtaining clearance from GoI agencies if needed.
- Facilitation of interactions with GoI agencies and with state agencies if needed.
- The SSLR shall provide Static observation data of CORS network for Ground Control.
- Release of funds and review of reports according to the agreed schedule.
- Constitution of a Technical Committee to support for interaction with the Service Provider on technical issues through the contract period, and in reviewing reports and recommending follow-on actions, QA/QC and for evaluating digital products prior to acceptance.
- The Survey of India shall nominate suitable officer to coordinate the activities, and provide necessary interaction at appropriate times to avoid any disturbance and loss of time for carrying out the assignment.
- Notification for entry to the land for surveying & authorization letter to civil authorities shall be given to the Service Provider.
- Any other facilities mutually agreed upon by employer and the Service Provider.

Survey of India Responsibilities

- a. Provide document on the technical methodology to be adopted for aerial survey using Large Format Digital Camera OR Drone based image acquisition
- b. Defining the process of GNSS survey for GCP and Check points
 - i. Static Survey
 - ii. Using CORS network
 - iii. Sharing the GCP's of SOI, for control extension if static differential processing is to be adopted
- c. Defining the accuracy parameters of method of quality acceptance for GCP, Block setup/adjustment, DEM and Ortho images
- d. Providing Training and support to SSLR and Service providers on GCP, Drone Survey, DEM / ORI generation and creating parcel data on the supplied ORI

KSRSAC Responsibilities

- a. To provide the Grid / Village boundaries and defining the project areas and prioritization in discussion with SSLR
- b. Approval of flight plans and GCP layout

- c. Verification of submitted data (Images, GCP, Check points, DSM, DEM, ORI), as per the defined parameters and giving approval
- d. Training to the service providers/ SSLR along with SOI
- e. Development of IT portal / application for project management and status tracking
- f. Generating the statistics of data delivered
- g. Performing QA/QC validation and providing acceptance report, areawise, as prioritized
- h. Publishing / making the ORI image available to SSLR surveyors for creating Land parcel maps.
- i. Such other technical and other help and support as assigned from time to time

4. DRAWINGS

(To be inserted if required)

5. INSPECTIONS AND TESTS

(Refer to Section VI Clause 6)

6. TENTATIVE AREA OF PROJECT SURVEY

Drone/Aerial Survey LOT 1		
S.No	District	Area in SqKM
1	Bidar	5448
2	Bellary	4252
3	Yadgir	5234
4	Kalaburagi	10951
5	Chikballapur	4524
6	Kolar	3969
Total =		34378

Drone/Aerial Survey LOT 2		
S.No	District	Area in SqKM
1	Mysore	6854
2	Shimoga	8477
3	Haveri	4823
4	Bagalkot	6575
5	Dharwad	4260
6	Udupi	3880
7	Dakshina Kannada	4560
Total =		39429

7. CHECKLIST / FORMS TO BE SUBMITTED BY THE BIDDERS

Docs to be submitted

Instruments proposed for the project (to be submitted for each Package, separately)

Package/LOT No and Name of Districts to be mentioned.

Description of Checklist to be submitted by Bidder	Section / Page No in the Bid document - to refer during evaluation	Submitted as per the requirement / form given in the RFP (Yes / No)
Details of Company Registration		
GST Registration		
Authorisation letter for the Signatory / bid submission		
Current Address / Email and Contact details of authorised Person		
Self-declaration that bidder is not blacklisted / barred from providing services		
Financial Year Audit Statement - 2020-21		
Financial Year Audit Statement - 2019-20		
Financial Year Audit Statement - 2018-19		
Financial Year Audit Statement - 2017-18		
Financial Year Audit Statement - 2016-17		
CA certificate on revenue from related services for last 5 years		
Cash flow Certificate from Bank		
Bank Details		
Details of Packages being applied		
Details of Sub Contractors, if any		
Details of GPS Instruments		
Details of Drone Instruments, if applicable		
Details of Aircraft proposed, if applicable		
Details of Camera to be used in Drone		
Details of Large Format Digital Camera		
Details of the Software license		
Details of Server / Storage		
Details of Manpower - Details of CV		
Details of Qualifying Projects		
Technical Compliance of each make / model of instruments		
GPS / Drone / Camera / Aircraft / Large Format Aerial Camera		

Proof of ownership of all the instruments to be considered for evaluation.		
Methodology- Aerial Survey, GPS Survey, Data Processing, Deliverables		
Implementation Plan - Resource Estimates, Time lines		
QA / QC Plan - Flight Plan, GCP Plan, Block Adjustment, OrthoImage Creation		
Resource Plan		
Price Bid		

PART 3 – CONTRACT

SECTION VI – GENERAL CONDITIONS OF CONTRACT

Section VI. General Conditions of Contract

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Section VI. General Conditions of Contract

1. General Provisions

1. Definitions	<p>Unless the context otherwise requires, the following terms whenever used in this Contract have the following meanings:</p> <ul style="list-style-type: none">(a) The Adjudicator is the person appointed jointly by the Employer and the Service Provider to resolve disputes in the first instance, as provided for in Sub-Clause 8.2 hereunder.(b) “Activity Schedule” is the priced and completed list of items of Services to be performed by the Service Provider forming part of his Bid;(c) “Completion Date” means the date of completion of the Services by the Service Provider as certified by the Employer(d) “Contract” means the Contract signed by the Parties, to which these General Conditions of Contract (GCC) are attached, together with all the documents listed in Clause 1 of such signed Contract;(e) “Contract Price” means the price to be paid for the performance of the Services, in accordance with Clause 6;(f) “Dayworks” means varied work inputs subject to payment on a time basis for the Service Provider’s employees and equipment, in addition to payments for associated materials and administration.(g) “Employer” means the party who employs the Service Provider(h) “Foreign Currency” means any currency other than the currency of the country of the Employer;(i) “GCC” means these General Conditions of Contract;(j) “Government” means the Government of the India;(k) “Local Currency” means the currency of India;(l) “Member,” in case the Service Provider consist of a joint venture of more than one entity, means any of these entities; “Members” means all these entities, and “Member in Charge” means the entity specified in the SC to act on their
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	<p>behalf in exercising all the Service Provider’ rights and obligations towards the Employer under this Contract;</p> <p>(m) “Party” means the Employer or the Service Provider, as the case may be, and “Parties” means both of them;</p> <p>(n) “Personnel” means persons hired by the Service Provider or by any SubService Provider as employees and assigned to the performance of the Services or any part thereof;</p> <p>(o) “Service Provider” is a person or corporate body whose Bid to provide the Services has been accepted by the Employer;</p> <p>(p) “Service Provider’s Bid” means the completed bidding document submitted by the Service Provider to the Employer</p> <p>(q) “SCC” means the Special Conditions of Contract by which the GCC may be amended or supplemented;</p> <p>(r) “Specifications” means the specifications of the service included in the bidding document submitted by the Service Provider to the Employer</p> <p>(s) “Services” means the work to be performed by the Service Provider pursuant to this Contract, as described in Appendix A; and in the Specifications and Schedule of Activities included in the Service Provider’s Bid.</p> <p>(t) “SubService Provider” means any entity to which the Service Provider subcontracts any part of the Services in accordance with the provisions of Sub-Clauses 3.5 and 4.</p>
<p>1.2 Applicable Law</p>	<p>The Contract shall be interpreted in accordance with the laws of the Employer’s country, unless otherwise specified in the Special Conditions of Contract (SCC).</p>
<p>1.3 Language</p>	<p>This Contract has been executed in the language specified in the SCC, which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Contract.</p>
<p>1.4 Notices</p>	<p>Any notice, request, or consent made pursuant to this Contract shall be in writing and shall be deemed to have been made when delivered in person to an authorized representative of the Party to whom the communication is addressed, or when sent by registered mail, telex, telegram, or facsimile or e-mail to such Party at the address specified in the SCC.</p>

1.5 Location	The Services shall be performed at such locations as are specified in Section V in the specifications and, where the location of a particular task is not so specified, at such locations, whether in the Government of India or elsewhere, as the Employer may approve.
1.6 Authorized Representatives	Any action required or permitted to be taken, and any document required or permitted to be executed, under this Contract by the Employer or the Service Provider may be taken or executed by the officials specified in the SCC .
1.7 Inspection and Audit	Inspection and Audit shall be carried out as per provisions of GFR 2017
1.8 Taxes and Duties	The Service Provider, SubService Providers, and their Personnel shall pay such taxes, duties, fees, and other impositions as may be levied under the Applicable Law, the amount of which is deemed to have been included in the Contract Price.
2. Commencement, completion, modification and termination of contract	
2.1 Effectiveness of Contract	This Contract shall come into effect on the date the Contract is signed by both parties and such other later date as may be stated in the SCC .
2.2 Commencement of Services	
2.2.1 Program	Before commencement of the Services, the Service Provider shall submit to the Employer for approval a Program showing the general methods, arrangements, order and timing for all activities. The Services shall be carried out in accordance with the approved Program as updated.
2.2.2 Starting Date	The Service Provider shall start carrying out the services thirty (30) days after the date the Contract becomes effective, or at such other date as may be specified in the SCC .
2.3 Intended Completion Date	Unless terminated earlier pursuant to Sub-Clause 2.6, the Service Provider shall complete the activities by the Intended Completion Date, as is specified in the SCC . If the Service Provider does not complete the activities by the Intended Completion Date, it shall be liable to pay liquidated damage as per Sub-Clause 3.8. In this case, the Completion Date will be the date of completion of all activities
2.4 Modification	Modification of the terms and conditions of this Contract, including any modification of the scope of the Services or of the Contract Price, may only be made by written agreement between the Parties and shall not be effective until the consent of competent authority in Government of India, has been obtained.

<p>2.5 Force Majeure</p> <p>2.5.1 Definition</p> <p>2.5.2 No Breach of Contract</p> <p>2.5.3 Extension of Time</p> <p>2.5.4 Payments</p>	<p>For the purposes of this Contract, “Force Majeure” (FM) means extraordinary events or circumstance beyond human control such as an event described as an Act of God (like a natural calamity) or events such as war, strike, riots, crimes (but not including negligence or wrong-doing, predictable/seasonal rain and any other events specifically excluded in the clause). An FM clause in the contract frees both parties from contractual liability or obligation when prevented by such events from fulfilling their obligations under the contract. An FM clause does not excuse a party’s nonperformance entirely, but only suspends it for the duration of the FM. The firm has to give notice of FM as soon as it occurs and it cannot be claimed ex-post facto. There may be a FM situation affecting the purchase organization only. In such a situation, the purchase organization is to communicate with the supplier along similar lines as above for further necessary action. If the performance in whole or in part or any obligation under this contract is prevented or delayed by any reason of FM for a period exceeding 90 (Ninety) days, either party may at its option terminate the contract without any financial repercussion on either side.</p> <p>The failure of a Party to fulfill any of its obligations under the contract shall not be considered to be a breach of, or default under, this Contract insofar as such inability arises from an event of Force Majeure, provided that the Party affected by such an event (a) hastaken all reasonable precautions, due care and reasonable alternative measures in order to carry out the terms and conditions of this Contract, and (b) has informed the other Party as soon as possible about the occurrence of such an event.</p> <p>Any period within which a party shall, pursuant to this Contract, complete any action or task, shall be extended for a period equal to the time during which such Party was unable to perform such action as a result of Force Majeure.</p> <p>During the period of their inability to perform the Services as a result of an event of Force Majeure, the Service Provider shall be entitled to continue to be paid under the terms of this Contract, as well as to be reimbursed for additional costs reasonably and necessarily incurred by them during such period for the purposes of the Services and in reactivating the Service after the end of such period.</p>
<p>2.6 Termination</p> <p>2.6.1 By the Employer</p>	<p>The Employer may terminate this Contract, by not less than thirty (30) days’ written notice of termination to the Service Provider, to be given after the occurrence of any of the events specified in paragraphs (a) through (d) of this Sub-Clause 2.6.1:</p>

<p>2.6.2 By the Service Provider</p> <p>2.6.3 Shortage of Budget</p> <p>2.6.4 Payment upon Termination</p>	<p>(a) if the Service Provider does not remedy a failure in the performance of its obligations under the Contract, within thirty (30) days after being notified or within any further period as the Employer may have subsequently approved in writing;</p> <p>(b) if the Service Provider become insolvent or bankrupt;</p> <p>(c) if, as the result of Force Majeure, the Service Provider is unable to perform a material portion of the Services for a period of not less than ninety (90) days; or</p> <p>(d) if the Service Provider, in the judgment of the Employer has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.</p> <p>The Service Provider may terminate this Contract, by not less than thirty (30) days' written notice to the Employer, such notice to be given after the occurrence of any of the events specified in paragraphs (a) of this Sub-Clause 2.6.2:</p> <p>(a) if, as the result of Force Majeure, the Service Provider is unable to perform a material portion of the Services for a period of not less than ninety (90) days.</p> <p>In the event the budget is curtailed by GoI and it would not be possible to make future payments to Service provider due to shortage of budget, the Contract may be terminated with approval of competent authority of GoI.</p> <p>Upon termination of this Contract pursuant to Sub-Clauses 2.6.1 or 2.6.2, the Employer shall make the following payments to the Service Provider:</p> <p>(a) remuneration pursuant to Clause 6 for Services satisfactorily performed prior to the effective date of termination;</p> <p>(b) except in the case of termination pursuant to paragraphs (a), (b), (d) of Sub-Clause 2.6.1, reimbursement of any reasonable cost incident to the prompt and orderly termination of the Contract, including the cost of the return travel of the Personnel</p>
<p>3. Obligations of the Service Provider</p>	
<p>3.1 General</p>	<p>The Service Provider shall perform the Services in accordance with the Specifications and the Activity Schedule, and carry out its obligations with all due diligence, efficiency, and economy, in accordance with generally accepted professional techniques and practices, and shall observe sound management practices, and employ appropriate advanced technology and safe methods. The Service Provider shall always act, in respect of any matter relating to this Contract or to the Services, as faithful adviser to the Employer, and shall at all times support and safeguard the Employer's legitimate interests in any dealings with SubService Providers or third parties.</p>

<p>3.2 Conflict of Interests</p> <p>3.2.1 Service Provider Not to Benefit from Commissions and Discounts</p> <p>3.2.2 Service Provider and Affiliates Not to be otherwise Interested in Project</p> <p>3.2.3 Prohibition of Conflicting Activities</p>	<p>The remuneration of the Service Provider pursuant to Clause 6 shall constitute the Service Provider’s sole remuneration in connection with this Contract or the Services, and the Service Provider shall not accept for their own benefit any trade commission, discount, or similar payment in connection with activities pursuant to this Contract or to the Services or in the discharge of their obligations under the Contract, and the Service Provider shall use their best efforts to ensure that the Personnel, any SubService Providers, and agents of either of them similarly shall not receive any such additional remuneration.</p> <p>The Service Provider agree that, during the term of this Contract and after its termination, the Service Provider and its affiliates, as well as any SubService Provider and any of its affiliates, shall be disqualified from providing goods, works, or Services (other than the Services and any continuation thereof) for any project resulting from or closely related to the Services.</p> <p>Neither the Service Provider nor its SubService Providers nor the Personnel shall engage, either directly or indirectly, in any of the following activities:</p> <ul style="list-style-type: none"> (a) during the term of this Contract, any business or professional activities in the Government’s country which would conflict with the activities assigned to them under this Contract; (b) during the term of this Contract, neither the Service Provider nor their SubService Providers shall hire public employees in active duty or on any type of leave, to perform any activity under this Contract; (c) after the termination of this Contract, such other activities as may be specified in the SCC.
<p>3.3 Confidentiality</p>	<p>The Service Provider, its SubService Providers, and the Personnel of either of them shall not, either during the term or within two (2) years after the expiration of this Contract, disclose any proprietary or confidential information relating to the Project, the Services, this Contract, or the Employer’s business or operations without the prior written consent of the Employer.</p>
<p>3.4 Insurance to be Taken Out by the Service Provider</p>	<p>The Service Provider (a) shall take out and maintain, and shall cause any SubService Providers to take out and maintain, at its (or the SubService Providers’, as the case may be) own cost but on terms and conditions approved by the Employer, insurance against the risks, and</p>

	for the coverage, as shall be specified in the SCC; and (b) at the Employer’s request, shall provide evidence to the Employer showing that such insurance has been taken out and maintained and that the current premiums have been paid.
3.5 Service Provider’s Actions Requiring Employer’s Prior Approval	The Service Provider shall obtain the Employer’s prior approval in writing before taking any of the following actions: (a) entering into a subcontract for the performance of any part of the Services, (b) appointing such members of the Personnel not listed by name in Appendix C (“Key Personnel and SubService Providers”), (c) changing the Program of activities; and (d) any other action that may be specified in the SCC
3.6 Reporting Obligations	The Service Provider shall submit to the Employer the reports and documents specified in Appendix B in the form, in the numbers, and within the periods set forth in the said Appendix.
3.7 Documents Prepared by the Service Provider to Be the Property of the Employer	All plans, drawings, specifications, designs, reports, and other documents and software submitted by the Service Provider in accordance with Sub-Clause 3.6 shall become and remain the property of the Employer, and the Service Provider shall, not later than upon termination or expiration of this Contract, deliver all such documents and software to the Employer, together with a detailed inventory thereof. The Service Provider may retain a copy of such documents and software. Restrictions about the future use of these documents, if any, shall be specified in the SCC .
3.8 Liquidated Damages	
3.8.1 Payments of Liquidated Damages	The Service Provider shall pay liquidated damages to the Employer at the rate per day stated in the SCC for each day that the Completion Date is later than the Intended Completion Date. The total amount of liquidated damages shall not exceed the amount defined in the SCC . The Employer may deduct liquidated damages from payments due to the Service Provider. Payment of liquidated damages shall not affect the Service Provider’s liabilities.
3.8.2 Correction for Overpayment	If the Intended Completion Date is extended after liquidated damages have been paid, the Employer shall correct any overpayment of liquidated damages by the Service Provider by adjusting the next payment certificate. The Service Provider shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rates specified in SubClause 6.5.
3.8.3 Lack of performance	If the Service Provider has not corrected a Defect within the time specified in the Employer’s notice, a penalty for Lack of performance will

penalty	be paid by the Service Provider. The amount to be paid will be calculated as a percentage of the cost of having the Defect corrected, assessed as described in Sub-Clause 7.2 and specified in the SCC.
3.9 Performance Security	The Service Provider shall provide the Performance Security of amount as specified in the SCC to the Employer no later than the date specified in the Letter of acceptance. The Performance Security shall be issued in an amount and form and by a bank or surety acceptable to the Employer, and denominated in the types and proportions of the currencies in which the Contract Price is payable. The performance Security shall be valid until a date 28 days from the Completion Date of the Contract in case of a bank guarantee, and until one year from the Completion Date of the Contract in the case of a Performance Bond.
4. Service Provider Personnel	
4.1 Description of Personnel	The titles, agreed job descriptions, minimum qualifications, and estimated periods of engagement in the carrying out of the Services of the Service Provider's Key Personnel are described in Appendix C. The Key Personnel and SubService Providers listed by title as well as by name in Appendix C are hereby approved by the Employer.
4.2 Removal and/or Replacement of Personnel	<p>a. Except as the Employer may otherwise agree, no changes shall be made in the Key Personnel. If, for any reason beyond the reasonable control of the Service Provider, it becomes necessary to replace any of the Key Personnel, the Service Provider shall provide as a replacement a person of equivalent or better qualifications.</p> <p>b. If the Employer finds that any of the Personnel have (i) committed serious misconduct or have been charged with having committed a criminal action, or (ii) have reasonable cause to be dissatisfied with the performance of any of the Personnel, then the Service Provider shall, at the Employer's written request specifying the grounds thereof, provide as a replacement a person with qualifications and experience acceptable to the Employer.</p> <p>c. The Service Provider shall have no claim for additional costs arising out of or incidental to any removal and/or replacement of Personnel.</p>
5. Obligation of the Employer	
5.1 Assistance and Exemptions	The Employer shall use its best efforts to ensure that the Government shall provide the Service Provider such assistance and exemptions as specified in the SCC.
5.2 Change in the Applicable Law	If, after the date of this Contract, there is any change in the Applicable Law with respect to taxes and duties which increases or decreases the cost of the Services rendered by the Service Provider, then the remuneration and reimbursable expenses otherwise payable to the Service Provider under this Contract shall be increased or decreased according-

	ly by agreement between the Parties, and corresponding adjustments shall be made to the amounts referred to in Sub-Clauses 6.2 (a) or (b), as the case may be.
5.3 Services and Facilities	The Employer shall make available to the Service Provider the Services and Facilities listed as stated in SCC.
6. Payment to the Service Provider	
6.1 Lump-Sum Remuneration	The Service Provider's remuneration shall not exceed the Contract Price and shall be a fixed lump-sum including all SubService Providers' costs, and all other costs incurred by the Service Provider in carrying out the Services described in Appendix A. Except as provided in SubClause 5.2, the Contract Price may only be increased above the amounts stated in Sub-Clause 6.2 if the Parties have agreed to additional payments in accordance with Sub-Clauses 2.4 and 6.3.
6.2 Contract Price	(a) The price payable in local currency is set forth in the SCC . (b) The price payable in foreign currency is set forth in the SCC .
6.3 Payment for Additional Services, and Performance Incentive Compensation	1.3.1 For the purpose of determining the remuneration due for additional Services as may be agreed under Sub-Clause 2.4, a breakdown of the lump-sum price is provided in Appendices D and E. 1.3.2 If the SCC so specify , the service provider shall be paid performance incentive compensation as set out in the Performance Incentive Compensation appendix.
6.4 Terms and Conditions of Payment	Payments will be made to the Service Provider according to the payment schedule stated in the SCC. Unless otherwise stated in the SCC , the advance payment (Advance for Mobilization, Materials and Supplies) shall be made against the provision by the Service Provider of a bank guarantee for the same amount, and shall be valid for the period stated in the SCC . Any other payment shall be made after the conditions listed in the SCC for such payment have been met, and the Service Provider have submitted an invoice to the Employer specifying the amount due.
6.5 Interest on Delayed Payments	If the Employer has delayed payments beyond fifteen (15) days after the due date stated in the SCC , interest shall be paid to the Service Provider for each day of delay at the rate stated in the SCC .
6.6 Price Adjustment	6.6.1 Prices shall be adjusted for fluctuations in the cost of inputs only if provided for in the SCC . If so provided, the amounts certified in each payment certificate, after deducting for Advance Payment, shall be adjusted by applying the respective price adjustment factor to the payment amounts due in each currency. A separate formula of the type indicated below ap-

	<p>plies to each Contract currency:</p> <p>$P_c = A_c + B_c L_{mc}/L_{oc} + C_c I_{mc}/I_{oc}$</p> <p>Where: P_c is the adjustment factor for the portion of the Contract Price payable in a specific currency “c”.</p> <p>A_c , B_c and C_c are coefficients specified in the SCC, representing: A_c the nonadjustable portion; B_c the adjustable portion relative to labor costs and C_c the adjustable portion for other inputs, of the Contract Price payable in that specific currency “c”; and</p> <p>L_{mc} is the index prevailing at the first day of the month of the corresponding invoice date and L_{oc} is the index prevailing 28 days before Bid opening for labor; both in the specific currency “c”.</p> <p>I_{mc} is the index prevailing at the first day of the month of the corresponding invoice date and I_{oc} is the index prevailing 28 days before Bid opening for other inputs payable; both in the specific currency “c”.</p> <p>If a price adjustment factor is applied to payments made in a currency other than the currency of the source of the index for a particular indexed input, a correction factor Z_o/Z_n will be applied to the respective component factor of p_n for the formula of the relevant currency. Z_o is the number of units of currency of the country of the index, equivalent to one unit of the currency payment on the date of the base index, and Z_n is the corresponding number of such currency units on the date of the current index.</p> <p>6.6.2 If the value of the index is changed after it has been used in a calculation, the calculation shall be corrected and an adjustment made in the next payment certificate. The index value shall be deemed to take account of all changes in cost due to fluctuations in costs.</p>
<p>6.7 Day works</p>	<p>6.7.1 If applicable, the Daywork rates in the Service Provider’s Bid shall be used for small additional amounts of Services only when the Employer has given written instructions in advance for additional services to be paid in that way.</p> <p>6.7.2 All work to be paid for as Dayworks shall be recorded by the Service Provider on forms approved by the Employer. Each completed form shall be verified and signed by the Employer representative as indicated in Sub-Clause 1.6 within two days of the Services being performed.</p> <p>6.7.3 The Service Provider shall be paid for Dayworks subject to</p>

	obtaining signed Dayworks forms as indicated in Sub-Clause
7. Quality Control	
7.1 Identifying Defects	The principle and modalities of Inspection of the Services by the Employer shall be as indicated in the SCC . The Employer shall check the Service Provider's performance and notify him of any Defects that are found. Such checking shall not affect the Service Provider's responsibilities. The Employer may instruct the Service Provider to search for a Defect and to uncover and test any service that the Employer considers may have a Defect. Defect Liability Period is as defined in the SCC .
7.2 Correction of Defects, and Lack of Performance Penalty	<p>(a) The Employer shall give notice to the Service Provider of any Defects before the end of the Contract. The Defects liability period shall be extended for as long as Defects remain to be corrected.</p> <p>(b) Every time notice a Defect is given, the Service Provider shall correct the notified Defect within the length of time specified by the Employer's notice.</p> <p>(c) If the Service Provider has not corrected a Defect within the time specified in the Employer's notice, the Employer will assess the cost of having the Defect corrected, the Service Provider will pay this amount, and a Penalty for Lack of Performance calculated as described in Sub-Clause 3.8.</p>
8. Settlement of Disputes	
8.1 Amicable Settlement	The Parties shall use their best efforts to settle amicably all disputes arising out of or in connection with this Contract or its interpretation
8.2 Dispute Settlement	<p>8.2.1 If any dispute arises between the Employer and the Service Provider in connection with, or arising out of, the Contract or the provision of the Services, whether during carrying out the Services or after their completion, the matter shall be referred to the Adjudicator within 14 days of the notification of disagreement of one party to the other.</p> <p>8.2.2 The Adjudicator shall give a decision in writing within 28 days of receipt of a notification of a dispute.</p> <p>8.2.3 The Adjudicator shall be paid by the hour at the rate specified in the BDS and SCC, together with reimbursable expenses of the types specified in the SCC, and the cost shall be divided equally between the Employer and the Service Provider, whatever decision is reached by the Adjudicator. Either party may refer a decision of the Adjudicator to an Arbitrator within 28 days of the Adjudicator's written decision. If neither party refers the dispute to arbitration within the above 28 days, the Adjudicator's decision will be final and binding.</p>

	<p>8.2.4 The arbitration shall be conducted in accordance with the arbitration procedure published by the institution named and in the place shown in the SCC.</p> <p>8.2.5 Should the Adjudicator resign or die, or should the Employer and the Service Provider agree that the Adjudicator is not functioning in accordance with the provisions of the Contract, a new Adjudicator will be jointly appointed by the Employer and the Service Provider. In case of disagreement between the Employer and the Service Provider, within 30 days, the Adjudicator shall be designated by the Appointing Authority designated in the SCC at the request of either party, within 14 days of receipt of such request.</p>
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SECTION VII. SPECIAL CONDITIONS OF CONTRACT

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

GCC 1.1 (a)	The Adjudicator is Principal Secretary to Government of Karnataka, Revenue Department,
GCC 1.1 (d)	The contract name is HIRING OF DRONEOR AERIAL SURVEYAS A SERVICE FOR ORI GENERATION FOR LARGE SCALE MAPPING LOT 1 & LOT 2 (as the case may be)
GCC 1.1 (h)	The Employer is Survey Settlement and Land Records Department
GCC 1.1 (p)	The Service Provider is _____
GCC 1.2	The Applicable Law is: Laws of Union of India and rules / acts of Govt of Karnataka
GCC 1.3	The language is English
GCC 1.4	The addresses are: Employer: Commissioner, Survey Settlement and Land Records Department K.R.Circle, Bangalore Service Provider: Attention: e-Mail: Facsimile:
GCC 1.5	Location of Service will be in Karnataka State.
GCC 1.6	The Authorized Representatives are: For the Employer: Commissioner, SSLR For the Service Provider:
GCC 2.1	The date on which this Contract shall come into effect is date of signing of Contract by both the parties.
GCC 2.2.1	The work awarded will be divided in revenue villages/cluster of villages / geographical grids as defined by employer. These revenue villages/cluster of villages/grids shall be units of processing and delivery. Program submitted should contain Implementation plan, Details showing timelines, resource deployment for each revenue villages/cluster of villages and delivery dates for each revenue villages/cluster of villages. The updated Program should be consistent with the Method Statement, Work Plan, & Time Schedule submitted in Section IV as part of this RFB. However, the bidder may be permitted to re-deploy his resources and re-schedule the delivery plans during program update as per SCC 2.2.1, to prioritize submission of revenue villages/cluster of villages as specified by employer but without changing the final completion
GCC 2.2.2	The Starting Date for the 'Commencement of Services' shall be the ear-

	<p>lier of following dates: i. 15 days from date of signing of contract ii. Date of issue of necessary security & flight clearances, However the service provider will be allowed to start the activities which are not related to above clearances immediately after signing of the contract.</p>														
GCC 2.3	<p>Implementation Timelines for Activities for each Revenue Village</p> <table border="1"> <thead> <tr> <th>SI No.</th> <th>Activity</th> <th>Av. daily out turn (Village)</th> <th>Time of completion (Days)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Drone/Aerial Data Acquisition and base observation</td> <td rowspan="3">derived from the data submitted by bidder as his implementation plan</td> <td>-</td> </tr> <tr> <td>3.</td> <td>Provision of Ground controls including check points</td> <td>T+3</td> </tr> <tr> <td>4.</td> <td>Post Processing & Generation of DSM and ORI</td> <td>T+5</td> </tr> </tbody> </table> <p>T shall be the date of Drone data acquisition</p> <p>However, the Intended Completion Date for entire work including delivery of final deliverables as per Section V is 12months from date of commencement of services. If the ‘actual area’ increases beyond that specified in Section V, the Project duration shall be extended beyond 2 months on pro rata basis by an explicit communication by the Purchaser.</p>	SI No.	Activity	Av. daily out turn (Village)	Time of completion (Days)	1	Drone/Aerial Data Acquisition and base observation	derived from the data submitted by bidder as his implementation plan	-	3.	Provision of Ground controls including check points	T+3	4.	Post Processing & Generation of DSM and ORI	T+5
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3.	Provision of Ground controls including check points		T+3												
4.	Post Processing & Generation of DSM and ORI		T+5												
GCC 3.2.3	<p>Activities prohibited after termination of this Contract are: Use or transmit in any form of maps/data supplied by employer or data/services generated by the service provider during the Project. The Service Provider will not use, transfer, propagate any of the deliverables, information etc.</p>														
GCC 3.4	<p>The risks and coverage by insurance shall be: (i) Aviation insurance to protect against Third Party property and bodily damage claims during Drone survey Work (In accordance with the statutory requirements applicable to India) (ii) Personal injury or death insurance for Service Provider’s Employees (In accordance with the statutory requirements applicable to India) (iii) Loss or damage to equipment and data till project completion (Minimum Cover Contract Price)</p>														
GCC 3.5(a)	<p>Sub-Contracting is permitted which are part of the Technical Bid and approved and accepted therein. A change of the sub-contractor is NOT allowed without intimation to the purchaser. Any changes to the sub-contractor can be accepted only</p>														

	if the proposed sub-contractor meet all the qualification criteria mentioned in the RFP and such a change is aprior accepted and approved by the Purchaser. Every change (inclusion / exclusion) of the sub-contractor will lead to deduction of 2% of overall contract fee to the bidder
GCC 3.5(d)	The other actions are: None
GCC 3.7	Restrictions on the use of documents prepared by the Service Provider are: All data, documents, reports generated during the Contract shall be exclusive property of Employer and the Service Provider shall have no claims over it. The Service Provider shall be bound by restrictions imposed by Security Classification of such data, documents and reports.
GCC 3.8.1	Delay in completion of the full work due to reasons attributable to the Service Provider shall attract Liquidated Damages @2% of Contract Price per month of delay to be computed on per day basis. The liquidated damage is over and above the penalties for delay in delivery of monthly deliverables as mentioned in the implementation plan. The maximum amount of liquidated damages for the whole contract is Ten percent of the final Contract Price. Pursuant to SCC 2.3, if the project duration is extended, LD clause shall not apply in the extended period. However, LD clause shall resume for delay beyond the extended period
GCC 3.8.3	The delivery in which defects have been detected and/or which have failed the Acceptance Test as perSection V, shall be returned to the Service Provider for further QA. In effect, Employer will pass responsibility to the service provider to provide adequate and clear internal Quality Audits to identify the extent and cause of the problems so established. The service provider will be expected to rectify these problems, and (where necessary to comply with the specification) make new products at his own cost. Redelivery of products will be followed by a further independent check on a new sample of the products. This procedure will continue until the products become finally acceptable under the terms above. The acceptance report (Pass/Fail) shall be given by the Employer within 4 weeks of each delivery/re-delivery of the data made by the Service Provider. If delivery fails the acceptance test of the Employer, it shall be construed as ‘Lack of Performance’ and the 100% of cost towards Acceptance Test by the Employer @ INR 1,00,000 for each subsequent delivery shall be imposed on Service Provider towards penalty for ‘Lack of performance’.
GCC 3.9	The amount of the Performance Security shall be of 10% of contract value.
GCC 5.1	The Employer shall use its best efforts to ensure that the Government shall provide the Service Provider
GCC 5.3	Following data, Service and facilities will be provided to the Service Provider after award of Contract: (i) Area of Interest (AOI) in shp and kmz format (ii) Static Observation Data of CORS stations for post processing OR Description and co-ordinates of GCP library ground control points in and around the Project area on WGS 84 datum (as available)

	<p>(iii) Facility of NRTK (Network RTK) if RTK rovers are used.</p> <p>Production Site: The Service Provider will be responsible for setting up secure and high performance Production Centre at _____. The production center should be adequate to handle and store raw Data, key intermediate data, data under process and Processed Data/deliverable. Survey of India will not be responsible for providing space or any other facility for production centers.</p>
GCC 6.2	All payments shall be made in Indian Rupees
GCC 6.1	<p>The incidence, extent and area provided in IFB & Section V of this RFB are limited by scale and accuracy (spatial & temporal) of existing maps on 1:50K scale. Considering this aspect, the payments made to the Service Provider shall be on the basis of ‘actual area’ and ‘area surveyed’.</p> <p>All submissions of deliverables shall be accompanied by ‘area polygons’ in .shp format. Shape file generated by KRSRAC shall be used to measure and ascertain the actual area completed by the Service Provider.</p> <p>However, if the ‘actual area’ comes out to be more than that mentioned in IFB & Section V of this RFB, approval of competent authority shall be taken before making payment beyond the ‘Contract Price’.</p>
GCC 6.3.2	The performance incentive paid to the Service Provider shall be: Not Applicable.
GCC 6.4	<p>6.4.1. The Contract Price as specified in the Contract Agreement shall be paid as under.</p> <p>6.4.2. The payment made to the Service Provider shall be on the basis of ‘Actual area’ of revenue village. ‘Actual area’ of the revenue will be calculated on the basis of Shape file villages provided by the purchaser.</p> <p>6.4.3. Payment to the Service provider will be made on monthly basis (Calendar month) by the office after deduction of applicable taxes and recoveries if any at the quoted rates as per the contract. Monthly payment shall be calculated as per following formula</p> $= A * 0.9 * (\text{Total contract value} / \text{Total tendered Area})$ <p>Whereas A is ‘Actual area’ of revenue village delivered in particular month on successful completion and acceptance of activities (1), (2) & (3) as per Section V sub section 3:</p> <ul style="list-style-type: none"> • Provision of Ground controls including check points & Drone Data Acquisition • Post Processing for generation of DSM and ORI

	<p>Details of revenue village / grids that are successfully completed & accepted and its actual area will be maintained by service provider and will be provided to the purchaser for verification. The service provider shall become entitled for payment after completion and acceptance of ORI. No payment will separately be made for activities such as GNSS control, and Drone flying.</p> <p>6.4.4 Remaining 10% retained will be released after submission and acceptance of final deliverables.</p> <p>6.4.5 The payment shall be released subject to certification by the Employer that services have been rendered satisfactorily. Acceptance test shall be carried out by Employer according to principle, modalities laid down in SCC Clause 7.1 & Section V of this RFB which shall form the basis of certification mentioned above. Should the certification (satisfactory or unsatisfactory) not be provided, by the employer within 'one' months of the date of receipt of the corresponding invoice, the certification will be deemed to have been provided, and the progress payment will be released at such date. "Payment of Local Taxes such as GST will be against valid Invoice as per GST ACT & Rules and submission of GST Registration Certificate along with declaration that GST Registration is valid and all liabilities towards GST have been discharged by the vendor. GST amount will be paid after submission of valid Invoice and all required documents and declaration by vendor".</p> <p>6.4.6 Every month delay in delivery and submission of Deliverables (color balanced ortho mosaic) will lead to penalty of 2% per week based on the quantities (in Sqkm) that was not delivered but due as per plan. For the penalty, the amount will be computed based on per sqkm area cost quoted by the bidder</p>
GCC 6.5	Payment shall be made within 45 days of receipt of the invoice and the relevant documents specified in Sub-Clause 6.4, and within 60 days in the case of the final payment. No Interest shall be payable
GCC 6.6.1	Price adjustment is not to be applied in accordance with Sub-Clause 6.6.
GCC 7.1	<p>The principle and modalities of inspection of the Services by the Employer are as follows:</p> <p>The responsibility of Quality assurance that would include adoption of best practices, processes and sets of approaches leading to outcomes of quality specified in this Contract shall rest with the Service Provider.</p> <p>As part of Quality Assurance, the Service Provider shall submit quality control (or check) measures detailing clearly specified tasks that scrutinizes all, or a sample, of the items issuing during and/or at the end of various stages of processing in order to ensure that the final product is of satisfactory quality. The scrutiny involves review, inspection or quantitative measurement, against well-defined pass/fail criteria.</p> <p>The Service Provider shall systematically lodge Quality Control Records (QCRs) which may take various forms like Computer Generated Reports, Inspection notes, Stage Approvals etc. Service Provider shall ensure that every such QCR :</p>

	<ul style="list-style-type: none"> • marked with a date • uniquely identifies the item, operation or product to which it relates • identifies the operator who generated the QCR • Is countersigned by a supervisor or other independent inspector (for important records) • is stored in a well-defined and predictable location so that it can be found easily by others. <p>The responsibility for maintaining necessary versions of data during the QA/QC cycle till its final acceptance by Employer shall also rest with Service Provider.</p> <p>Employer will carry out Quality Audit as per Section V to ensure that that plan/methodology/ QA/QC measures etc. detailed are being properly followed. Employer shall also audit to ensure that the QCRs are being properly maintained.</p> <p>In addition following ‘Final Acceptance’ tests shall be carried out by the Employer on the delivery made by Service Provider.</p>												
GCC 8.2.3	<p>The Adjudicator proposed by the Employer is Principal Secretary to Government of Karnataka, Revenue Department or a person decided by him; whose fees, if applicable, shall be governed by the Article 11 of ‘Arbitration and Conciliation (Amendment) Act 2015’ as given below:</p> <table border="1"> <thead> <tr> <th><i>Sum in Dispute</i></th> <th><i>Model Fee</i></th> </tr> </thead> <tbody> <tr> <td>Up to Rs.5,00,000</td> <td>Rs. 45,000</td> </tr> <tr> <td>Above Rs.5,00,000 and Up to Rs. 20,00,000</td> <td>Rs. 45,000 plus 3.5 per cent of the claim amount over and above Rs. 5,00,000</td> </tr> <tr> <td>Above Rs. 20,00,000 and up to Rs. 1,00,00,000</td> <td>Rs.97,500 plus 3 per cent of the claim amount over and above Rs. 20,00,000</td> </tr> <tr> <td>Above Rs. 1,00,000 and up to 10,00,000</td> <td>Rs. 3,37,500 plus 1 per cent of the claim amount over and above Rs. 1,00,00,000</td> </tr> <tr> <td>Above Rs. 10,00,00,000 and up to Rs. 20,00,00,000</td> <td>Rs.12,37,500 plus 0.75 per cent of the claim amount over and above Rs. 10,00,00,000</td> </tr> </tbody> </table>	<i>Sum in Dispute</i>	<i>Model Fee</i>	Up to Rs.5,00,000	Rs. 45,000	Above Rs.5,00,000 and Up to Rs. 20,00,000	Rs. 45,000 plus 3.5 per cent of the claim amount over and above Rs. 5,00,000	Above Rs. 20,00,000 and up to Rs. 1,00,00,000	Rs.97,500 plus 3 per cent of the claim amount over and above Rs. 20,00,000	Above Rs. 1,00,000 and up to 10,00,000	Rs. 3,37,500 plus 1 per cent of the claim amount over and above Rs. 1,00,00,000	Above Rs. 10,00,00,000 and up to Rs. 20,00,00,000	Rs.12,37,500 plus 0.75 per cent of the claim amount over and above Rs. 10,00,00,000
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Above Rs. 1,00,000 and up to 10,00,000	Rs. 3,37,500 plus 1 per cent of the claim amount over and above Rs. 1,00,00,000												
Above Rs. 10,00,00,000 and up to Rs. 20,00,00,000	Rs.12,37,500 plus 0.75 per cent of the claim amount over and above Rs. 10,00,00,000												

	Above Rs. 20,00,00,000	Rs. 19,87,500 plus 0.5 per cent of the claim amount over and above Rs.20,00,00,000 with a ceiling of Rs. 30,00,000
GCC 8.2.4	Provisions of Arbitration and Conciliation Act 2015 will apply.	
GCC 8.2.5	The designated Appointing Authority for a new Adjudicator is President, Institution of Engineers, New Delhi.	
ADDITIONAL CLAUSE 9.0	<p>Add the following as GCC clause 9.0 :</p> <p>9. Security to be reviewed as per new guidelines Security instructions for raw data acquisition and pre-processing shall be as follows:</p> <p>(a) Aerial data- acquisition/photography/survey is to be strictly confined to the exact area for which permission obtained. Moreover, the undertakings given in the application shall be strictly adhered to.</p> <p>(b) No sensor, other than those mentioned in the application should be used.</p> <p>(c) The date of survey is to be intimated to ATC if applicable in advance indicating specific date and time to enable them to issue necessary clearance</p> <p>(d) The Service Provider should be ready to offer his UAS/Drone for inspection by the service agencies of MoD, MHA, DGCA to check survey equipment /sensor before undertaking Drone surveys.</p> <p>(e) The data should not be taken out of the UAS/Drone to any place other than directed by Employer.</p> <p>(f) After completion of survey, no data should be left in storage in the equipment fitted in the UAS/Drone.</p> <p>(g) At the end of each day operation, the data should be copied and stored as directed by the Employer.</p> <p>(h) 'Restricted' security classification will be given to the data products. The data is to be handled by the Service Provider accordingly.</p> <p>(i) The data should be processed by Indian experts in India at the designated places within SoI complex. In case a foreign expert is required for processing the data, the Service Provider shall be responsible for obtaining necessary clearances/permissions as per the latest government of india guidelines on geospatial products and services, to handle data ensuring the storage of data within India.</p> <p>(j) Whenever Inspecting Officer is placed with drone flying team, it will be mandatory on the part of Operator to provide the following documents for his perusal:-</p> <p>(i) Copy of valid DGCA permit and ATC clearance.</p> <p>(ii) Copy of valid MOD clearance (if required).</p> <p>(iii) Proof of Insurance cover.</p>	

- (iv) valid UAS pilot Licence / certification
- (l) Any change/addition and equipment/sensors at any stage of work, can be made only after obtaining prior Employer clearance.
- (m) Fortnightly progress report is to be submitted to the Employer.
- (n) All UAS/Drone permits and clearances (DGCA permit, ATC clearance, valid MoD clearance) will be the responsibility of the Service Provider and all operations will be undertaken in accordance with Indian Air Safety Regulations.
- (o) The data acquired/intermediately or final products will not be permitted to be taken elsewhere. Proper account of daily production and distribution should be maintained.
- (p) Post Processing of data acquired by Drone survey will be carried out inside the secure premises of purchaser or the service provider under the supervision of SSLR appointed officers. Necessary equipment/infrastructure should be installed at the premises by the successful bidder. The data acquired/intermediately or final will not be permitted to be taken elsewhere. Proper account of daily production and distribution should be maintained.

The Security instructions to be followed by the Service Provider during the Post Processing of Data at the Production Centre shall be as follows:

- (a) No Data storage devices or electronic devices including mobile phones, laptops , CD , pen drives etc should be allowed inside the Production Centre except for specific clearances to be taken from Security Officer of Survey of India in exceptional circumstances arising out of any requirements.
- (b) No data should be allowed to be taken outside the Production Centre by the Service Provider
- (c) Systems and storage in Production Centre should not be connected to unsecured internet lines.
- (d) All the personnel working inside the Production Centre should have valid Identity card of the company. Any foreign national working inside the Production center should have valid visa and other documents verified by Ministry of External Affairs and permission from Ministry of Defense. Identity card of the company will be checked by the Security staff every day before the employee enters the Production Centre. Surprise checks for the same will also be carried out by the Security Officer of Survey of India during the working hours.
- (e) Work should only be executed inside Production Centre only in the Presence of SSLR officials.
- (f) All the hardcopy plots and printouts, other Project related materials are to be kept in Almirahs whose key will be with SOI officials.
- (g) The Survey of India Security Officer reserves the right to frisk the working personnel every day / during surprise check.
- (h) There should be two separate segments in the Production centre, one for administrative and other for the production / processing.

	<p>(i) The Production centre should strictly adhere to the security measures in terms of entry and exit to Production centre (preferably Biometric methods etc), accessing data (Administrator /user passwords , Networking etc) , disabling USB ports for theft of data , authorising persons to handle the data , log books , CCTV cameras , fire and smoke protection , lock and key system etc.</p> <p>(j)Storage disks of network storage, servers, workstations etc used at production center shall not be allowed to be taken outside of production center.</p>
<p>Additional Clause 10.0</p>	<p>Add the following as GCC clause 10.0 :</p> <p>Salient Features of Major Labour Laws in India applicable to Establishments is given below. The law as current on the date of bid opening will apply</p> <p>a) Workmen Compensation Act 1923: The Act provides for compensation in case of injury by accident arising out of and during the course of employment.</p> <p>b) Payment of Gratuity Act 1972: Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed 5 years' service or more or on death the rate of 15 days wages for every completed year of service. The Act is applicable to all establishments employing 10 or more employees.</p> <p>c) Employees P.F. and Miscellaneous Provision Act 1952 (since amended): The Act Provides for monthly contributions by the employer plus workers @ 10% or 8.33%. The benefits payable under the Act are :</p> <p>(i) Pension or family pension on retirement or death, as the case may be.</p> <p>(ii) Deposit linked insurance on the death in harness of the worker.</p> <p>(iii) Payment of P.F. accumulation on retirement/death etc.</p> <p>d) Maternity Benefit Act 1951: The Act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.</p> <p>e) Contract Labour (Regulation & Abolition) Act 1970: The Act provides for certain welfare measures to be provided by the Service Provider to contract labour and in case the Service Provider fails to provide, the same are required to be provided, by the Principal Employer by Law. The Principal Employer is required to take Certificate of Registration and the Service Provider is required to take license from the designated Officer. The Act is applicable to the establishments or Service Provider of Principal Employer if they employ 20 or more contract labour.</p> <p>f) Minimum Wages Act 1948: The Employer is supposed to pay not less than the Minimum Wages fixed by appropriate Government as per provisions of the Act if the employment is a scheduled employment. Constructions of Buildings, Roads, Runways are scheduled employments.</p> <p>Wage Code: to be included</p> <p>g) Payment of Wages Act 1936: It lays down as to by what date the wages are to be paid, when it will be paid and what deductions can be</p>

	<p>made from the wages of the workers.</p> <p>h) Equal Remuneration Act 1979: The Act provides for payment of equal wages for work of equal nature to Male and Female workers and for not making discrimination against Female employees in the matters of transfers, training and promotions etc.</p> <p>i) Payment of Bonus Act 1965: The Act is applicable to all establishments employing 20 or more employees. The Act provides for payments of annual bonus subject to a minimum of 8.33% of wages and maximum of 20% of wages to employees drawing Rs.3500/-per month or less. The bonus to be paid to employees getting Rs.2500/- per month or above upto Rs.3500/- per month shall be worked out by taking wages as Rs.2500/-per month only. The Act does not apply to certain establishments. The newly set-up establishments are exempted for five years in certain circumstances. Some of the State Governments have reduced the employment size from 20 to 10 for the purpose of applicability of this Act.</p> <p>j) Industrial Disputes Act 1947: The Act lays down the machinery and procedure for resolution of Industrial disputes, in what situations a strike or lock-out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.</p> <p>k) Industrial Employment (Standing Orders) Act 1946: It is applicable to all establishments employing 100 or more workmen (employment size reduced by some of the States and Central Government to 50). The Act provides for laying down rules governing the conditions of employment by the Employer on matters provided in the Act and get the same certified by the designated Authority.</p> <p>l) Trade Unions Act 1926: The Act lays down the procedure for registration of trade unions of workmen and employers. The Trade Unions registered under the Act have been given certain immunities from civil and criminal liabilities.</p> <p>m) Child Labour (Prohibition & Regulation) Act 1986: The Act prohibits employment of children below 14 years of age in certain occupations and processes and provides for regulation of employment of children in all other occupations and processes. Employment of Child Labour is prohibited in Building and Construction Industry.</p> <p>n) Inter-State Migrant workmen's (Regulation of Employment & Conditions of Service) Act 1979: The Act is applicable to an establishment which employs 5 or more inter-state migrant workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in another state). The Inter-State migrant workmen, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as housing, medical aid, travelling expenses from home upto the establishment and bank etc.</p> <p>o) The Building and Other Construction workers (Regulation of Employment and Conditions of Service) Act 1996 and the Cess Act of 1996: All the establishments who carry on any building or other construction work and employs 10 or more workers are covered under this Act. All such establishments are required to pay cess at the rate not ex-</p>
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	<p>ceeding 2% of the cost of construction as may be modified by the Government. The Employer of the establishment is required to provide safety measures at the Building or construction work and other welfare measures, such as Canteens, First-Aid facilities, Ambulance, Housing accommodations for workers near the work place etc. The Employer to whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the Government.</p> <p>p) Factories Act 1948: The Act lays down the procedure for approval at plans before setting up a factory, health and safety provisions, welfare provisions, working hours, annual earned leave and rendering information regarding accidents or dangerous occurrences to designated authorities. It is applicable to premises employing 10 persons or more with aid of power or 20 or more persons without the aid of power engaged in manufacturing process.</p> <p>q) Code of Wages 2019 (implemented from 1st April, 2021)</p>
<p>Additional Clause 11.Non-Disclosure Obligations</p>	<p>The Service Provider will ensure that complete data (Raw, Geo-tagged, GPS observed, logs etc) is handed over to the purchaser representative and do not copy in any form & in any media for any other purpose without explicit approval/consent of the Service consumer will be kept by Service provider after completion of data capturing & pre-QC and final acceptance of the data by Service consumer.</p>

SECTION VIII – CONTRACT FORMS

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1. LETTER OF ACCEPTANCE

[Letterhead paper of the Purchaser]

[date]

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

Subject: **Notification of Award Contract No.** for LOT 1/2

This is to notify you that your Bid dated . . . *[insert date]* . . . for execution of the *[insert name of the contract and identification number, as given in the SCC]* for the Accepted Contract Amount of *[insert amount in numbers and words in Rupees]*, as corrected and modified in accordance with the Instructions to Bidders is hereby accepted by our Agency.

You are requested to furnish the Performance Security within 28 days in accordance with the Conditions of Contract, using for that purpose the of the Performance Security Form included in Section VIII, Contract Forms, of the Bidding Document.

Authorized Signature: _____
Name and Title of Signatory: _____
Name of Agency: _____

Attachment: Contract Agreement

2. CONTRACT AGREEMENT

LUMP-SUM REMUNERATION

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

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

WHEREAS

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

NOW THEREFORE the parties hereto hereby agree as follows:

- 1. The following documents shall be deemed to form and be read and construed as part of this Agreement, and the priority of the documents shall be as follows:
 - (a) The letter of Acceptance
 - (b) The Service Provider’s Bid
 - (c) The Special Conditions of Contract
 - (d) The General Conditions of Contract
 - (e) Technical Requirements (including Schedule of Requirements and Technical Specifications and deliverables as per Section V)
 - (f) The Price Activity Schedule; and
 - (g) [Add here any other document(s) as part of contract]

3. The mutual rights and obligations of the Employer and the Service Provider shall be as set forth in the Contract, in particular:
 - a. the Service Provider shall carry out the Services in accordance with the provisions of the Contract; and
 - b. the Employer shall make payments to the Service Provider in accordance with the provisions of the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of *[insert the name of the Contract governing law country]* on the day, month and year indicated above.

For and on behalf of the Purchaser

Signed: *[insert signature]*
in the capacity of *[insert title or other appropriate designation]*
in the presence of *[insert identification of official witness]*

For and on behalf of the Supplier

Signed: *[insert signature of authorized representative(s) of the Supplier]*
in the capacity of *[insert title or other appropriate designation]*
in the presence of *[insert identification of official witness]*

3.PERFORMANCE SECURITY - BANK GUARANTEE

[Guarantor letterhead or SWIFT identifier code]

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

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

To: _____ *[name of Purchaser]*

_____ *[address of Purchaser]*

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

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

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

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Applicant, up to a total of _____ *[amount of guarantee³]* _____ *[in words]*, such sum being payable in the types and proportions of currencies in which the Contract Price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of _____ *[amount of guarantee]* as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

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

We further agree that no change or addition to or other modification of the terms of the Contract or of the Goods and related Services to be supplied thereunder or of any of the Contract documents which

³ *An amount shall be inserted by the Guarantor, representing the percentage of the Contract Price specified in the Contract and denominated in Indian Rupees.*

may be made between you and the Applicant shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid until (i.e.) 60 days following the Completion date of the Contract including any warranty obligations⁴, and any demand for payment under it must be received by us at this office on or before that date.

Signature and seal of the guarantor _____

Name of Bank _____

Address _____

Date _____

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

⁴ Completion date as described in GC Clause 18.4

4. ADVANCE PAYMENT SECURITY

Demand Guarantee

[Guarantor letterhead or SWIFT identifier code]

Advance Payment Guarantee No.....*[insert guarantee reference number]*

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

To: _____ *[name of Purchaser]*

_____ *[address of Purchaser]*

_____ *[name of Contract]*

Gentlemen:

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

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

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

This guarantee shall remain valid and in full effect from the date of the advance payment under the Contract until _____ *[name of Purchaser]* receives full repayment of the

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

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

Yours truly,

Signature and seal: _____

Name of Bank: _____

Address: _____

Date: _____

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

NOTICE INVITING TENDER (NIT)

No SSLR/STR/ORI/11/2022-23

Date 17.12.2022

TENDER
HIRING OF DRONE OR AERIAL SURVEY AS A SERVICE FOR ORI GENERATION FOR LARGE SCALE MAPPING

UNDER RESURVEY/SURVEY, UPOR AND SVAMITVA PROJECT
(Two-Cover Bidding Process via e-Procurement Portal)

1. The Government of Karnataka has taken up Drone/Aerial Based Resurvey of Agricultural Lands as well as the Residential Properties in both rural and urban areas in Karnataka as part of its Resurvey / Large Scale Mapping (LSM) Program.
2. Additionally, the Government of India has taken up the project of SVAMITVA which is drone/aerial based survey of the residential properties or the aabadi area in the rural area.
3. The Government of Karnataka, as part of its Large Scale Mapping and Resurvey Project through department of Survey Settlement and Land Records (SSLR) in partnership with Survey of India (SoI) has initiated the works in 5 full districts (Tumkur, Ramnagar, Hassan, Uttara Kannada and Belgavi) as well as the Bengaluru City. Large scale maps and the revised RTC's (Record of Right, Tenancy and Crop data) are to be generated for these areas using drone/aerial based image acquisition.
4. The Government of Karnataka decided and approved to expand the Resurvey, UPOR and SWAMITVA activities to the remaining 26 districts in phases using high resolution images of 5cm or better Ground Sampling Distance (GSD) under Large Scale Mapping (LSM) Project. Accordingly, the Drone/Aerial Based Survey is being taken up in rest of the 26 districts in multiple phases as 5cm GSD and other technical details mentioned in this tender.
5. In this tender two Package/LOT wise bid for 7 districts of (i) Bagalkote (ii) Dharwad (iii) Udupi (iv) Dakshin Kannada (v) Mysore (vi) Shimoga (vii) Haveri, covering about 39429 SqKM is being called.
6. These seven districts covering 39,429 Sq KM area are divided into 2 LOTS/PACKAGES – namely LOT 1A and LOT 1B.
7. The Resurvey, UPOR and SVAMITVA are time bound and mission critical projects and with pre-defined deadlines. Hence, the time is of essence for this work. The drone based 5cm GSD survey-grade survey is a new technological methodology for doing survey for lands and properties. The private sector drone flying and its policies and guidelines have been issued by Government of India in the last 2-3 years only. The sector is poised for huge growth and technological transformation. Being technology centric the traditional players by mere virtue of financial and traditional survey experience are not the only capable agencies. It is seen in previous tenders that the main bidders who meet financial turnover requirements do not have drones nor have experience in survey-grade drone flying. They are choosing sub-contractors who have drones and rel-

evant experience. Hence, the traditional method of qualifying agencies with financial turnover as main qualifying criteria alone is not adequate, hence, in this tender such Drone/Aerial based agencies who have successfully delivered the ORIs for thousands of Square Kilo Meters in government programmes are also given an opportunity to be qualified provided they meet the technical and other qualifying criteria.

8. This tender is for **HIRING OF DRONE OR AERIAL SURVEYAS A SERVICE FOR ORI GENERATION FOR LARGE SCALE MAPPING (LSM)** for 7 districts covering total area of about 39,429 Sq KM in two Packages/LOTS – LOT 1A and LOT 1B.
9. Survey, Settlement & Land Records, Revenue Department, Govt of Karnataka [herein-after referred to as the Purchaser] has Survey of India and Karnataka State Remote Sensing Applications Centre (KSRSAC), as the technical partners of the Survey Settlement and Land Records Department of Government of Karnataka. Our technical partners shall also be technical advisor and technical coordinator for this tender.
10. Purchaser along with SoI / KSRSAC shall define the methodology/process to be adopted including the QA/QC process and standard or accuracy parameters for data acceptance for this project. SoI/KSRSAC shall act as the technical and Implementation partner in the project.
11. Purchaser along with support of SoI/KSRSAC shall supervise and provide the quality acceptance of the datasets generated by the service provider, as per the defined standard.
12. Purchaser, with the support of KSRSAC/SoI, shall establish the process of data submission and provide its approval for compliance submitted by the service provider as per the defined standards of each product(s) – for each stage..
13. The methodology mentioned in the RFP shall be followed. Detailed guidelines on the data submission process and file naming conventions to be adopted will be shared with the successful bidder during the contract award.
14. The project area of 7 districts in this tender is divided in to 2 packages or LOTs. Bidders can quote for any one or both the package/LOT subject to meeting the pre-qualification and eligibility criteria mentioned in the ITB.
15. In the context explained above, Additional Director, Office of Commissioner, Survey, Settlement and Land Records, Revenue Department, Bengaluru invites bids in e-Procurement Portal of the Government of Karnataka from the eligible bidders for supply of following goods and services listed below:

Aerial Survey – Package/LOT 1A		
S.No	District Name	Area in Sq Km
1	Bagalkot	6575
2	Dharwad	4260
3	Udupi	3880
4	Dakshina Kannada	4560
	Total =	19275

Aerial Survey – Package/LOT 1B		
S.No	District Name	Area in Sq Km
1	Mysore	6854
2	Shimoga	8477
3	Haveri	4823
	Total	20154

Area figures provided above is indicative. Final area & shape file will be provided to the Service Provider at the time of award.

Calendar of Events

The details of the Calendar of Events are as below:

Sl. No.	Description	Date	Time
1	Commencement of issue of Bid document through E-Procurement Portal of Government of Karnataka	17-12-2022	10:00 AM
2	Last date for downloading of Bid document	03-01-2023	-
3	Last date and time for receipt of Bid	03-01-2023	05:00 PM
4	Pre-Bid meeting (at Office of Commissioner SSLR, Bengaluru)	23-12-2022	11:00 AM
5	Opening of Bids (Technical)	05-01-2023	12: 00 PM onwards
6	Opening of Bids (Commercial – only of technically qualified bidders)	As per intimation given after technical evaluation.	-
7	Award of Contract	As per intimation given after financial evaluation.	-
8	Furnishing of Performance Security by the Successful Bidder	07-days from issue of LoI	
9	Signing of contract	Within 5-days of successful submission of PG	

*Time and date of opening of Financial part of bid will be intimated after Technical acceptance of bid

1. Bidders may view and download the Bid document free of cost from the e-procurement portal of Government of Karnataka at <https://eproc.karnataka.gov.in>.
2. For participation in the bidding, it is mandatory for the bidder to obtain Class-III Digital Signature Certificate (DSC) from one of the authorized Certifying Authorities (CA) and then register with the Government of Karnataka e-procurement platform and submit bids by using their user ID and Digital Signature. Foreign bidders may obtain DSC from any Licensed Certifying Authority which has been recognized by the Controller of Certifying Authorities, Govt. of India as per details available at www.cca.gov.in. Bidders already possessing the Digital Signature issued from authorized CAs can use the same in this bid. Bidders should note that they are required to obtain separate DSCs for signing and encryption, issued by the same CA, for participating in the electronic bid submission.
3. A **pre-bid meeting** will be held at the Office of Commissioner Survey Settlement & Land Records, K R Circle, Opposite BESCOM Head Office, Bengaluru, as per schedule given above, to clarify the issues and to answer questions on any matter that may be raised at that stage as stated in the bidding document.
4. Bid Processing Fee: Interested Tenderer who wish to participate shall pay tender processing fee through any of the 5 e-Payment options only:
 - a. Credit Card
 - b. Direct Debit
 - c. National Electronic Funds Transfer (NEFT)
 - d. Net banking
 - e. Over the Counter (OTC) – designated ICICI bank branches located across the country. Please note that payments submitted through cheque or demand draft shall not be accepted. Further details regarding e-Payment; please refer to e-Procurement website –<https://eproc.karnataka.gov.in>
5. Only online submission of tenders is permitted. Therefore, tenders must be submitted online on website <https://eproc.karnataka.gov.in> as per deadline fixed in the Calendar of Tender above and the applicable date and time shall be as per server date and time. The bids will be opened online by the authorized officers as per schedule given in the Calendar above.
6. Other details can be seen in the bidding documents.
7. The address for communication is as under:

Additional Director
Office of Commissioner,
Survey, Settlement & Land Records,
K R Circle, Opposite BESCOM Head
Office,
E-mail: Karnatakadaas2022@gmail.com

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Section I. Instructions to Bidders

A. General

1. Scope of Bid

1.1 The Purchaser – Commissioner Survey, Settlement & Land Records, Revenue Department, Government of Karnataka, issues these Bidding Documents for the supply of Goods and Related Services incidental thereto as specified in Section V, Schedule of Requirements. The name, identification and number of lots (contracts) of this OPEN TENDER ENQUIRY (OTE) procurement are as follows

HIRING OF DRONE OR AERIALSURVEY AS A SERVICE FOR ORI GENERATION FOR LARGE SCALE MAPPING MAPPING for about 39,429[#] Sq KM area in 7 districts in Karnataka in 2 LOTS and the details specified in Section V Schedule of Requirement and as per Sub-section 3 Technical Specification.

Area figures provided above is indicative. Final area shape file will be provided to the Service Provider at the time of award.

The 7 districts in this tender are divided into two Packages/LOTs as follows –

Aerial Survey – Package/LOT 1A		
S.No	District Name	Area in Sq Km
1	Bagalkot	6575
2	Dharwad	4260
3	Udupi	3880
4	Dakshina Kannada	4560
	Total =	19275

Aerial Survey – Package/LOT 1B		
S.No	District Name	Area in Sq Km
1	Mysore	6854
2	Shimoga	8477
3	Haveri	4823
	Total	20154

Area figures provided above is indicative. Final area & shape file will be provided to the Service Provider at the time of award.

The whole geographical of these 7 districts,in 2 packages/ LOTs shall be covered as part of drone/aerial flying under this tender

	<p>The scope of work includes:</p> <ul style="list-style-type: none"> ➤ Flight Planning ➤ Provision of ground control points by Dual frequency GNSS receivers either in relative static positioning mode OR by using existing NRTK CORS with Dual frequency RTK rovers required for Drone / Aerial survey. ➤ Planning and execution of Drone / Aerial Survey with Professional survey grade PPK enabled drones or with aircraft fitted with Large or Medium Format Digital Cameras. <ul style="list-style-type: none"> • Mission planning • Data acquisition, • Data pre-Processing / geo-tagging, • Data Post processing with suitable software, • DSM and Ortho Rectified Image (ORI) ➤ QA/QC at each stage of work and for the whole work ➤ Data management including daily incremental backup, monthly full backup of data as per the back-up plan submitted by the Service Provider and approved by the Purchaser. ➤ Delivery of products (softcopy) as per list of deliverables and delivery instructions. <p>The Intended Completion Date is Twelve (12) months from the date of ‘Commencement of Service’; provided that the flying should be completed in 9-months time from date of signing of the contract.</p> <p>1.2 Throughout these Bidding Documents: The term “in writing” means communicated in written form (e.g. by mail, e-mail, fax, telex, distributed or received through the electronic-procurement system used by the Purchaser) with proof of delivery – including electronic delivery; The Purchaser shall use the electronic-procurement system specified in 7.1 to manage this Bidding process.</p> <p>if the context so requires, “singular” means “plural” and vice versa; and “day” means calendar day.</p>
<p>2. Source of Funds</p>	<p>2.1 The Employer/Purchaser, as defined in the BDS, intends to apply part of the funds approved for drone / Aerial based Survey/Resurvey & SVAMITVA, towards the cost of the Project, as defined in the BDS, to cover eligible payments under the Contract for the Services to be performed as per bid document</p>
<p>3. Corrupt & Fraudulent Practices</p>	<p>3.1 It is the Government of India’s (GoI) & Government of Karnataka’s (GoK) policy to require that the highest standards of ethics are observed during the procurement and execution of</p>

contracts. In pursuance of this policy, the officials of Procuring Entities and the bidders / suppliers/ contractors/ sub-contractors/consultants/ service-providers involved in procurement process must abide by the Code of Integrity for Public Procurement (CIPP).

3.2 Code of Integrity for Public Procurement: Procuring authorities as well as bidders, suppliers, contractors and consultants/contractor should observe the highest standard of ethics and should not indulge in the following prohibited practices, either directly or indirectly, at any stage during the procurement process or during execution of resultant contracts:

- i) “Corrupt practice”: making offers, solicitation or acceptance of bribe, rewards or gifts or any material benefit, in exchange for an unfair advantage in the procurement process or to otherwise influence the procurement process or contract execution;
- ii) “Fraudulent practice”: any omission or misrepresentation that may mislead or attempt to mislead so that financial or other benefits may be obtained or an obligation avoided. This includes making false declaration or providing false information for participation in a tender process or to secure a contract or in execution of the contract;
- iii) “Anti-competitive practice”: any collusion, bid rigging or anti-competitive arrangement, or any other practice coming under the purview of The Competition Act,2002, between two or more bidders, with or without the knowledge of the Procuring Entity, that may impair the transparency, fairness and the progress of the procurement process or to establish bid prices at artificial, non-competitive levels;
- iv) “Coercive practice”: harming or threatening to harm, persons or their property to influence their participation in the procurement process or affect the execution of a contract;
- v) “Conflict of interest”: participation by a bidding firm or any of its affiliates that are either involved in the consultancy contract to which this procurement is linked; or if they are part of more than one bid in the procurement; or if the bidding firm or their personnel have relationships or financial or business transactions with any official of Procuring Entity who are directly or indirectly related to tender or execution process of contract; or improper use of information obtained by the (prospective) bidder from the Procuring Entity with an intent to gain unfair advantage in the procurement process or for personal gain; and
- vi) “Obstructive practice”: materially impede the Procuring Entity’s investigation into allegations of one or more of the above mentioned prohibited practices either by deliberately destroying, falsifying, altering; or by concealing of evidence material to the investigation; or by making false statements to investigators and/or by threatening, harassing or intimidating any party to prevent it from disclosing its

	<p>knowledge of matters relevant to the investigation or from pursuing the investigation; or by impeding the Procuring Entity’s rights of audit or access to information;</p> <p>3.3 The bidders shall submit, as part of Bidding Document, a signed declaration to the effect that they shall abide by the Code of Integrity for Public Procurement in Letter of Bid-Technical Part at Section IV(Bidding Forms).</p> <p>3.4 Without prejudice to and in addition to the rights of the Purchaser to other penal provisions as per the bid documents or contract, if the Purchaser comes to a conclusion that a (prospective) bidder (including members of Joint Venture/ Sub-Contractor)/contractor/supplier/consultant/service-provider, directly or through an agent, has violated this Code of Integrity in competing for the contract or in executing a contract, the Purchaser may take appropriate measures including one or more of the following:</p> <p>i) <u>If his bids are under consideration in any procurement,</u></p> <p>a) forfeiture or encashment of bid security;</p> <p>b) calling off of any pre-contract negotiations; and</p> <p>c) rejection and exclusion of the bidder from the procurement process.</p> <p>ii) <u>If a contract has already been awarded,</u></p> <p>a)cancellation of the relevant contract and recovery of compensation for loss incurred by the Purchaser;</p> <p>b) forfeiture or encashment of any other security or bond relating to the procurement;</p> <p>c) recovery of payments made by the Procuring Entity along with interest thereon at the prevailing rate;</p> <p>iii) <u>Provisions in addition to above,</u></p> <p>a) removal from the list of registered suppliers and banning/debarment of the bidder from participation in future procurements of the Procuring Entity for a period not less than one year;</p> <p>b) in case of anti-competitive practices, information for further processing may be filed by the Purchaser, with the Competition Commission of India;</p> <p>c)initiation of suitable disciplinary or criminal proceedings against any individual or staff found responsible.</p>
	<p>3.5 Furthermore, Bidders shall be aware of the provision stated in Clause 3 of the General Conditions of Contract.</p>
<p>4. Eligible Bidders</p>	<p>4.1 All bidders shall provide in Section IV, Bidding Forms, a statement that the Bidder (including all subcontractors) is not associated, nor has been associated in the past, directly or indirectly, with the consultant or any other entity that has prepared the design,</p>

	<p>specifications, and other documents for the Project or being proposed as Project Manager for the Contract. A firm that has been engaged by the Employer to provide Consultant Services for the preparation or supervision of the procurement, and any of its affiliates, shall not be eligible to bid.</p> <p>4.2 Bidders shall not be under Ban/Blacklisting/Debarment for corrupt and fraudulent practices or for lack in performance by any Government/Semi-Government entity.</p> <p>4.3 A Bidder shall be a company registered under the Company Act of India. A Joint Venture is not accepted.</p> <p>4.4 NOT Applicable</p> <p>4.5 Any false declaration and non-compliance of the above would be a ground for immediate termination of the contract and further legal action in accordance with the laws.</p> <p>4.6 Sub-contractors can be included as part of the bid to complete the project in time. There is no limit in having any number of sub-contractors. However, each subcontractor should fulfill the pre-qualification criteria mentioned in the RFP for the specific activity.</p>
<p>5. One Bid Per Bidder for Each LOT</p>	<p>5.1 Each Bidder shall submit only one Bid for a LOT. A Bidder who submits or participates in more than one Bid in a single LOT will cause all the bids of the Bidder to be disqualified.</p> <p>5.2 A Sub Contractor is allowed for this tender.</p> <p>5.3 A subcontractor participating with one bidder can't be participating in another bidder in the same LOT. Such multiple participation of same sub-contractor with multiple bidders in the same LOT shall lead to disqualification of all bids participated by such a sub-contractor in that LOT.</p>
	<p>B. Contents of Bidding Document</p>
<p>6. Sections of Bidding Documents</p>	<p>6.1 The Bidding Documents consist of Parts 1, 2, and 3, which include all the Sections indicated below, and should be read in conjunction with any Addendum issued in accordance with ITB Clause 8.</p> <p>PART 1 Bidding Procedures Section I. Instructions to Bidders (ITB) Section II. Omitted Section III. Evaluation and Qualification Criteria Section IV. Bidding Forms</p> <p>PART 2 Supply Requirements Section V. Schedule of Requirements</p> <p>PART 3 Contract Section VI. General Conditions of Contract (GCC) Section VII. Special Conditions of Contract (SCC) Section VIII. Contract Forms</p>

	<p>6.2 The NOTICE INVITING BIDS issued by the Purchaser is not part of the Bidding Document.</p> <p>6.3 Unless obtained directly from the Purchaser, the Purchaser is not responsible for the completeness of the document, responses to requests for clarification, minutes of pre-bid meeting (if any), or Addenda to the Bidding Document in accordance with ITB 8. In case of any contradiction, documents obtained directly from the Purchaser shall prevail. The tender or bidding document is uploaded and available in e-Procurement Portal of the Government of Karnataka viz https://eproc.karnataka.gov.in</p> <p>6.4 The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Documents and to furnish with its Bid all information or documentation as is required by the Bidding Documents.</p>
<p>7. Clarification of Bidding Documents</p>	<p>7.1 The clarifications/updation/addendum/corrigendum before opening up of the tender shall be solely through the eProcurement Portal of Government of Karnataka viz https://eproc.karnataka.gov.in and the bid therein for this tender. A prospective Bidder requiring any clarification on the Bidding Documents may raise the same in the Pre-Bid Conference provided in the Calendar of Events. Clarifications requested through any other mode shall not be considered by the Purchaser. The Purchaser will respond to any request for clarification, provided that such request is received at least one day prior to the date of Pre-Bid Conference. Description of clarification sought and the response of the Purchaser shall be uploaded for information of all Bidders without identifying the source of request for clarification. Should the Purchaser deem it necessary to amend the Bidding Documents as a result of a clarification, it shall do so following the procedure under ITB Clause 8 and ITB Sub-Clause 22.2. It is the bidder's responsibility to check on the e-procurement system, for any addendum/ amendment/ corrigendum to the bidding document. The clarifications/corrigendum/addendum or any communication shall be through the said eProcurement portal of Government of Karnataka viz https://eproc.karnataka.gov.in</p>
<p>8. Amendment of Bidding Documents</p>	<p>8.1 At any time prior to the deadline for submission of bids, the Purchaser may amend the Bidding Documents by issuing addendum. The addendum will appear on the e-procurement system.</p> <p>8.2 Any addendum thus issued shall be part of the Bidding Documents and shall be deemed to have been communicated to all the bidders.</p> <p>8.3 To give prospective Bidders reasonable time in which to take an addendum into account in preparing their bids, the Purchaser may, at its discretion, extend the deadline for the submission of bids, pursuant to ITB Sub-Clause 22.2</p>

	8.4 The clarifications/corrigendum/addendum or any communication shall be through the said eProcurement portal of Government of Karnataka viz https://eproc.karnataka.gov.in
	C. Preparation of Bids
9. Cost of Bidding	9.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, and the Purchaser shall not be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process. The Bidder, at the Bidder's own responsibility and risk, is encouraged to visit and examine the Site of required Services and its surroundings and obtain all information that may be necessary for preparing the Bid and entering into a contract for the Services. The costs of visiting the Site shall be at the Bidder's own expense.
10. Language of Bid	10.1 The Bid, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Purchaser, shall be written in Kannada or English language. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages into English language, in which case, for purposes of interpretation of the Bid, such translation shall govern.
11. Documents Comprising the Bid	11.1 The Bid shall comprise two Parts, namely the Technical Part and the Financial Part. These two Parts shall be submitted simultaneously. 11.2 The Technical Part shall contain the following: <ul style="list-style-type: none"> (a) Letter of Bid – Technical Part, in accordance with ITB Clause 12; (b) Bid Security, in accordance with ITB Clause 19.1, if required; (c) Alternative bids– Technical Part, if permissible, in accordance with ITB 13, the Technical Part of any Alternative Bid; (d) Written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB Clause 20.2; (e) Documentary evidence in accordance with ITB Clause 17 establishing the Bidder's qualifications to perform the contract if its bid is accepted; (f) Documentary evidence in accordance with ITB 17 establishing the Bidder's eligibility to bid; (g) Documentary evidence in accordance with ITB Clauses 16,

that the Services conform to the Bidding Documents; and
(h) The following documents as part of the technical bid:

1. Certification of incorporation of the bidder.
2. As e- procurement system is being used, there is no hard copy submission of bid. The relevant hard copies shall be brought at the time of technical evaluation and will be scrutinized as per need – including but not limited to the power of attorney, Bid Security Declaration Form, original affidavit regarding correctness of information furnished with bid document.
3. The bidder shall clearly confirm that all facilities (owned or leased or by procurement) including key and critical equipment as specified in section III exist with him for inspection and testing and these can be accessed by the Purchaser or his representative for inspection.
4. Technical schedules of services as required by technical specifications.
5. Qualification information including key personnel, Method Statement, Work Plan & Schedule as per section IV to meet employer technical specifications as per Section V to demonstrate substantial responsiveness of the Services.
6. The following details shall also be provided by Indian Bidders:
 - a. Name, address, PAN and ward/circle where they are being assessed of the Directors of the Bidding Company.
 - b. Company's PAN and Income Tax clearance certificate and ward/circle where it is being assessed,
 - c. Registration details of the company under GST, local and Central Sales Tax, and other laws as may be applicable.
7. The bidders from outside India shall provide the corresponding details of Income Tax registration, Social Security Number, details regarding Registration under goods & services tax (as may be applicable) etc.
8. The bidder shall disclose instance of previous past performance that may have resulted into adverse actions taken against the bidder during the last five years.
9. All documents required in Section III: Evaluation & Qualification Criteria

All Forms as required in Section IV

11.3 The **Financial Part** shall contain the following:

	<p>(a) Letter of Bid – Financial Part: prepared in accordance with ITB 12 and ITB 14;</p> <p>(b) Price Schedules: completed prepared in accordance with ITB 12 and ITB 14;</p> <p>(c) Alternative Bid - Financial Part; if permissible in accordance with ITB 13, the Financial Part of any Alternative Bid; and</p> <p>(d) Any other document required in the AITB.</p> <p>11.4 The Technical Part shall not include any financial information related to the Bid price. Where material financial information related to the Bid price is contained in the Technical Part, the Bid shall be declared non-responsive and disqualified.</p> <p>11.5 The Bidder shall furnish in the Letter of Bid, information on commissions and gratuities, if any, paid or to be paid to agents or any other party relating to this Bid.</p>
12. Process of Bid Submission	<p>12.1 The Letter of Bid – technical Part, Letter of Bid – Financial Part and Price Schedules shall be prepared using the relevant forms furnished in Section IV, Bidding Forms. The forms must be completed without any alterations to the text, and no substitutes shall be accepted except as provided under ITB 20.2. All blank spaces shall be filled in with the information requested. The submission shall be in the eProcurement Portal https://eproc.karnataka.gov.in.</p> <p>12.2 Entire Bid including the Letter of Bid and filled-up Price Schedules shall be submitted online on e-procurement system specified in ITB 7.1. Details and process of online submission of the tender and relevant documents are given in the website mentioned above. Scanned copies of documents listed in clauses 11 and 12.3 should also be uploaded on this website.</p> <p>12.3 Submission of Original Documents: The bidders are required to separately bring during the technical scrutiny/evaluation (i) written confirmation authorizing the signatory of the Bid to commit the Bidder as per ITB Clause 11.2(d); (ii) original bid security declaration form in approved form; and (iii) original affidavit regarding correctness of information furnished with bid document.</p>
13. Alternative Bids	13.1 The alternative bids shall not be considered.
14. Bid Prices and Dis-	14.1 The prices and discounts quoted by the Bidder in the Letter

<p>counts</p>	<p>of Bid – Financial Part and in the Price Schedules shall conform to the requirements specified below:</p> <p>14.2 All lots (contracts) and items must be listed and priced separately in the Price Schedules.</p> <p>14.3 The price to be quoted in the Letter of Bid – Financial Part, in accordance with ITB 12.1, shall be the total price of the bid, excluding any discounts offered.</p> <p>14.4 The Bidder shall quote any discounts and indicate the methodology for their application in the Letter of Bid – Financial Part in accordance with ITB 12.1.</p> <p>14.5 Prices quoted by the Bidder shall be fixed during the Bidder’s performance of the Contract and not subject to variation on any account. A bid submitted with an adjustable price quotation shall be treated as nonresponsive and shall be rejected, pursuant to ITB 31.</p>
	<p>14.6 Not applicable</p>
	<p>14.7 The Bidder, at the Bidder’s own responsibility and risk, is encouraged to visit and examine the locations of required Services and its surroundings and obtain all information that may be necessary for preparing the Bid and entering into a contract for the Services. The costs of visiting the locations of required Services and its surroundings shall be at the Bidder’s own expense.</p> <p>14.8 Prices shall be quoted in the eProcurement Portal viz https://eproc.karnataka.gov.in as specified in the Price Schedule included in Section IV, Bidding Forms. Prices shall be entered in the following manner:</p> <p>(i) Bidder shall fill in rates and prices for all items of the Services described in the Specifications, and listed in the Activity Schedule in Section V, Schedule of Requirements. Items for which no rate or price is entered by the Bidder will not be paid for by the Employer when executed and shall be deemed covered by the other rates and prices in the Activity Schedule</p> <p>(ii) All duties, taxes, and other levies payable by the Service Provider under the Contract, or for any other cause, as of the date 28 days prior to the deadline for submission of Bids, shall be deemed to have been included in the total Bid price submitted by the Bidder.</p> <p>14.9 Deemed Exemption Benefits Bidders may like to ascertain availability of tax/duty exemption benefits, if any. They are solely responsible for obtaining such benefits, which they have considered in their bid and in case of failure to receive such benefits for rea-</p>

	<p>sons whatsoever, the Purchaser will not compensate the bidder.</p> <p>Where the bidder has quoted taking into account such benefits, it must give all information required for issue of necessary Certificates in terms of the Government of India's relevant Notification along with its bid as proforma stipulated in Section IV Bidding Forms.</p> <p>If the Bidder has considered the Deemed Export Benefits in its bid, the Bidder shall confirm and certify that the Purchaser will not be required to undertake any responsibilities of the deemed export scheme or the benefits available during contract execution except issuing the required certificates. Bids which do not conform to this provision or any condition by the Bidder which makes the bid subject to availability of deemed export benefits or compensation on withdrawal of or any variations in the deemed export benefits scheme will make the bid non responsive and hence liable to rejection.</p>
15. Currencies of Bid & Payment	15.1 The Bidder shall quote the Price in Indian Rupees only.
16. Documents Establishing the Eligibility and conformity of the Services	16.1 To establish the conformity of the Non-Consulting Services to the bidding document, the Bidder shall furnish as part of its Bid the documentary evidence that Services provided conform to the technical specifications and standards specified in Section V, Schedule of Requirements.
	16.2 Standards for provision of the Non-Consulting Services are intended to be descriptive only and not restrictive. The Bidder may offer other standards of quality provided that it demonstrates, to the Employer's satisfaction, that the substitutions ensure substantial equivalence or are superior to those specified in the Section V, Schedule of Requirements.
17. Documents Establishing the Eligibility & Qualifications of the Bidder	17.1 To establish Bidder's eligibility in accordance with ITB 4, Bidders shall complete the Letter of Bid – Technical Part, included in Section IV, Bidding Forms.
	17.2 The documentary evidence of the Bidder's qualifications to perform the contract if its bid is accepted shall establish to the Purchaser's satisfaction: that the Bidder meets each of the qualification criteria specified in Section III, Evaluation and Qualification;
	17.3 All Bidder shall provide in Section IV, Bidding Forms, a preliminary description of the proposed methodology work plan and schedule
18. Period of Validity	18.1 Bids shall remain valid for the period of 90-days after the

<p>of Bids</p>	<p>bid submission deadline date prescribed by the Purchaser in accordance with ITB 22.1. A bid valid for a shorter period shall be rejected by the Purchaser as non-responsive.</p> <p>18.2 In exceptional circumstances, prior to the expiration of the bid validity period, the Purchaser may request bidders to extend the period of validity of their bids. The request and the responses shall be made in writing. If a Bid Security is requested in accordance with ITB Clause 19, it shall also be extended for a corresponding period. A Bidder may refuse the request without forfeiting its Bid Security. A Bidder granting the request shall not be required or permitted to modify its bid, except as provided in ITB Sub-Clause</p>
<p>19. Bid Security</p>	<p>19.1 The Bidder shall furnish as part of the Technical Part of its bid, a Bid Security/EMD (Earnest Money Deposit) Declaration Form included in Section IV Bidding Forms..</p> <p>19.2 Not used.</p> <p>19.3 The Bid Security/EMD shall be in the amount shall be as per the table given in the RFP, mentioned separately for each package/lot and denominated in Indian Rupees or a freely convertible currency, and shall:</p> <p>(a) The bidder shall calculate the cumulative EMD amount, as per the packages / LOT proposed for submission.</p> <p>(b) Out of total EMD, Rs 5 Lakhs shall be paid through the eProcurement Portal of Government of Karnataka as permitted therein.</p> <p>(c) The rest of EMD shall be paid as Bank Guarantee from a Scheduled Commercial Bank having turnover not less than Rs 5000 Crores in the previous financial year. The Bank Guarantee shall be substantially in the format prescribed in this regard and uploaded in e-Procurement Portal as part of the Technical Bid.</p> <p>(d) The Bank Guarantee in original form shall be submitted, for all packages cumulatively or independently – packagewise – at the time of technical evaluation. Also the Bank Guarantee should be scanned and uploaded in the eProcurement Portal as part of technical evaluation.</p> <p>(e) be substantially in accordance with one of the forms of Bid Security/EMD included in Section IV,</p> <p>(f) Bidding Forms, or other form approved by the Purchaser prior to bid submission;</p> <p>(g) be payable promptly upon written demand by the Purchaser in case the conditions listed in ITB Clause 19.7 are invoked;</p> <p>(h) be submitted within 3 working days from the last date</p>

	<p>of submission of bids to the tender inviting authority for technical evaluation in its original form; copies will not be accepted;</p> <ul style="list-style-type: none"> (i) Remain valid for a period of 45 days beyond the original validity period of the 3-months bids that shall remain valid for 135 days or beyond that as per any period of extension of bid validity, if so requested under ITB Clause 18.2. (j) Absence of submission of BG for EMD in original shall lead to disqualification of bids and shall not entitle to any refund of amount paid in e-procurement portal towards EMD. (k) EMD shall be paid for each LOT separately. In case of EMD is not paid in full and cumulative for packages/LOTs applied for, the purchaser shall decide on the package/LOT to be considered for evaluation at its own discretion. (l) BG Shall be in favour of The Commissioner Survey, Settlement & Land Records Department, K R Circle, Opposite BESCO Head Office, Bengaluru (m) Beneficiary bank details shall be shared with the bankers at the time of claim in discussion with the finance department of Government of Karnataka. <p>19.4 If a Bid Security/EMD is required in accordance with ITB Sub-Clause 19.1, any bid not accompanied by a substantially responsive Bid Security shall be rejected by the Purchaser as non-responsive.</p> <p>19.5 MSME companies can't claim for waiver of EMD / performance security as this is a mission critical and high value tender.</p> <p>19.6 The Bid Security/EMD of the unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder's signing the contract and furnishing the Performance Security pursuant to ITB Clause 44.</p> <p>19.7 The Bid Security/EMD of the successful Bidder shall be returned as promptly as possible once the successful Bidder has signed the contract and furnished the required performance security.</p> <p>19.8 The originals of BG towards Bid Security/EMD and all associated letters from the bank shall be submitted to the purchaser as per the date mentioned in the RFP which will be used for evaluation of bids.</p> <p>19.9 The originals shall be returned to the bidders on the completion of evaluation process and initiating the return of EMD for un-</p>
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	<p>successful bidders.</p> <p>19.10 But the scanned copies should be submitted in eProcurement portal as part of the technical bid.</p> <p>19.11 The Bid Security/EMD may be forfeited:</p> <ul style="list-style-type: none"> (a) if a Bidder <ul style="list-style-type: none"> (iii) withdraws its bid during the period of bid validity specified by the Bidder in the Letter of Bid (Technical Part and/or Financial Part), except as provided in ITB Sub-Clause18.2; OR (iv) does not accept the correction of errors in pursuant to ITB35, OR (b) if the successful Bidder fails to: <ul style="list-style-type: none"> (i) sign the Contract in accordance with ITB Clause 43; or (ii) Furnish a Performance Security in accordance with ITB Clause 44. <p>19.12 The Employer may declare the Bidder ineligible to be awarded a contract in case of forfeiture of Bid Security/EMD and will be suspended for the period of 5 years from being eligible to submit Bids/Proposals for contract with the Procuring Entity.</p>
<p>20. Format and Signing of Bid</p>	<p>20.1 The Bidder shall prepare the Bid as per details given in ITB</p> <p>20.2 The bid shall be signed by a person duly authorized to sign on behalf of the Bidder. The authorization shall consist of a written confirmation as per this tender document and shall be uploaded along with the bid in eProcurement portal viz https://eproc.karnataka.gov.in.</p> <p>20.3 Not Applicable</p> <p>20.4 Corrections if any in the bid can be carried out by editing the information before electronic submission on e-procurement portal.</p>
	<p>D. Online Submission of Bids</p>
<p>21. Preparation of Bids</p>	<p>21.1 Bids, both Technical and Financial Parts, shall be submitted online on the e-procurement system viz https://eproc.karnataka.gov.in. Detailed guidelines for viewing bids and submission of online bids are given on the website. The NOTICE INVITING BIDS under this Project is published on this website. Any citizen or prospective bidder can logon to this website and view the NOTICE INVITING BIDS and can view the details of goods for which bids are invited. A prospective bidder can submit its bid online; however, the bidder is required to have enrol-</p>

	<p>ment/registration in the website, and should have valid Digital Signature Certificate (DSC) obtained from any authorised certifying agency of Government of India (for class of DSC Class III). The bidder should register in the website using the relevant option available. Then the Digital Signature registration has to be done with the e-token, after logging into the website. The bidder can then login the website through the secured login by entering the password of the e-token & the user id/ password chosen during registration. After getting the bid schedules, the Bidder should go through them carefully and submit the specified documents, along with the bid; otherwise the bid will be rejected.</p> <p>21.2 The completed bid comprising of documents indicated in ITB 11, should be uploaded on the e-procurement portal along with scanned copies of requisite certificates as are mentioned in different sections in the bidding document and scanned copy of the bid security.</p> <p>21.3 All the documents are required to be signed digitally by the bidder. After electronic on line bid submission, the system generates a unique bid identification number which is time stamped as per server time. This shall be treated as acknowledgement of bid submission.</p> <p>21.4 Physical, Email, Telex, Cable or Facsimile bids will be rejected as non-responsive.</p>
<p>22. Deadline for Submission of Bids</p>	<p>22.1 Bids must be uploaded online no later than the date and time specified in this tender.</p> <p>22.2 The Purchaser may, at its discretion, extend the deadline for the submission of bids by amending the Bidding Documents in accordance with ITB Clause 8, in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended. All such extensions shall be communicated only through eProcurement Portal viz https://eproc.karnataka.gov.in</p>
<p>23. Late Bids</p>	<p>23.1 The electronic bidding system would not allow any late submission of bids after due date & time as per server time.</p>
<p>24. Withdrawal, Substitution, and Modification of Bids</p>	<p>24.1 Bidders may modify their bids by using appropriate option for bid modification on the e-procurement portal, before the deadline for submission of bids. For this the bidder need not make any additional payment towards the cost of bid document. For bid modification and consequential re-submission, the bidder is not required to withdraw his bid submitted earlier. The last modified bid submitted by the bidder within the bid submission time shall be considered as the bid. For this purpose, modification/withdrawal by other means will</p>

	<p>not be accepted. In online system of bid submission, the modification and consequential re-submission of bids is allowed any number of times. A bidder may withdraw his bid by using appropriate option for bid withdrawal, before the deadline for submission of bids, however, if the bid is withdrawn, re-submission of the bid is allowed as per eProcurement portal policy and system in this regard.</p> <p>24.2 Bids requested to be withdrawn in accordance with ITB Sub-Clause 24.1 shall not be opened and dealt with as per eProcurement portal system.</p> <p>24.3 No bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Letter of Bid (Technical Part and/or Financial Part) or any extension thereof.</p>
<p>25. Public Opening of Technical Parts of Bids</p>	<p>25.1 The Purchaser shall publicly open Technical Parts of all bids received by the deadline, at the date, time and place specified in this tender, in the presence of Bidder's designated representatives and anyone who chooses to attend, and this could also be viewed by the bidders online. The Financial Parts of the bids shall remain unopened in the e-procurement system, until the subsequent public opening, following the evaluation of the Technical Parts of the Bids. In all cases, original documents submitted as specified in ITB 12.3 shall be first scrutinized, and Bids that do not comply with the provisions of ITB 12.3 will be declared non-responsive and will not be opened. Thereafter, bidder's names, and such other details as the Purchaser may consider appropriate will be notified online as Technical Part bid opening summary.</p> <p style="padding-left: 40px;">In the event of the specified date of bid opening being declared a holiday for the Purchaser, the bids will be opened at the appointed time and location on the next working day.</p> <p>25.2 The electronic summary of the bid opening will be generated and uploaded online. The Purchaser will prepare and upload the Technical Evaluation of the bids in the eProcurement Portal. Only Technical Parts of Bids, alternative bids - Technical Parts if permitted in ITB 13 that are opened at Bid opening shall be considered further for evaluation.</p>
	<p>E. Evaluation of Bids – General Provisions</p>
<p>26. Confidentiality</p>	<p>26.1 Information relating to the examination, evaluation, comparison, and post-qualification of bids, and recommendation of contract award, shall not be disclosed to bidders or any other persons not officially concerned with such process until information on Contract Award is communicated to all Bidders in accordance with ITB 42.</p>

	<p>26.2 Any effort by a Bidder to influence the Purchaser in the examination, evaluation, comparison, and post-qualification of the bids or contract award decisions may result in the rejection of its Bid.</p> <p>26.3 Notwithstanding ITB Sub-Clause 26.2, from the time of bid opening to the time of Contract Award, if any Bidder wishes to contact the Purchaser on any matter related to the bidding process, it should do so in writing.</p>
<p>27. Clarification of Bids</p>	<p>27.1 To assist in the examination, evaluation, comparison of the bids and post-qualification of the Bidders, the Purchaser may, at its discretion, ask any Bidder for a clarification of its Bid including breakdown of prices in the Activity Schedule, and other information that the Employer may require. Any clarification submitted by a Bidder in respect to its Bid, that is not in response to a request by the Purchaser shall not be considered. The Purchaser’s request for clarification and the response shall be in writing. No change, including any voluntary increase or decrease, in the prices or substance of the Bid shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Purchaser in the Evaluation of the bids, in accordance with ITB Clause 35.</p> <p>27.2 If a Bidder does not provide clarifications of its bid by the date and time set in the Purchaser’s request for clarification, its bid may be rejected.</p>
<p>28. Deviations, Reservations, Omissions</p>	<p>28.1 During the evaluation of bids, the following definitions apply:</p> <ul style="list-style-type: none"> (a) “Deviation” is a departure from the requirements specified in the Bidding Documents; (b) “Reservation” is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Documents; and (c) “Omission” is the failure to submit part or all of the information or documentation required in the Bidding Documents.
<p>29. Nonconformities, Errors and Omissions</p>	<p>29.4 Provided that a Bid is substantially responsive, the Purchaser may waive any nonconformities or omissions in the Bid which do not constitute a material deviation, reservation or omission.</p> <p>29.5 Provided that a Bid is substantially responsive, the Purchaser may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities or omissions in the Bid related to documentation requirements. Such omission shall not be related to any aspect of the price or substance of the Bid. Failure of the Bidder to comply with the</p>

	<p>request may result in the rejection of its Bid.</p> <p>29.6 Provided that a Bid is substantially responsive, the Purchaser shall rectify quantifiable nonmaterial nonconformities related to the Bid Price. To this effect, the Bid Price shall be adjusted, for comparison purposes only, to reflect the price of a missing or non-conforming item or component in the manner specified below –</p> <p>The adjustment shall be based on the Average Price of the item or component as quoted in other substantially responsive Bids, subject to a maximum of the estimated price of the item. If the price of the item or component cannot be derived from the price of other substantially responsive Bids, the Purchaser shall use its best estimate.</p>
<p>30. Evaluation of Technical Parts</p>	<p>30.4 In evaluating the Technical Parts of each Bid, the Purchaser shall use the criteria and methodologies listed in ITB 31, ITB 32, and Section III, Evaluation and Qualification Criteria. No other evaluation criteria or methodologies shall be permitted.</p>
<p>31. Determination of Responsiveness</p>	<p>31.4 The Purchaser’s determination of a bid’s responsiveness is to be based on the contents of the bid itself as defined in ITB 11.</p> <p>31.5 A substantially responsive Bid is one that meets the requirements of the Bidding Documents without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that:</p> <ul style="list-style-type: none"> (a) If accepted, would <ul style="list-style-type: none"> (i) affect in any substantial way the scope, quality, or performance of the Non- Consulting Services specified in the Contract; or (ii) limit in any substantial way, inconsistent with the Bidding Documents, the Purchaser’s rights or the Bidder’s obligations under the Contract; or (b) If rectified would unfairly affect the competitive position of other bidders presenting substantially responsive bids. <p>31.2.1 Bids from Agents, without proper authorization from the manufacturer as per Section IV, shall be treated as non-responsive.</p> <p>31.3.1 The Purchaser shall examine the bids to confirm that all documents and technical documentation requested in ITB Clause 11 have been provided, and to determine the completeness of each document submitted.</p> <p>31.3.2 The Purchaser shall examine the bid to confirm that the Bid-</p>

	<p>der has accepted all terms and conditions specified in GCC and the SCC without material deviations or reservations. Deviations from or objections or reservations to critical provisions such as those concerning Performance Security (GCC Clause 3.9). Correction of Defects and Lack of Performance Penalty(GCC Clause 7.1), Force Majeure (Clause 2.5),Applicable law (GCC Clause 1.2) and Taxes & Duties (GCC Clause 1.8) will be deemed to be a material deviation. The Purchaser’s determination of a bid’s responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence.</p> <p>31.4 If a bid is not substantially responsive to the Bidding Documents, it shall be rejected by the Purchaser and may not subsequently be made responsive by the Bidder by correction of the material deviation, reservation, or omission.</p>
<p>32. Qualification of the Bidders</p>	<p>32.1 The Purchaser shall determine, to its satisfaction, whether all eligible Bidders, whose Bids have been determined to be substantially responsive to the bidding document, meet the Qualification Criteria specified in Section III, Evaluation and Qualification Criteria.</p> <p>32.2 The determination shall be based upon an examination of the documentary evidence of the Bidder’s qualifications submitted by the Bidder, pursuant to ITB 17. The determination shall not take into consideration the qualifications of other firms such as the Bidder’s subsidiaries, parent entities, affiliates, subcontractors (other than specialized subcontractors if permitted in the bidding document), or any other firm(s) different from the Bidder).</p> <p>32.3 If a Bidder does not meet the qualifying criteria specified in Section III, Evaluation and Qualification Criteria, its Bid shall be rejected by the Purchaser and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.</p> <p>32.4 Only Bids that are both substantially responsive to the bidding document, and meet all Qualification Criteria shall have the Financial Parts of their Bids opened at the second public opening</p>
<p>33. Public Opening of Financial Parts</p>	<p>33.1 Following the completion of the evaluation of the Technical Parts of the Bids, and approval of Competent authority, the Purchaser shall notify in writing those Bidders who have failed to meet the Qualification Criteria and/or whose Bids</p>

	<p>were considered non-responsive in the Technical Evaluation giving them the following information in the form of a Proceedings:</p> <ul style="list-style-type: none"> (a) their Technical Part of Bid failed to meet the requirements of the bidding document; (b) their Financial Part of the Bid shall not be opened; and (c) notify them of the date and time for public opening of the Financial Parts of the Bids. Financial Parts of the bids shall not be opened earlier than three (3) days from the communication of technical evaluation results to the bidders. <p>33.2 The Purchaser shall, simultaneously, notify in writing those Bidders whose Technical Parts have been evaluated as substantially responsive to the bidding document and met the Qualification Criteria, advising them of the following information:</p> <ul style="list-style-type: none"> (a) their Bid has been evaluated as substantially responsive to the bidding document and met the Qualification Criteria; (b) their Financial Part of Bid will be opened at the public opening of Financial Parts; (c) Notify them of the date and time of the second public opening of the Financial Parts of the Bids, as specified in this tender. <p>The opening date should allow Bidders sufficient time to make arrangements for attending the opening. The Financial Part of the Bid shall be opened publicly in the presence of Bidders' designated representatives and anyone who chooses to attend, and this could also be viewed by the bidders online on eProcurement portal viz https://eproc.karnataka.gov.in. The bidder's names, the Bid prices, the total amount of each bid, including any discounts and Alternative Bid – Financial Part, and such other details as the Purchaser may consider appropriate will be notified online via eProcurement portal viz https://eproc.karnataka.gov.in.by the Purchaser at the time of bid opening.</p> <p>In the event of the specified date of bid opening being declared a holiday for the Purchaser, the bids will be opened at the appointed time and location on the next working day.</p> <p>33.4 The electronic summary of the bid opening will be generated</p>
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	<p>and uploaded online. The Purchaser will also prepare minutes of the Bid opening, including the information disclosed and upload the same for viewing online. Only Financial Part of Bids, Financial Parts of Alternative Bids and discounts that are opened and read out at Bid opening shall be considered further for evaluation.</p>
34. Evaluation of Financial Parts	<p>34.1 To evaluate the Financial Part of each Bid/LOT, the Purchaser shall consider the following:</p> <ul style="list-style-type: none"> (a) evaluation will be done as per the Financial Bid document; and the Bid Price as quoted in accordance with ITB 14; (b) Not used; (c) Not Used (d) Not used; (e) Nt Used <p>34.2 Not used</p> <p>34.3 Not Applicable</p> <p>34.4 Not used</p> <p>34.5 Omitted</p> <p>34.6 Employer reserves the right to accept or reject any variation, deviation, or alternative offer. Variations, deviations, and alternative offers and other factors, which are in excess of the requirements of the bidding documents or otherwise result in unsolicited benefits for the Employer will not be taken into account in Bid evaluation.</p>
35. Correction of Arithmetical Errors	<p>35.1 The e-procurement system automatically calculates the total amount from unit rates and quantities and the system also automatically populates the amount in words from the amount in figures and therefore there is no scope of discrepancy and need for arithmetic correction.</p>
36. Conversion to Single Currency	<p>36.1 Not applicable.</p>
37. Preference	<p>Omitted</p>
38. Comparison of Financial Parts	<p>38.1 The Purchaser shall compare the evaluated prices of all substantially responsive bids to determine the lowest-evaluated bid for each LOT in accordance with ITB Clause 34.</p>

<p>39. Purchaser’s Right to Accept Any Bid, and to Reject Any or All Bids</p>	<p>39.1 The Purchaser reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to Bidders. In case of annulment, all documents submitted and specifically, bid securities, shall be promptly returned to the Bidders.</p>
	<p>F. Award of Contract</p>
<p>40. Award Criteria</p>	<p>40.1 Subject to ITB 39.1, the Purchaser shall award the Contract to the Bidder whose bid has been determined to be the lowest evaluated bid and is substantially responsive to the Bidding Documents, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily.</p>
<p>41. Purchaser’s Right to Vary Quantities at Time of Award</p>	<p>41.1 At the time the Contract is awarded, the Purchaser reserves the right to increase or decrease the quantity originally specified in Section V, Schedule of Requirements, provided this does not exceed the 25%, and without any change in the unit prices or other terms and conditions of the bid and the Bidding Documents.</p> <p>41.2 If the quantity has not been increased at the time of the awarding the contract, still the purchaser reserves the right to increase or decrease, the quantity originally specified in Section V. Schedule of Requirements, provided this does not exceed 25%, and without any change in the unit prices or other terms and conditions of the bid and the Bidding Documents, during the currency of the contract.</p> <p>41.3 Further, during the execution of the contract in case any bid winner of a LOT fails to execute the project as per this tender document and agreement signed pursuant thereto and the same leads to cancellation of the contract, then the Purchaser reserves the right, pending finalization of such a cancelled contract in a new tender, to assign the cancelled LOT to the BID winner of the other LOT in any tender of the Purchaser (called Substitute Service Provider); who shall duly execute the such an assigned work of the cancelled LOT until/if the cancelled LOT is awarded to a bid winner in a new tender. Such an assignment shall be on same terms and conditions (including the payments) as per the said Substitute Service Provider’s awarded agreement and the contract.</p>

<p>42. Notification of Award, Publication of Award & Recourse to Unsuccessful Bidders</p>	<p>42.4 Prior to the expiration of the period of bid validity, the Purchaser shall notify the successful Bidder, in writing, that its Bid has been accepted. The notification letter (hereinafter called “Letter of Acceptance”) shall specify the sum that the purchaser will pay in consideration of the supply of Goods (hereinafter called “the Contract Price”).</p> <p>42.5 At the same time the Purchaser shall publish in eProcurement Portal of Government of Karnataka – viz https://eproc.karnataka.gov.in or on the Purchaser’s website with free access, or in the official gazette, the results identifying the bid and lot numbers and the following information: (i) name of each Bidder who submitted a Bid; (ii) bid prices as read out at bid opening; (iii) name and evaluated prices of each Bid that was evaluated; (iv) name of bidders whose bids were rejected and the reasons for their rejection; and (v) name of the successful Bidder, and the price it offered, as well as the duration and summary scope of the contract awarded. Provided the same may be informed through a suitable Proceedings of the Purchaser.</p> <p>42.6 The Purchaser shall promptly respond in writing to any unsuccessful Bidder who, after Publication of contract award, requests in writing the grounds on which its bid was not selected.</p> <p>42.7 Until a formal Contract is prepared and executed, the notification of award shall constitute a binding Contract.</p> <p>42.8 Upon the successful Bidder’s furnishing of the performance security and signing the Contract Form pursuant to ITB Clause 43, the Purchaser will promptly notify each unsuccessful Bidder and will discharge its bid security, pursuant to ITB Clause 19.5</p> <p>42.9 If after notification of award, a bidder wishes to ascertain the grounds on which its bid was not selected, it should address its request to the Tender Accepting Authority as per KTPP Act. The Employer will respond suitably in writing to the unsuccessful Bidder.</p>
<p>43. Signing of Contract</p>	<p>43.1 Promptly after notification, the Purchaser shall send the successful Bidder the Contract Agreement.</p> <p>43.2 Within fifteen (15) days of receipt of the Contract Agreement, the successful Bidder shall sign, date, and return it to the Purchaser.</p>
<p>44. Performance Security</p>	<p>44.1 Within twenty-one (21) days of the receipt of notification of award from the Purchaser, the successful Bidder, if required, shall furnish the Performance Security in accordance with the GCC, using for that purpose the Performance Security Form included in Section VIII Contract forms, or another Form ac-</p>

	<p>ceptable to the Purchaser. Failure of the successful Bidder to submit the above-mentioned Performance Security or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security. The Performance Bank Guarantee is liable to be forfeited in favour of the Purchaser in case of termination of the contract of the bid winner by the Purchaser where the termination is for the default in performance or other reasons prescribed in this RFP.</p>
<p>45. Adjudicator</p>	<p>45.4 The Adjudicator shall be a person that is nominated by Principal Secretary Revenue Department, Government of Karnataka under the Contract, and paid a suitable fee, plus reimbursable expenses. If the Bidder disagrees with this proposal, the Bidder should so state in the Bid. If, in the Letter of Acceptance, the Purchaser has not agreed on the appointment of the Adjudicator, the Adjudicator shall be appointed by the Appointing Authority designated in the Special Conditions of Contract at the request of either party.</p>

SECTION II

OMITTED

SECTION III. EVALUATION AND QUALIFICATION CRITERIA

This Section complements the Instructions to Bidders. It contains the criteria that the Purchaser shall use to evaluate a bid and determine whether a Bidder qualifies in accordance with criteria specified in this bidding document. No other criteria shall be used.

Contents

1. Evaluation Criteria (ITB 34)
2. Multiple Contracts (ITB 30.4)
3. Qualification Requirements (ITB 32.1)

1. Evaluation Criteria (ITB 34)

The Employer shall determine the Most Advantageous Bid, which is the Bid of the Bidder whose Technical Parts have been evaluated as substantially responsive to the bidding document and met the Qualification Criteria and whose Bid has been determined to be the lowest evaluated cost after considering total prices of all items of the Services described in the in Specifications, and listed in the Activity Schedule in Section V, Schedule of Requirements and all duties, taxes, and other levies payable by the Service Provider under the Contract.

Evaluation of the Bidder's Technical Proposal will include an assessment of the Bidder's technical capacity to mobilize key equipment and personnel for the contract consistent with its proposal regarding work methods, scheduling, and material sourcing in sufficient detail and fully in accordance with the requirements stipulated in Section V, Schedule of Requirements.

2. Multiple Contracts (ITB 30.4)

Not applicable

3. Qualification Criteria (ITB 32.1)

The Purchaser shall assess each Bid against the following Qualification Criteria Requirements for selection of agency for hiring of drone / Aerial Survey as a service for ORI generation for large scale mapping:

- A. The Bidder's Assets (equipment and technically qualified manpower)
- B. Bidder's Credentials (Turn Over & Work Experience)
- C. Methodology, Work Plan and Organization Staff Plan in response to the Terms of Reference:

A. The Bidder's Assets

The quantification of instruments/resources required for evaluation of bid capacity are given **per package/LOT**. The bidders who wish to apply for more than one package/LOT shall meet the requirements, cumulatively and should be substantiated in the bids submitted. In case a bidder has bid for more than one LOT but does not meet the requirements of all the LOTs summed together; but meets requirements of some of the LOTs that he has bid, then in such a case the PURCHASER reserves complete right to qualify the bidder – subject to satisfying other technical qualification conditions – in only such number of LOTs for which the bidder technically qualifies for. The Purchaser shall have, in such a case, complete discretion to qualify the bidder for the specific the LOTs out of total LOTs bidder bids for. Bidder shall have no say or control over selection of LOTs that they may be technically qualified for. For example, if a bidder bids for 2 Lots but they meets technical requirements for only 1 Lot. Then which LOT(s) the bidder will be technically qualified for shall be decided by the PURCHASER. Bidder shall have no say in the same.

Any bidder

- (i) Whose contract has been terminated by any department or agency of Government of Karnataka in the last six years for reasons of performance or default or fraud or misrepresentation, or
- (ii) who stands black listed by any Government Department or Agency and the black listing period is subsisting as on date of technical evaluation,

shall not be qualified to bid in this tender.

The qualification criteria of the Instruments related GPS / Drone / Aircraft with sensors can be met by the bidder along with the authorized sub-contractor. The numbers mentioned are the preliminary requirements that should be available with the bidder or its authorized sub-contractor at the time of bidding and will be used for technical evaluation of bid. The ownership of the instruments should be with the bidder or its authorized sub-contractor only.

The bidder shall however give the detailed implementation plan separately for each LOT that they bid as part of the technical bid describing the actual number of instruments that they will deploy for project execution. The proposed additional number of instruments / equipment's / manpower resources, if any shall be explained in details with per sqkm / per day outputs that are estimated. The detailed implementation plan that is mandatory to be submitted as part of the Technical Bid must include month wise square kilometer of the ORI generation. The same shall be correlated with the deployment of the resources mentioned in the implementation plan. This shall be mandatory criteria in technical evaluation. An unsatisfactory or unscientific implementation plan shall lead to rejection of the bid at the technical evaluation stage itself. The Monthly Implementation Plan and its adherence is part of the non-negotiable deliverables for the bid winner.

The bidder shall also explain the process and plan of engaging such requisite quantities as per the implementation plan. The declaration stating the additional quantity of resources (instrument / manpower, computing resources etc) that are required to complete the project within the scheduled time shall be submitted by the bidder with the schedule plan detailing the source of supply of such resources and their technical details. The schedule plan of such increase in resources should be linked and substantiated in the implementation plan which shall be used as a key factor in evaluating the bidders capability of understanding the project scope and its capacity in ensuring the deliverables, on time. The failure to give a proper implementation plan showing completion of the work within 12-months period shall lead disqualification of the bidder in the technical evaluation. Further, failure to deliver output every month as per the said implementation plan shall be treated as a critical breach of the contract and shall result in cancellation of the award apart from delay penalties in payments.

a) Instrument and Software-

a. Aerial data Acquisition Platform

- **Professional survey grade PPK enabled UAS/Drone –**
Bidder must have such minimum nos. of Professional survey grade PPK enabled UAS/Drone which are eligible for drone flying as per DGCA Drone Guidelines, with associated camera for achieving at least 5 cm GSD at the time of submission of bid as prescribed for each Lot separately in the RFP. Note: If bidder bids for more than one Lot then the requirement in this regard will be arrived at by summing up requirement for each Lot.
 - Supporting documents should consist of copy of the valid proof of ownership of each drone to be engaged for providing services along with its Unique Identification Number (UIN) of each drone.
- **Aircraft with Large / Medium Format Digital Camera–** 1 or 2 nos of aircraft, as per the LOT the bidder bids for, with large format digital camera and associated accessories required for carrying out aerial survey to achieve at least 5 cm GSD. details of aircraft with sensors and its ownership need to be submitted. Provided that for Aerial Survey Bid based on aircraft, availability of 2 number of aircrafts, at the time of bid, shall technically qualify, subject to fulfilment of other technical criteria, the

bidder for more than one LOT and number of aircraft requirement need not be summed up for each LOT that the bidder bids for.

Bidders are expected to complete 750 sqkm area of flying per week (per package). The details of number of drones / aircraft and sensors which shall be used for completing the project and the desired output should be planned and detailed in the implementation plan as part of the technical bid. It is reiterated that the drones proposed by the bidder should be type certified and no model drones should be proposed / used by the bidder. The UIN's quoted by the bidder shall be verified for its ownership, type certificate and the category of drone.

Proof of Ownership of aircraft/drone by the bidder or its subcontractor can be proved with the ownership / lease documents already in place.

b. GNSS receiver

- Minimum units of Dual frequency GPS instruments Capable of tracking and logging Multi frequency & multi constellation signals OR RTK rovers as per LOT wise number prescribed in the RFP.

c. Aerial Data Processing

- The bidder must achieve on average of not less than 750 Sq KM per week (per package) of ORI generation and prove his capacity to do so during the technical evaluation of the bid by way of per day drone or aerial data acquisition and the number of drones/ aircrafts that would be deployed. Details of source of deployment – equipment and funds availability for the same shall be mentioned.
- The per week 750 Sq KM is deliverable on average per week basis. Therefore, fluctuations in one week to another is permitted. The core point in this regard is that the bid winner must execute the project as per the Monthly Implementation Schedule that the bidder submits as part of technical bid and as finally approved by the Purchaser at the time of signing of the Contract Agreement with the Bid Winner.
- The bidder shall detail the plan on the following, **package or LOT wise**
 - Completion of acquisition in terms of number of instruments and per day coverage
 - Number of days planned along with number of instruments. The monsoon days / high wind days, cloud cover, etc shall be considered and mentioned in the proposal – for each geographical area / package.
 - The implementation plan shall give full clarity on the number of instruments proposed with the estimated targets per day / activity with respect to the methodology proposed and the reasons.
 - The number of days of pre-processing of the acquired data for making them ready for generation of DSM and ORI data. Pre-processing includes GPS data processing, project / block set-up, Block adjustment, stereo – model generation etc

d. Workstations for Data Processing: minimum nos, per package as mentioned in the Table

- Bidder must have minimum 15 Middle level Workstations and for the rest, as per the implementation plan, the undertaking can be submitted by the bidder OR an agreement with the MEITY empanelment cloud provider in case service provider chooses to process and store data in cloud. Such agreement should clearly describe the storage, processing resources, timelines etc
- The workstation proposed shall have the following minimum configuration

- RAM – 16 GB
- Processor Speed –As necessary
- Internal storage – 1 TB
- Graphics card – Nvidia Quadro 4 1 GB or equivalent
- Monitor Size – 19 inches or better

e. **Network Storage System:** 02(two) no. of Minimum 50 TB (in RAID 5 configuration)OR An agreement with the MEITY empanelment cloud provider in case service provider chooses to process and store data in cloud.

In case of processing and storing the data on cloud, the lead bidder or its proposed cloud service provider should produce a certificate from MeitY that the cloud server and processing environment proposed is located in India only

f. **Servers:** minimum 02 nos and during the actual implementation as per the Implementation Plan submitted during the technical evaluation. The proposed server configuration shall have the following minimum configuration.

- RAM – 64 GB
- Processor Speed - As necessary
- Internal storage – 1 TB

g. Software Suite for generation of DSM / ORI

- Should have minimum 10 no Software for data processing like Px4D / UAS master / AGI etc.per package for drones / medium / large format aerial data processing and any of the industry standard photogrammetry software suite (LPS, DAT/EM, Inpho etc). During the actual implementation this shall be as per the Implementation Plan submitted during the technical evaluation. The proposed estimates on number of system, output that can be achieved per system and the plan of completion of project should be explained in the implementation plan, in detail – as part of technical bid.

b) Manpower:

The minimum Qualification and number of key- personnel proposed to be deployed in the Project should be as follows. The numbers stated are the minimum required for qualification. Bidder/Service provider shall deploy sufficient additional resources as per Detailed Implementation Plan submitted as part of the technical bid for each LOT as are required to meet the delivery timelines during actual execution.

For the purpose of this Bid Document for each package/LOT, Key Personnel shall include:

- a. Project Manager: At least 01 (one), Project Manager with minimum 3 years in working projects of similar nature & complexity.
- b. Pilot:with Remote Pilot License / Certificateas per Drone Rules 2021 and updated from time to time and minimum number for each LOT as prescribed in the RFP
- c. Aircraft operations – Pilot and data acquisition Engineer / navigator as per the requirements of DGCA / MoD
- d. Operator: Post-processing for generation DSM and ORI : technical persons having minimum three years’ experience in post-processing in projects of similar nature & complexity on its payroll at the time of submission of technical bid and minimum number for each LOT as prescribed in the RFP

- e. Ground Controller: The technical persons having minimum two years' experience in GNSS observations and computation/processing, on its payroll at the time of submission of technical bid and minimum number for each LOT as prescribed in the RFP.
- f. System Manager cum Data Manager: At least 01 (one), technical person having minimum 3 years of experience in system management & Data Management in Data Production Centre, on its payroll at the time of submission of technical bid
- g. QA/QC Expert: Person having at least five years' experience in post-processing of data in projects of similar nature & complexity, on its payroll at the time of submission of technical bid and minimum number for each LOT as prescribed in the RFP
- h. Overseas experts can be included. However, the same experts should be available in Karnataka, India during the execution of project. The necessary security clearance from MEA/MHA should be obtained for engaging the resources for the said work. In case of non-receipt of approvals from the respective authorities, better qualified and experienced personnel should be involved for the processing. However, any delays due to this should be the responsibility of the successful bidder. Delay in plans / schedule shall not be acceptable for the purchaser.

B. Bidder's Credentials:

(a) Financial Capability

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

- a. The Minimum required AVERAGE annual turnover for the last five (5) Financial Year- si.e.2016-17 to 2020-21 should be as mentioned for the LOT in the RFP or an equivalent amount in other currency. The bidder should also submit the concerned documents in support of the above to the satisfaction of the purchaser.

Or, in lieu of financial turnover, the Bidders with proven capacity of successful delivery & acceptance of Drone/Aerial Based Survey of Survey Grade work (equal or better than 5 cm GSD) for any Government Department or Government Agency to an extent not less than 5000 (five thousand) Sq KM Ortho-Rectified Image during the last 3-years is also eligible.

In this regard the certificate/letter of successful delivery and acceptance of relevant quantities of ORIs by the Government Department or Government Agency shall be furnished/uploaded.

The requirement under this clause shall be met by the Bidder himself and not by or including his sub-contractor (if any).

- b. Capacity to have a cash flow: The bidder must provide a letter from a reputed Nationalized / Scheduled Bank stating the availability of liquid assets and/or credit facilities exclusively for the contract of value less than amount mentioned for the LOT in the RFP.

Notes:

- (i) Even the bidders seeking qualification based on at least 5000 Sq KM 5 cm GSD Survey Grade work shall furnish the annual turnover for each of the last 5 Financial Years if the business entity was in existence during the said period.

- (ii) The financial turnover will be taken as given under the head “Income” in audited Profit and Loss Account and excluding non-recurring income, income from other sources and stock. It is clarified that the Financial Turnover means relevant revenue as recorded in the Income side of Profit and Loss Account. It does not mean Profit.
- (iii) Closing stocks in whatsoever manner should not form part of turnover.
- (iv) The Bidder should furnish Annual Financial Turnover for each of the last 5 Financial Years in tabular form and give reference of the document (with page no.) relied upon in support of meeting the Qualification Criterion.
- (v) The Bidder should submit self-attested copy of Auditor’s Report along with Balance Sheet and Profit and Loss Statement along with Schedules for the relevant Financial Year in which the minimum criterion is met. Provisional audit reports or certified statements will not be accepted.
- (vi) If the Audited Balance Sheet for the immediately preceding year is not available in case of tender opened before 30th Sept., audited Balance Sheets, Profit and Loss Statements and other financial statements of the five Financial Years may be adopted for evaluating the credentials of the Bidder.

(b) Work Experience:

- (i) The experience required to be demonstrated by the Bidder should include as a minimum that they have executed during the last 5 years the following:

Bidder must have experience as service provider in the provision of at least one service contract in drone / Aerial Survey and its data processing of similar nature and complexity and the said single contract having a minimum value of Rs 1 Crore in the last 5 years. The Service Contract cited must necessarily include all activities viz. acquisition of raw data, post-processing of data for creation of DSM/ORI.

OR

Bidder may meet requirement of experience as service provider in the provision of Drone / Aerial Survey and its data processing of similar nature and complexity and by citing not more than 5 (five) projects he has executed in the last 5 years whose cumulative value together should not be less than Rs. 1 Crore in the last 5 years. These Service Contracts taken together must necessarily include all activities viz. acquisition of raw data by drone / aircraft, post-processing of data for creation of DSM / ORI.

- (ii) Proof of work experience should include generation and processing of at least 1000 Sqkm area of Ortho rectified image from drone / aerial or high resolution satellite data with DEM/DTM.

The above work experience can be met by the bidder or its sub-contractor qualified for data processing. Experience of mere mapping or digitization from ortho rectified images or any other image classification / change analysis is not adequate for meeting this above criteria

Notes:

- a. Only such works shall be considered where physical completion of entire work is over or commissioning of work has been done, whichever is earlier.

- b. The Bidder should submit the details of such similar completed works as per the format enclosed.
- Name and address of client with contact details as email address/ Phone No.
 - Contract No. and Date.
 - Scheduled completion date and actual completion date.
 - Details of Complaint, if any, received from the purchaser about the performance of the Equipment/items.
- c. Works carried out by another Service Provider on behalf of the Bidder on a back to back basis will not be considered for satisfaction of the Qualification Criterion by the Bidder.
- d. Credential certificates issued by Government Organizations / Semi Government Organizations of Central or State Government; or by Public Sector Undertakings/ Autonomous Bodies of Central/State Government or their subsidiaries / by Public Ltd. Companies listed in Stock exchange in India or Abroad or subsidiaries of such companies shall only be accepted for assessing the eligibility of a Tenderer. Certificates issued by one of the aforesaid organizations as a lead member (having equity stake of 51% or more) of a Joint Venture (JV) for a work executed for the JV, will also be acceptable. In case of PPP projects, if the bidder has executed a work for a concessionaire who is one of the aforesaid organizations, then the certificate issued by such concessionaire or by the public authority concerned, will also be acceptable.
- e. The cutoff date in respect to work experience shall be 31/11/2022.
- (iii) As part of project experience, experience of previous work using 50 cm or better high resolution stereo satellite data processing with proper editing of DTM for generating the Ortho images can be considered, provided while considering the value of work done in this, the cost of procurement of satellite images will be excluded. (This is done as the focus of the RFP is to evaluate capacity to process aerial / drone photography data in addition to ability to generate such a data from drone / aerial survey. A bidder with experience only with satellite images needs to demonstrate their experience in data and image processing and hence the exclusion of the cost of purchase of satellite images).
- (iv) The bidder should provide profile of their company including its Infrastructure, technical manpower and their expertise.
- (v) The eligibility conditions mentioned in the RFP is neutral. Drone or Aircraft is for acquisition. Data processing for ortho image and DSM generation need to be done in both categories. The number of software / hardware is based on the area covered for each package. It shall be noted that the pre-qualification number of licenses / equipment's is for the purpose of pre-qualification. Each bidder must give detailed Implementation Plan which is mandatory part of the technical evaluation. The deployment of resources including the software shall match the implementation plan. In case of inadequacy in resources or implementation plan, the bid will be rejected at the technical evaluation stage itself.
- (iii) The bidder shall have to prove the adequacy of their Implementation Plan as well as the resources that they will deploy.
- (iv) The bidder or OEM must have office and firm arrangement in Karnataka to provide support as well as comprehensive management of work.
- (v) The bidder should submit the details of agreements entered into with various manufacturers/partners for the equipment and providing services and their experience to meet the qualification & experience criterion for the turn-key solution.
- (vi) Changes in the make / model of the instruments, if any shall be acceptable, only if the proposed changes are better than the current make / model mentioned and approved as Detailed Implementation Plan as the part of the Technical Bid. This shall be substantiated.

- ed by the bidder and accepted by the technical evaluation committee appointed by the purchaser.
- (vii) It is the bidder's responsibility of completing all activities of the project within the scheduled time as per the RFP.
 - (viii) A change in the sub-contractor is NOT allowed without intimation to the purchaser. Any changes to the sub-contractor can be accepted only if the proposed sub-contractor meet all the qualification criteria mentioned in the RFP. Every change (inclusion / exclusion) of the sub-contractor will lead to deduction of 2% of overall contract fee to the bidder.
 - (ix) The lead bidder should ensure that the sub-contractor identified by them is capable of delivering the project, as defined and scheduled. As part of the evaluation, the sub-contractor assets and credentials of the lead bidder will also be evaluated.
 - (x) It is to be noted that the aircraft and sensor can be owned by different agencies. However, Proof of earlier projects wherein the lead bidder had availed the services from such agencies with the same combination of aircraft and the sensor should be produced. The same shall be submitted as proof of documentary evidence, endorsed by the client for whom the services are provided should be submitted as part of bid – for evaluation.
 - (xi) The purchaser is not in favour or against for any specific technology. The requirement is of 5 cm GSD ortho rectified image suitable for land parcel mapping. Since the required output can be generated from Drone / Aerial technologies, bidder can have their own choice of preferred technology and submit the bids.

Pre-Qualification Criteria – Consolidated form (the number mentioned in this table shall be considered for evaluation, in case of any discrepancies noted in the similar references in the RFP)

Description of Items / LOT or Package	Remarks / Explanation	Lot 1A	Lot 1B
Total Area in Sq Km		19,275	20,154
A. Bid Security / EMD			
EMD - 5 Lakhs	Amount to be paid in e-Procurement Portal of Karnataka	5 lakhs for this tender (Common for all packages in this tender& to paid in e-Procurement Portal)	
Additional Bid Security in BG, Value in Lakhs	Amount in Rupees, in Lakhs	25	25
B. Bidder's Credentials (Financial & Work Experience)			
Average Annual Turnover of Lead bidder	Amount in Rupees, in Crore	25	25
Work Experience			
1 Crore worth of related Service in the last 5 yrs from any one or upto 5 projects (to be satisfied by the lead bidder)	Common for one bidder		
Generation and processing of at least 1000 Sqkm area of Ortho rectified image from drone / aerial images or high resolution satellite data with DEM/DTM	(can be satisfied through sub-contractor for data processing)	Common for one bidder (if multiple sub contractors are shown for each package, then the condition shall be satisfied by each sub-contractor)	
C. The Bidder's Assets (Equipment and technically qualified Manpower)			
Drone with Sensor Details (Camera / LI-DAR) - nos per Package is mentioned here		10	10
Aircraft with Sensor Details (Camera / LI-DAR) - nos per package is mentioned here. (one aircraft shall be quoted for every 20,000 sqkm shall be considered)	Ie. If a bidder wishes to deploy 2 aircraft, then number of packages covering upto 30,000 sqkm area (up to 2 lot / packages) can be considered, as eligible	1	1

Description of Items / LOT or Package	Remarks / Explanation	Lot 1A	Lot 1B
GNSS receiver - nos per Package is mentioned here		10	10
Middle level Workstations - nos per Package, mentioned here		15	15
50 TB Network Storage System- nos per Package mentioned here		2	2
Servers – nos per Package, mentioned, here		2	2
Software – nos per Package		10	10
Whether Processing in the Cloud is mentioned	Mention Yes / No.	If yes, details of provider, terms and conditions of contract engagement detailing storage, servers, time of engagement need to be mentioned	
Technically Qualified Manpower, no per package is mentioned here			
Project Manager - 3 years Experience	Mention whether the quantity of resources and the experience/expertise mentioned are meeting the requirements. For certification, proof of the certificate should be submitted and verified. Names of experts shall also be listed	1	1
Certified Remote License Pilot for Drones		10	10
Pilot for Air Craft - 3 years experience		2	2
Surveyors for GCP survey and processing		10	10
Data Processing Operator - 3 years experience		20	20
System cum Data Manager - 3 years experience		1	1
QA/QC Expert - 5 years experience		5	5

- a. If a bidder wishes to participate in more than one lot / package, then the evaluation criteria mentioned for each package shall be satisfied by the bidder, cumulatively – that is by summing up requirement for all the LOTs he bids for.
- b. There is no limit on number of sub-contractors which can be included. However, each sub-contractor shall satisfy the criteria mentioned in the RFP.
- c. One bidder can participate in as many LOTs as he wants but bidder has to meet the technical requirements of all bids he makes independently and equal to sum of requirements of all such LOTs
- d. One bidder / sub-contractor cannot bid more than one bid for each LOT. In such event, all the associated bids by that bidder for that LOT will be disqualified.

C. Technical Methodology Evaluation

- As part of technical evaluation, the bidders who propose to use image acquisition and data processing using drone or aircraft shall be given one village each. The bidders shall generate all the deliverables for the specific village – as per the methodology proposed.
- The results / deliverables shall be evaluated as per the requirements mentioned in the RFP. The solutions / deliverables that meet and comply with the requirements mentioned in the tender shall only be qualified for further evaluation and opening of commercial bids.
- The said field testing of the bidders otherwise eligible in the technical evaluation shall form the part of the technical evaluation. Those who fail to successfully demonstrate their solution shall be declared disqualified in technical evaluation.
- In case of bid received propose to use aircrafts for data acquisition the bidder should demonstrate capturing data of GSD and accuracies prescribed in the RFP in any area of their choice anywhere within India or abroad acquired with the same Sensor as are being offered for deployment in this tender along with the latest calibration certificates. The GSD to be demonstrated shall be better than 10 cm for the pilot project.
 - The bidder should submit the latest calibration certificate of the offered sensor and other instruments for the given GSD requirements mentioned in the RFP.
 - In case such an Aerial Survey bidder emerges winner in the bid, the Purchaser has the right to seek actual demonstration in the field of the requisite GSD and other accuracies as per the RFP before the work is permitted to be carried out for the full scope of award.
 - In case of failure of bid winner in such a demonstration, the Purchaser reserves absolute right to cancel the tender and not issue the workorder or cancel the workorder in case it has already been issued.
- In absence of complying with above requirements by the bidders, the bid shall be rejected as technically non-responsive.

Note: Purchaser may have the option of not to evaluate the methodology of data acquisition and processing of a bidder, if the bidder had earlier participated in the earlier tender of SSLR and had successfully qualified in the technical evaluation process – provided the same methodology, instrumentation and process are adopted. However, the decision of the purchaser is final in this regard. Every bidder shall be ready for the methodology evaluation.

Section IV BIDDING Forms

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1A. LETTER OF BID– TECHNICAL PART

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

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

No alterations to the text except as provided in ITB20.2, shall be permitted and no substitutions shall be accepted except as provided in ITB 12.]

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

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

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

To:

Commissioner,
Survey, Settlement & Land Records,
Revenue Department,
Government of Karnataka,
K R Circle,
Bengaluru – 560 001

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Documents as per the RFP No (mention the RFP No and Date)and Proceedings/Clarifications/Addendum as per Pre-Bid Meeting.
- (b) We meet the eligibility requirements and have no conflict of interest in accordance with the RFP;
- (c) We are submitting our bids for HIRING OF DRONE OR AERIAL SURVEY AS A SERVICE FOR ORI GENERATION FOR LARGE SCALE MAPPING for the following packages **(list out the packages which are being applied for)**
- (d) We have not been suspended nor declared ineligible by the Purchaser/any Government/Semi-Government entity in the Purchaser's country in accordance with the provisions of the RFP (ITB 4.2);
- (e) We offer to supply in conformity with the Bidding Documents and in accordance with the Delivery Schedules specified in the Schedule of Requirements the following Services and deliverables as per the tender document;
- (f) Our bid shall be valid for the period of time specified in ITB Sub-Clause 18.1, from the date fixed for the bid submission deadline in accordance with ITB Sub-Clause 22, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (g) If our bid is accepted, we commit to obtain a performance security in accordance with the Bidding Documents;

- (h) We are not participating, as a Bidder or as a subcontractor, in more than one bid in a single LOT in this bidding process. We understand that I can bid for as many or all the 7 (seven) LOTs but for each LOT I cannot bid more than once either as Bidder or as a Sub-Contractor;
- (i) We, along with any of our subcontractors, suppliers, consultants, manufacturers, or service providers for any part of the contract, are not subject to, and not controlled by any entity or individual that is subject to a suspension or a debarment imposed by the Government of Karnataka or Govt of India as per the RFP in this regard. Further, we are not ineligible under the Purchaser's Country laws or official regulations.
- (j) We confirm that Principal Secretary to Government, Revenue Department be appointed as the Adjudicator in case of dispute as per this tender document.
- (k) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed;
- (l) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive;
- (m) We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in any type of fraud and corruption; and we will strictly observe the laws against fraud and corruption in force in India namely, "Prevention of Corruption Act 1988."
- (n) We, along with all our sub-contractors, undertake to abide by the Code of Integrity in public Procurement of Government of India,

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

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

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

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

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

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

1B. LETTER OF BID- FINANCIAL PART

The Bidder must submit the FINANCIAL BID only in the eProcurement Portal of the Government of Karnataka and in the forms and space made available therein.

Note: ANY DISCLOSURE OF FINANCIAL BID IN ANY FORM OTHER THAN THROUGH eProcurement's Financial Bid Form or AT ANY OTHER STAGE SHALL LEAD TO DISQUALIFICATION OF THE BIDDER

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

NIT No.: [insert number of bidding process]

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

To:

Commissioner,
Survey, Settlement & Land Records,
Revenue Department, Government of Karnataka,
K R Circle, Bengaluru – 560 001

We, the undersigned Bidder have submitted the Financial Bid in eProcurement Portal of Government of Karnataka. In this regard we make the following additional declarations:

- (a) We understand that this is a tender through eProcurement portal of Government of Karnataka viz <https://eproc.karnataka.gov.in> and the financial bid shall be filled up therein and will be evaluated accordingly. **Other than in eProcurement Portal at no other place or form the financial bid shall be disclosed or given.**
- (b) Our bid shall be valid for the period of time specified in ITB Sub-Clause 18.1, from the date fixed for the bid submission deadline in accordance with ITB Sub-Clause 22, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (c) No commissions, gratuities, or fees have been paid or are to be paid with respect to the bidding process or execution of the Contract:
- (d) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed.

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

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

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

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

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

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

2. BIDDER INFORMATION FORM

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

Date: *[insert date (as day, month and year) of Bid Submission]*
NIT No.: *[insert number of bidding process]*

Page _____ of _____ pages

1. Bidder's Legal Name <i>[insert Bidder's legal name]</i>
2. Bidder's Registration Number: <i>[insert Registration number]</i>
3. Bidder's Year of Registration: <i>[insert Bidder's year of registration]</i>
4. Bidder's Legal Address in Country of Registration: <i>[insert Bidder's legal address in country of registration] (All communication by post shall be sent to this address)</i>
5. Bidder's Authorized Representative Information Name: <i>[insert Authorized Representative's name]</i> Address: <i>[insert Authorized Representative's Address]</i> Telephone/Fax numbers: <i>[insert Authorized Representative's telephone/fax numbers]</i>
Email Address: <i>[insert Authorized Representative's email address]</i>
6. Attached are copies of original documents of: <i>[check the box(es) of the attached original documents]</i> <input type="checkbox"/> Articles of Incorporation or Registration of firm named in 1. <input type="checkbox"/> GST Registration. <input type="checkbox"/> Included are the organizational chart, a list of Board of Directors, and the beneficial ownership

2A. BIDDER SUB-CONTRACTOR'S INFORMATION FORM

[The Bidder shall fill in this Form for each Sub-Contractor Partner separately in accordance with the instructions indicated below. No alterations to its format shall be permitted and no substitutions shall be accepted.]

Date: *[insert date (as day, month and year) of Bid Submission]*
 NIT No.: *[insert number of bidding process]*

Page _____ of _____ pages

1. Bidder's Legal Name <i>[insert Bidder's legal name]</i>
2. Bidder's Sub-Contractor Member's Name <i>[insert Subcontractor Member legal name]</i>
3. Bidder's Sub-Contractor Registration: <i>[insert Sub-Contractor Member's Registration]</i>
4. Bidder's Sub-Contractor Member's Year of Registration: <i>[insert Bidder's Sub-Contractor Member's year of registration]</i>
5. Bidder's Sub-Contractor Member's Address in Country of Registration: <i>[insert Bidder's Sub-Contractor Member's address in country of registration]</i>
6. Bidder's Sub-Contractor Member's Authorized Representative Information Name: <i>[insert Sub-Contractor Member's Authorized Representative's name]</i> Address: <i>[insert Sub-Contractor Member's Authorized Representative's Address]</i> Telephone/Fax numbers: <i>[insert Sub-Contractor Member's Authorized Representative's telephone/fax numbers]</i> Email Address: <i>[insert Sub-Contractor Member's Authorized Representative's email address]</i>
7. Attached are copies of original documents of: <i>[check the box(es) of the attached original documents]</i> <input type="checkbox"/> Articles of Incorporation (or equivalent documents of constitution or association), and/or registration documents of the legal entity named above. <input type="checkbox"/> GST Registration. <input type="checkbox"/> Included are the organizational chart, a list of Board of Directors, and the beneficial ownership
8. Activity to be performed by the sub-contractor in this project (<i>[Encircle the items from the below list for which the sub-contractor will perform the role]</i>) a. Drone Data Acquisition with GPS Control b. Aerial Image Acquisition with GPS Control c. DGPS Control Survey d. Aerial Data processing

3. QUALIFICATION INFORMATION

1. Individual Bidders

- 1.1 Constitution or legal status of Bidder: *[attach copy]*
 Place of registration: *[insert]*
 Principal place of business: *[insert]*
 Power of attorney of signatory of Bid: *[attach]*
- 1.2 Total annual volume of Services performed in five years, in INR, Convert to INR if internationally traded currency is specified in the work order submitted as proof: *[insert]*
- 1.3 Services performed as prime Service Provider on the provision of Services of a similar nature and volume over the last five years. The values should be indicated in the same currency used for Item 1.2 above. Also list details of work under way or committed, including expected completion date.

Project name	Country in which the project is executed	Name of employer and contact person	Type of Services provided	year of completion	Value of contract (in INR)	% completed (in terms of payment received)

- 1.4 Major items of Service Provider's Equipment proposed for carrying out the Services. List all information requested below. Refer also to Section III 3(a). *(include separate row for each make / model of the instrument)*. **The below information need to be submitted for all packages, cumulatively.** Total no of packages applied for shall be mentioned, **explicitly.**

Mention all the LOTs or Packages Numbers for which Bids given = _____
 (The table below should be filled up by summing up for all the LOTs bid by you)

Item of equipment	Availability Proposal				Proposed total Quantity to be used for the project
	Make & Model & ID Number	Owned by bidder / Sub contractor	Nos.	Age/ Condition	
(a) Professional Survey grade PPK enabled UAS / Drone OR Medium / Large format digital Aerial Camera and Aircraft detail					
(b) Dual Frequency GNSS receivers/RTK rover					

(c) Middle level Work-stations					
(d) Network Storage system					
(g) Backup Device (Minimum 50 TB)					
(h) Servers					
(i) Software of Mission planning & data acquisition					
(j) Post processing software for DSM & ORI					

Note: - Pl refer Section III for minimum requirement of equipment's. Proof of ownership of the equipment's should be submitted

1.5 Qualifications and experience of key personnel proposed for administration and execution of the Contract. Attach biographical data. Refer also to Section III 3(b) and GCC Clause 4.1. **The below information need to be submitted for all packages, cumulatively.** Total no of packages applied for shall be mentioned, **explicitly.**

T
able
1.5(a)

Mention all the LOTs or Package Numbers for which Bids given = _____
(The table below should be filled up by summing up for all the LOTs bid by you)

Sl. No.	Title of Position	Minimum required as per RFP	No of Persons proposed	Average years of experience in proposed position
1	Project Manager			
2	Pilot and Co Pilot			
	Operator – Pre-Processing and Block Setup			
3	Operator – Post-processing of DSM & ORI			
4	GNSS Surveyor			
5	System Manager cum Data Manager			
6	Expert QA/QC			

b) Details of Proposed Positions (Names):

Table 1.5(b)

Include separate row for each staff to be considered as part of qualification criteria. (*Detailed CV of each staff to be enclosed*)

The below information need to be submitted for all packages, cumulatively. Total no of packages applied for shall be mentioned, ***explicitly***.

Mention all the LOTs or Package Numbers for which Bids given = _____
(The table below should be filled up by summing up for all the LOTs bid by you)

Sl. No.	Title of Position	Name of the Person	Qualification	Experience	Bidder / Sub contractor name
1	Project Manager				
2	Pilot and Co Pilot				
	Operator – Pre-Processing and Block Setup				
3	Operator – Post-processing of DSM & ORI				
4	GNSS Surveyor				
5	System Manager cum Data Manager				
6	Expert QA/QC				

c) **Resume of every Proposed Personnel should be enclosed as per format given below:**

Table 1.5(c)

Title Position as per Table 1.5(b): _____

[e.g. for Project Manager, Pilot, Supervisor, Operator, System Manager & QA/QC Expert etc]

Name of Bidder:	
Position:	
Personnel Information	Name: _____ Date of Birth: _____
	Professional Qualification: _____
	General of Experience: _____
	Experience in Proposed Position: _____
Present	Name of Employer: _____ Address of Employer: _____
	Telephone: _____ Contact (Manager/Personnel officer)
	Fax: _____ E-mail: _____
	Job Title: _____ Years with present employer

Summarize professional experience over the last 10 years, in reverse chronological order. Indicate particular technical and managerial experience relevant to the project.		
S.No.	Period (From-To)	Details of experience in drone / aerial Survey work

1		Company :
		Project Name :
		Brief description of project :
		Position (in which worked) :
		Details of work handled :
2		Company :
		Project Name :
		Brief description of project :
		Position (in which worked) :
		Details of work handled :
3		Company :
		Project Name :
		Brief description of project :
		Position (in which worked) :
		Details of work handled :

1.6 Proposed subcontracts and firms involved. Refer to GCC Clause 3.5 and 4.1. **The below information need to be submitted for each packages, separately.** Total no of packages applied for shall be mentioned, **explicitly.**

Mention all the LOTs or Package Numbers for which Bids given = _____
(The table below should be filled up by summing up for all the LOTs bid by you)

Sections of the Services	Subcontractor (name and address)	Experience in providing similar Services
(a)		
(b)		
(c)		

1.7 Financial reports for the last five years: balance sheets, profit and loss statements, auditors' reports, etc. List below and attach copies.

1.8 Evidence of access to financial resources to meet the qualification requirements: cash in hand, lines of credit, etc. List below and attach copies

of support documents. We certify/confirm that we comply with eligibility requirements as per Section III

- 1.9 Name, address, and telephone, email, and facsimile numbers of banks that may provide references if contacted by the Employer.
- 1.10 Information regarding any litigation, current or within the last five years, in which the Bidder is or has been involved.

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

- 1.11 Statement of compliance with the requirements of ITB Sub-Clause 4.2.
- 1.12 Proposed Program (service work method and schedule). Descriptions, drawings, and charts, as necessary, to comply with the requirements of the bidding documents. Refer also to ITB 17.3.

2. Joint Ventures

NOT PERMITTED

3. Additional Requirements

- 3.1 Bidders should provide any additional information required in the Bid.

4. METHOD STATEMENT

[Bidder shall provide information and write-up as per points listed below. The bidder shall furnish the sufficient details in respect of all headings/sub-headings and documentary evidences as per format given below.]

1. DRONE / AERIAL DATA ACQUISITION & POST-PROCESSING

A) Technology: Details of Technology for data Acquisition using Drone / Aerial Survey using Medium / Large Format Digital Camera:

- i. Workflow showing various stages of work and their inter-dependencies.
- ii. Details of Processes at every stage viz. planning, mission/flight planning, actual execution
- iii. Details of approvals / clearance that need to be obtained for data acquisition and processing. The bidders understanding on the security clearance process need to be established.
- iv. Best Practices that will be adopted at each stage
- v. Details of manual/semi-automatic/automatic QA/QC measures to be taken during/at end of each stage.
- vi. Brief write up based on information provided on above points justifying the adequacy of processes and practices to meet the technical specifications stipulated in bid document. (fundamental & supplementary accuracy)

B) Equipment: Make, model and specifications of key equipment's viz. aerial survey platform OR UAS / DRONE, On-board and base GNSS receivers, On-board IMU, Camera/Sensors for raw data acquisition, hardware & software to be used for flight planning, flight monitoring, and justification of equipment to meet the technical specifications stipulated in bid document

C) Details of Previous Work:

- i. Key Specifications of similar work executed by the bidder listed in section III in which drone / aerial survey Technology has been used. References to be cited of Indian & International Projects (from bidder's own experience)
- ii. Brief write-up based on information provided above clearly bringing out how by suitable modifications(if any) to the Flying/Acquisition parameters the specifications stipulated in this bid document shall be met requirements of this Project

2. PROVISION OF GROUND CONTROL POINTS

Full use of the established CORS station by Survey of India for Karnataka should be done to get the best out the said infrastructure. Further and in conjunction with that –

- i. Density & distribution of Ground Stations to be established for correction to onboard GNSS
- ii. Equipment to be used for Observations
- iii. Hardware & Software to be used for computation
- iv. Description of observation methods
- v. Description of computation method
- vi. Density and distribution of check-points for Internal QA/QC in order to meet the Fundamental & Supplemental accuracy stipulated in Section V

3. POST PROCESSING

- (i) Details of Hardware & IT Infrastructure to be set up in Production Centre justifying its adequacy to handle and store raw Data, key intermediate data, data under process and Processed Data/deliverables.
- (ii) Software to be used for Post-Processing for generating DSM & ORI
- (iii) Workflow showing various stages of Post-Processing and their interdependencies
- (iv) Best Practices that will be adopted at each stage
- (v) Details of manual/semi-automatic/automatic QA/QC measures to be taken
- (vi) Brief write-up based on information provided above justifying the adequacy of hardware, software, methods & processes proposed to meet the specifications stipulated in the bid-document

5. WORK PLAN & SCHEDULE

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

1. Resource Deployment

- i. Activity wise Effort Estimate viz. Raw Data Acquisition, Provision of Ground Control, Pre-processing and Block setup, Generation of ORI and DEM.
- ii. Activity wise expected out-turns
- iii. Manpower resources proposed based on effort estimate calculation & expected out-turns for all the activities
- iv. Details of resource deployment for Internal QA/QC by the bidder shall also be provided.
- v. Number of shifts proposed
- vi. Quantity of equipment (Drone / aircraft fitted with on-board GNSS, Camera), instruments, hardware and software for every activity.

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

3. Bidder shall provide details of resource deployment in similar services performed by them in previous projects to justify that the proposed work plan from their previous experience

4. The work-plan, schedule and resource deployment has to be submitted separately for different lots/phase/districts clearly bringing out the details of resources/works that are clubbed (if any).

5. The implementation plan need to be explained in detail. The table below need to be filled and submitted by the bidder.

- Mention quantity (in numbers) and the estimated area (in Sq Km) that would be completed in a month, explicitly. This Monthly Implementation Plan is binding and non-negotiable deliverable for each month and default therein makes the bid winner liable for termination with forfeiture of PBG and also black-listing.
- On the timelines, please colour the cells. The numbers and colours mentioned are indicative. The bidder needs to calculate and update them, appropriately.
- The descriptive explanation of Implementation Plan should clearly reflect the estimates per day / week and month - for each activity. The Plan of scaling of resources and equipment's should be clear so that it reflects the proper understanding of the project, practical timelines and understanding of field realities.

- In case of procurement of new equipment's or instruments like drone/ aircraft, GPS devices etc, the timelines for such procurements and its delivery for project implementation should be considered. The same should be properly reflected and mentioned in the plan
- Clarity in the implementation plan - in terms of resources, estimates, field conditions and deliverables shall be reviewed critically. The understanding of the bidder on the complexities will be reviewed based on it. If clarity is not provided in the implementation plan, the bids will not be considered as technically qualified.
- The human resources / equipment's that would be deployed should meet the qualification / experience and the specification mentioned in the RFP.
- Penalties will be levied for delay in submission of proposed deliverables, every month.
- Every month delay in submission of Deliverables (colour balanced ortho mosaic) will lead to penalty of 2% per week based on the quantities (in Sqkm) that was not delivered for the month as per plan. For the penalty, the amount will be computed based on per Sqkm area cost quoted by the bidder.
- Every Delivery (either grids / tiles) shall be having minimum area of 100 Sqkm, exclusive of overlapping region. Overlaps of 50 m on all sides of tiles / villages shall be provided for DSM and ortho mosaic.
- The QA / QC process should be explained in detail and clearly. Methods of achieving the accuracy and the parameters / process that would be adopted for verification and acceptance shall be detailed.

6. Price Schedule Forms (Inclusive of all taxes, duties and cesses)

*[The Bidder shall fill in these Price Schedule Forms in accordance with the instructions indicated. The list of line items in column 1 of the **Price Schedules** shall coincide with the List of Goods and Related Services specified by the Purchaser in the Schedule of Requirements.]*

HIRING OF DRONE OR AERIAL SURVEY AS A SERVICE FOR ORIENTATION GENERATION FOR LARGE SCALE MAPPING UNDER RESURVEY/SURVEY PROJECT AND SVAMITVA PROJECT

6. PRICE BID FOR LOT _____								
Date: _____			OTE No: _____					
SI No	Description	Unit of Payment	Total Area of the LOT	Unit price per Sq KM	Total Price	GST and other taxes payable per item if Contract is awarded		Total Price
1	2	3	4	5	6 = (col 5*6)	7 (Percentage)	8 (Actual amount of GST & Taxes)	9 = Col. 6+8
1	Drone or Aerial Survey based Generation and delivery of Ortho-Rectified Images (ORI) \, duly meeting the specifications and conditions specified in the tender document - including all costs associated with the same for – Package no <n>	Per Square Kilometer of final output delivered and accepted (excluding buffer area)	<area> Sq KM					

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

NB: The cost of setting up Production Centre and mobilization , deployment and use-rate of equipment, h/w, s/w, other costs associated with Preparation of site wages/salary of manpower deployed and all other expenses incurred shall be deemed to be included in above price bid

The above bid format is indicative and shall not be submitted as part of technical bid. The commercial bid format shall be filled and submitted as per the e-procurement portal of Govt of Karnataka. The cost quoted shall be inclusive of all taxes. The tax components shall be detailed separately, as per the provisions in the e-procurement portal

7. BID SECURITY DECLARATION FORM

To

Commissioner,
Survey, Settlement & Land Records,
Revenue Department,
Government of Karnataka,
K R Circle,
Bengaluru – 560 001

Dear Sir,

Ref: Your OTE document No _____ dated _____

We, the undersigned, declare that:

We, M/s.....(herein referred as bidder)¹ understand that, according to bid document, bids must be supported with a Bid Securing Declaration as part of the EMD, therefore in addition to submission of the EMD (Rs 5 Lakhs through e-Procurement Portal and additional **Rs XX Lakhs** in the form of a Bank Guarantee from a Scheduled Commercial Bank as per conditions laid in this RFP), bidder gives the declaration that:-

Bidder will automatically be, in addition to forfeiture of the EMD of **Rs XX Lakhs**, suspended from being eligible for bidding in any contract with any of the Government of Karnataka, for a period of 2 years from the date of debarment, if bidder are in breach of any of the following obligation(s) under the bid conditions:-

(a) If a Bidder withdraws the proposal or increases the quoted prices after opening of the Proposal and during the period of Bid validity period or its extended period, if any.

(b) In case of a successful Bidder, if the Bidder fails to sign the Agreement in accordance with the terms and conditions (including timelines for execution of the Agreement) of this Bid Document or fails to furnish the Performance Bank Guarantee in accordance with the terms and conditions (including time lines for furnishing PBG) of this Bid Document.

(c) During the Bid process, if a Bidder indulges in any act as would jeopardize or unnecessarily delay the process of bid evaluation and finalization.

(d) if the Purchaser comes to a conclusion that bidder (including members of Joint Venture/ Sub-Contractor)/ contractor/ supplier/ consultant/ service-provider), directly or through an agent, has violated Code of Integrity in competing for the contract.

Bidder understand that this declaration shall expire if Bidder is not the successful Bidder and on receipt of purchaser's notification of the award to another Bidder; or thirty days after the validity of the Bid; whichever is earlier.

(Signature)

Authorized Signatory

Name : _____

Designation: _____

Office Seal: _____

Place: _____

Date: _____

BID SECURITY/EARNEST MONEY DEPOSIT (EMD) - BANK GUARANTEE

[Guarantor letterhead or SWIFT identifier code]

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

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

To:

The Commissioner
Survey, Settlement & Land Records Department,
K R Circle, Opposite BESCOM Head Office,
Bengaluru

WHEREAS _____ *[name and address of Bidder]* (hereinafter called "the Applicant") has undertaken, in pursuance of Tender No. **SSLR/STR/ORI/11/2022-23** dated **16-12-2022** to participate in the bidding process for *HIRING OF DRONE OR AERIALSURVEYAS A SERVICE FOR ORI GENERATION FOR LARGE SCALE MAPPING* (hereinafter called "the tender");

AND WHEREAS it has been stipulated by you in the said tender that the Applicant shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as part of Earnest Money Deposit (EMD) for compliance with his obligations in accordance with the tender;

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

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Applicant, up to a total of _____ *[amount of guarantee¹]* _____ *[in words]*, such sum being payable in the types and proportions of currencies in which the EMD for tender is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of _____ *[amount of guarantee]* as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

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

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

This guarantee shall be valid until (i.e.) remain valid for a period of 45 days beyond the original validity period of the 3-months bids that is shall remain valid for 135 days or beyond that as per any period of extension of bid validity, if so requested including any warranty obligations², and any demand for payment under it must be received by us at this office on or before that date.

¹ An amount shall be inserted by the Guarantor, representing the amount based on the number of packages being quoted by the bidder as EMD as specified in the tender and denominated in Indian Rupees.

² Completion date as described in ITB Clause 18.2

Signature and seal of the guarantor _____

Name of Bank _____

Address _____

Date _____

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

8. PROFORMA FOR PERFORMANCE STATEMENT

[Please see ITB Clause 36.2 and Section III-Evaluation and Qualification Criteria]

Proforma for Performance Statement (for a period of last five years)

Bid No. _____ Date of opening _____ Time _____ Hours
 Name of the Firm _____

<u>Order placed by (full address of Client)</u>	<u>Order No. and date</u>	<u>Description of services and quantity of ordered in terms of area</u>	<u>Value of order (in INR)</u>	<u>Date of completion of service</u>		<u>Remarks indicating reasons for late delivery, if any</u>	<u>Attach a certificate from the concerned employer for satisfactory performance of service contract</u>
				As per contract	Actual		
1	2	3	4	5	6	7	8

Signature and seal of the Bidder _____

Note:

1. In support of having completed above works, attach self-attested copies of the completion certificate from the owner/client or Executing Agency / Consultant appointed by owner / Client indicating the name of work, the description of work done by the Bidder, date of start, date of completion (contractual & actual) and contract value as awarded and as executed by the Bidder. "Contract Value" shall mean gross value of the completed work including cost of materials supplied by the owner/client but excluding those supplied free of cost.
2. Credential certificates issued by Government Organizations/ Semi Government Organizations of Central or State Government; or by Public Sector Undertakings/Autonomous Bodies of Central/State Government or their subsidiaries / by Public Ltd. Companies listed in Stock exchange in India or Abroad shall only be accepted for assessing the eligibility of a Tenderer. Certificates issued by one of the aforesaid organizations as a lead member (having equity stake of 51% or more) of a Joint Venture (JV) for a work executed for the JV, will also be acceptable. In case of PPP projects, if the bidder has executed a work for a concessionaire who is one of the aforesaid organizations, then the certificate issued by such concessionaire or by the public authority concerned, will also be acceptable.
- 3 Information must be furnished for works carried out by the Bidder in his own name or proportionate share as member of a Joint Venture. In the latter case details of contract value including extent of financial participation by partners in that work should be furnished.
- 4 If a Bidder has got a work executed through a Subcontractor on a back to back basis, the Bidder cannot include such a work for his satisfying the Qualification Criterion even if the Client has issued a Completion Certificate in favour of that Bidder.
- 5 Use a separate sheet for each partner in case of a Joint Venture.
6. Only similar works completed during the last 5 years prior to the last stipulated date for submission of Bid, which meet the Qualification Criterion need be included in this list.

PART 2 - SUPPLY REQUIREMENTS

SECTION V – SCHEDULE OF REQUIREMENTS

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1.LIST OF GOODS AND DELIVERY SCHEDULE

Deleted

2. ACTIVITY SCHEDULE

1. The flying and ORI generation shall be done district wise and within the district, taluk-wise and within the taluk – village wise/ Gridwise.
2. The district wise, taluk wise and village wise flying and ORI handover plan should be done, as per the implementation plan.
3. The Activity Schedule shall be as per Detailed Implementation Plan included in the technical bid and as finalized as part of the signing of the Contract with the Bid Winner.
4. In 12-months the complete flying and delivery of all deliverables for all the villages in all the districts in the LOT shall be completed. The Activity Schedule shall be accordingly drawn up.
5. Every delivery should be accompanied with its QA/QC report, as detailed in the bid/implementation plan.

3. TECHNICAL SPECIFICATIONS

1. General:

Aerial image acquisition using Drone / Aerial survey shall be carried out for of the defined packages or LOTs with a GSD of 5cm or better. Data will be captured with reference to control network already established by CORS Network/SoI GCP's in State of Karnataka. To achieve the required accuracy, the bidder will have to establish ground control points and check points prior to flying.

The following data will be provided to the Service Provider:

- Area of Interest (AOI) in shp and kmz format
- Static Observation Data of CORS stations/SoI GCP's for post processing OR
- Facility of NRTK (Network RTK) if RTK rovers are used.

Broadly, the Service Provider would need to provide the following services:

- (i) Provision of Ground controls for Base stations as per requirements of project to achieve the required accuracy and also for check points.
- (ii) Procuring necessary clearances from DGCA & Ministry of Defense, other agencies of Government of India for flying over the AOI to acquire data from drone / aircraft, Imagery etc.
- (iii) Compliance of Requirements for Operation of Civil Remotely Piloted Aircraft System (RPAS) issued by Ministry of Civil Aviation, Government of India as per the Drone Act 2021 dated 25th August 2021. In case of Aerial survey using aircraft fitted with Medium / Large Format Digital Camera, the standard conditions defined by Ministry of Defence for conduct of aerial survey / photography using aircraft /UAV's dated 28th Dec 2018 shall be followed.
- (iv) The purchaser shall provide all necessary letters and authorization to the service provider. It is the responsibility of the service provider to obtain the necessary clearance for aerial surveys for all authorities concerned.
- (v) Preparation of Mission planning
- (vi) Post-processing of drone/ aerial survey captured data to produce the following:
 - a. Digital Surface Model (DSM)
 - b. Ortho Rectified Images (ORI) and submitting as seamless color balanced mosaic for the project area.
- (vii) Conducting Quality Control/Quality Assurance (QC/QA) to establish correctness at each stage.
- (viii) Validating horizontal and vertical accuracy through independent means
- (ix) Compliance with other product requirements such as file naming, datum and projection, units, etc
- (x) Delivery of raw data, other products and supporting reports

2. Scope of Work

a. Clearances for flying

The Service Provider is responsible to obtain necessary clearances from Director General of Civil Aviation, Ministry of Defence and other agencies of Government of India or concerned State Government as may be required to complete the job of flying over the AoI, acquire image data using Drone / Aerial Survey etc. The purchaser would provide

necessary documentation; however, getting clearance would be the entirely the responsibility of the Service Provider. Scope of this activity shall include operational requirements for Civil Remotely Piloted Aircraft System (RPAS) as per Drone Rules 2021 notified by Ministry of Civil Aviation, dated 25th August 2021 and also in obtaining Unique Identification Number (UIN), and the type certificate, Insurance etc.

b. Mission Planning

The flight path shall cover the desired area completely including enough cross flight lines to eliminate shadowing and allow for proper quality control. Flight line forward overlap should be 80% & side overlap should be 70% or greater for the urban (towns and cities) areas. For the rest of area, the overlap shall be 80% forward overlap and 40% side overlap as required for drone. For medium / large format aerial cameras. it shall be 60 % and 30%, to ensure that there are no data gaps between the usable portions of the swaths. In the highrise areas, the overlap has to be increased so that the most nadir pictures are used for ortho generation which shall have minimal tilt from high altitude buildings / trees. Data collections in high relief terrain should have greater overlap. Any data with gaps between the geometrically usable portions of the swaths will be rejected. Buffer area of 100m shall be covered for the given boundaries. The data coverage / processing for the buffer areas are not considered as additional area in terms of total area both for physical progress and financial calculations.

c. Ground Control Survey

The Service Provider must use ground control network already established by SOI or CORS Network to establish the ground control for the base stations for drone / aircraft based aerial survey flying activities. The proposed control network should be provided to KRSAC for its approval prior to commencement of work. The control network points shall be surveyed using GNSS of dual frequency (L1 and L2) and multi-channel capability with on-the-fly ambiguity resolution and be able to log GPS data at 1-second epochs or better. Sufficient no. of check points must also be made with reference to existing ground control network or CORS network to check the accuracy of ORI.

Network RTK solution from SOI established CORS network is preferred. In the absence of CORS signals, static surveys and post processing shall be carried out. However, in both the cases, the expected GPS accuracy should be achieved, as mentioned in this RFP.

Check points shall be provided with 5 points per village. In Urban areas, for every 500 m x 500m grid area, one check point should be provided

d. Data Acquisition

The Service Provider will acquire high-resolution 5 cm GSD or better images using drone / medium or Large format digital cameras as per the technical specifications with forward overlap of 80% & side overlap of 40% / 60% forward overlap and 40% side overlap or greater, respectively. The Service Provider must use ground control already established with reference to SOI GCP library or CORS network for the base stations for drone / aerial flying activities.

e. Post-Processing

The Service Provider will provide high-resolution 5 cm GSD or better ORI and DSM of 25 cm or better to achieve the desired ortho image accuracy after post processing of drone /

aerial data. The accuracy the ORI will be checked using the check points. The Service Provider will ensure Proper versioning, file naming. The naming convention shall be defined by KRSAC (as per LGD code, in case of villages OR K-GIS Grid codes) and management of data in various Production Cycles.

f. Quality Control/ Quality Assurance

Quality Control/Quality Assurance (QC/QA) of the drone or aerial data and/or derived data at various stages of Project including validating horizontal and vertical accuracy as per specifications laid down in RFB will be the responsibility of the Service Provider. The purchaser may perform additional QC/QA testing. This shall include (a) Carrying out corrections as per Quality Audit Report and security vetting report provided by KRSAC/SOI (b) Facilitating quality audit, stage approvals, security vetting and final acceptance tests by KRSAC/SOI

3.0 TECHNICAL SPECIFICATION:

1. SPECIFICATIONS OF UAS/DRONE BASED SYSTEM

Technical Specifications			
S.No.	Description	Required Specification without operator	Bidder's Offered Specifications / Compliance /Deviation Statement (to be filled up by BIDDER)
1.	UAS Type	Up to the service provider	
2.	Mission	Surveying and Mapping /Professional Grade	
3.	(i) Landing &Takeoff	Vertical Take Off and Landing (VTOL)	
4.	MaximumTakeoff weight (MTOW)	Up to the service provider	
5.	Flight Height above Ground Level	Maximum of 120m AGL with Terrain tracing Capability	
6.	Endurance or Max flight time	Minimum 40Minutes	
7.	Sensor or Camera	One high resolution RGB camera with minimum resolution 20 MP or more. Drone camera should capture the image in fix mode.	

8.	GNSS Grade	Both PPK/RTK Enabled onboard GNSS along with Base(Master) GNSS receiver with L1 & L2 frequencies capable to achieve accuracies stipulated in bid-document.	
9.	Nominal Coverage at 120 m (400 ft) Forward Overlap : 80 % Side Overlap : 70%	1sq km with less than 5cm GSD	
10.	Operational wind Speed	Minimum 8 m/s or higher	
11.	Ground Sampling Distance (GSD)	5 cm or better	
12.	Average X,Y accuracy	<10cm(95% of total checked values(absolute accuracy) should be less than 10 cm)	
13.	Average Z accuracy	< 20 cm(95% of total checked values (absolute accuracy) should be less than 20 cm)	
14.	Battery Type	Li-Po/Li-ion or more efficient, international Standard Compliant	
15.	Emergency Recovery Mode	Ability to return back to launch pad or home position with landing accuracy of 1 meter or better in case of communication failure, low battery/power and high wind (more than operational wind speed) etc.	
16.	Onboard storage	Minimum 64 GB or more (Expandable)	
17.	Security	128 bit encryption	
18.	Flight planning & control software	A navigation software package that enables the user to plan and perform complex flight patterns for different surveying applications (Corridor and Area mapping) and should allow the combination of telemetry data with the recorded images/data. The software should feature the functions that enable to plan, fly and prepare the data for post processing for different applications. Package should include at least following features: <ul style="list-style-type: none"> • Flight Plan editor & monitoring Flight book • Photo count display during flight 	

		<ul style="list-style-type: none"> • Should permit use of 3D data for flight planning in hilly/rolling terrain. Should have the interface to insert SRTM data and K-GIS DEM data other than default • Real time tracking and live data Preview • Link loss time should be flexible/Drone pilot centric so that he/she can fix the same on the basis of flight duration. • Should have the capability of flight/mission planning of adjacent villages/polygon (more than one village/polygon) simultaneously at once before commencement of flight simultaneously and also automatic navigation of Drone after completion of one polygon to another planned polygon without specific command of Pilots. • Should have one software for both flight planning & Geo-tagging and should have optimal input for GNSS coordinates • Should have capability of recording more than one flight data without being downloading the same after each flight. All the flight data can be downloaded at once after closing the everyday work. • Should have capability to store each day data of different flights separately • The geo-tagged images should provide the INS data along with the coordinates for input into the image processing software • On board GNSS observation file should be available separately. Drone camera should 	
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		capture photos of mission polygon only with specified overlap i.e it should not capture unwanted photos while moving from one flight line to another in particular mission polygon.	
19.	Data Link	Communication data link complying with International standard and certification. Frequencies used should not interfere with other users allocated frequency spectrum	
20.	Communication distance between GCS and flying Drone/UAV	Upto VLOS as per CAR guidelines	
21.	Operational Temperature	-5 to +50°C	
22.	The UAV/RPAS provided by bidder shall also be equipped with the following serviceable components/ equipment	i. GNSS for horizontal and vertical position fixing	
		ii. Autonomous Flight Termination System or Return Home (RH) option	
		iii. Flashing anti-collision strobe lights	
		iv. No permission – No Take-off (NPNT) compliant for APP based real time tracking. NPNT Hardware and Firmware shall be tamper proof.	
		v. Fire resistant identification plate inscribed with UIN	
		vi. Flight controller with flight data logging capability	
		viii. Barometric equipment with capability for remote sub-scale setting	
		ix. Geo-fencing capability	
		xi. Manufacture Serial Number	
23.	DGCA Guideline	i. The Professional Survey Grade unmanned Aerial Vehicle /Drone shall have all necessary permits and should be registered with DGCA as per (or conform to) the latest Drone Rules 2021 notified by Ministry of Civil Aviation dated 25 th August 2021. Obtaining type certificate, flying	

		<p>approval in various zones as per the digital sky platform, , DGCS clearance for import, DGFT license for import, security clearance or any other clearance along with obtaining UIN for the drones shall rest with service provider. SSLR shall act only as facilitator. UAV survey operations to be carried out in the field shall also conform to the above mentioned DGCA standards.</p> <p>ii. The operator provided should have undergone proper training, should have proper clearances and permits/licenses to operate UAV as per (or conform to) the latest Drone Rules 2021 and other guidelines as and when issued by DGCA in future.</p>	
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2. SPECIFICATION FOR AIRCRAFT WITH MEDIUM / LARGE FORMAT DIGITAL CAMERA

Technical Specifications			
S.No.	Description	Required Specification without operator	Bidder's Offered Specifications / Compliance / Deviation Statement (to be filled up by BIDDER)
24.	Aircraft Type	Up to the service provider (fixed wing / Rotary (Helicopter))	
25.	Mission	Professional medium / large format aerial photography for large scale mapping	
26.	Flight Height above Ground Level	upto 10,000 ft. GSD of aerial imag acquired shall be 5cm or better	
27.	Endurance or Max flight time	Minimum 4 hrs	
28.	Sensor or Camera	Large format digital camera which can acquire upto 2 cm GSD of image.	

29.	Focal Length	50 cm or above	
30.	Channels	4 band – R, G,B, NIR	
31.	Pan sharpened Ratio	1 : 4 or better (ex 1: 3)	
32.	Flying height	Upto 5000 ft	
33.	Ground Coverage per flight/frame	Coverage of more than 750 m in swath @ 5 cm GSD when flown at 1000 m height	
34.	GNSS Grade	Both PPK/RTK Enabled onboard GNSS along with Base (Master) GNSS receiver with L1 & L2 frequencies capable to achieve accuracies stipulated in bid-document.	
35.	Mount	Gyro stabilized mount with IMU with 20 Hz minimum. In case Gyro stabilized mount is not proposed due to camera's in-built tilting compensation mechanism then the same shall be explained and details there of be given as part of technical bid and Technical Evaluation Committee of Purchaser shall take a final decision in this regard.	
36.	Ground Sampling Distance (GSD)	5 cm or better	
37.	Average X,Y accuracy	<10cm (95% of total checked values (absolute accuracy) should be less than 10 cm)	
38.	Average Z accuracy	< 20 cm (95% of total checked values (absolute accuracy) should be less than 20 cm)	
39.	Onboard storage	Minimum 2 TB or more (Expandable)	
40.	Security	128 bit encryption	
41.	Flight planning & control software	A navigation software package that enables the user to plan and perform complex flight patterns for different surveying applications (Corridor and Area mapping) and should allow the combination of telemetry data with	

		<p>the recorded images/data. The software should feature the functions that enable to plan, fly and prepare the data for post processing for different applications. Package should include at least following features:</p> <ul style="list-style-type: none"> • Flight Plan editor & monitoring Flight book • Photo count display during flight • Should permit use of 3D data for flight planning in hilly/rolling terrain. Should have the interface to insert SRTM data and K-GIS DEM data other than default • Real time tracking and live data Preview • Should have the capability of flight/mission planning of adjacent villages/polygon (more than one village/polygon) simultaneously at once before commencement of flight simultaneously. • Should have software for both flight planning & processing of GPS / IMU to derive the better accurate Photo orientation parameters and co-ordinates. • Processing software (block setup) shall be able to import the data and generate the blocks / tie points as part of triangulation adjustment. • Should have capability of recording more than one flight data without being downloading the same after each flight. All the flight data can be downloaded at once after closing the everyday work. • Should have capability to store each day data of different flights separately • The geo-tagged images should 	
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		<p>provide the INS data along with the coordinates for input into the image processing software</p> <ul style="list-style-type: none"> • On board GNSS observation file should be available separately. 	
42.	Operational Temperature	-5 to +50°C	

2. SPECIFICATION OF DRONE OR AERIAL SURVEY DATA ACQUISITION

Coverage	1. Area finalized & approved by SSLR / KRSRAC with 100 m buffer surrounding the AOI polygon.
Collection condition	2. Sun angle - no less than 30 degree to minimize shadow. 3. The project site has relief changes due to built-up area therefore photograph should be captured at high sun angle to avoid shadows due to these high relief formations. 4. Cloud free with minimal smoke, smog, fog and dust. 5. To avoid breaks within individual flight lines. 6. Open space should be chosen for the flight and landing of drone to avoid endanger to public or property.
Outturn	It is expected that Service provider will carry out drone flying in average 05 villages / grids per day ready Service Provider is expected to complete aerial data acquisition for over 750 Sqkm in a week.

3. SPECIFICATION OF PROVISION OF GROUND CONTROL POINT

Sl No.	Description	Specifications
1.	GNSS Control Point	<p>1. Installation of Control Points for Drone / Aerial Survey Using existing ground control network of CORS Network or GCP library, 1 base Control Points for flying shall be established. Density of these control points will be finalized by Service Provider in consultation with Survey of India to achieve stipulated accuracy of drone / aerial survey.</p> <p>The following points shall be kept in mind while selecting control point locations:</p> <ul style="list-style-type: none"> • Clear of HT/LT lines, radio / mobile towers, high frequency dish antennas, radar etc. • Free from multipath problems associated with tall features in the vicinity. • Free from foliage • Free from major obstructions / obstacles • Easily accessible to the survey team. • Open to sky with a clear view towards sky at 15-degree angle with horizontal plain. • Marker numbering scheme shall be finalized in consultation with Survey of India before start of work.
		<p>1. Scheme and schedule of observation</p> <ul style="list-style-type: none"> • Base control points must be located on pillars/permanent structures. • The Service Provider shall prepare a scheme i.e net-

		<p>work of base control stations along with the proposed flight plan, in advance and get it approved from KRSAC/SOI. The network shall be presented on satellite imagery. This should also contain description of proposed base control stations.</p> <ul style="list-style-type: none"> • When observation scheme containing location of base control stations which is adequately connecting to Existing ground control points forming a network is approved by KRSAC, the Service Provider shall submit schedule of observation indicating tentative date and time of observation at base control stations specifying their locations. • The bidder should submit its flight plan and block layout of processing for approval with the client and the statutory authorities for approval. As part of the block layout, the tentative location of GCP / check points with its distribution should be submitted and approved by the client. • It shall be noted, all GCP's and check points shall be pre-targeted so that the points are available on the image and it is preferred to have such pre-target points be on pillar / semi permanent structured. However, in the absence of such pillar / permanent structures, the pre-targets can be placed on the plain ground which is visible clearly in the aerial image acquired. • It is to be noted that the pre-target established should not obscure any corner point of the property which is intended to be mapped from the images / ground.
		<p>Establishment and Observation of base control points</p> <ul style="list-style-type: none"> • Base control stations shall be engraved neatly for their identification and will be painted by filling of engraving with contrast color paint. Unique ID of Point and date information are to be engraved. Necessary jungle clearance and approach to site for proper execution of work wherever required shall have to done by the Service Provider at no extra cost. • Utilizing existing GCP Ground Control Points or CORS network provided by Survey of India can be considered which shall enable to achieve the adjusted coordinates from the GNSS measurement. Such coordinates shall meet the accuracy requirements, specified in this RFP. • The pre-target points shall be established in each of the proposed locations of GCP which shall be neatly painted with contrasting colours with respect to the terrain. These points shall be uniquely seen on the drone / aerial survey photographs. • Dual frequency GNSS receivers with the required ac-

		<p>cessories and software in Static mode are to be used for observations. The GNSS used shall be multi channels. A minimum of 6 healthy satellites should be available during entire duration of observation. The GNSS receivers should not be older than three years from the date of award of contract. Compatible GNSS instrument and accessories of LEICA /Trimble/ASTECH/Spectraprecision/Topcon/Hemisp here or of any other reputed brand having similar specifications only shall be used so as to achieve the required accuracy. Chinese models of any brand shall not be allowed to use. Observations taken with Geometric Dilution of Precision (GDOP) exceeding 4 should not be considered. During observations, satellite mask angle should be above 15 degree.</p> <ul style="list-style-type: none"> • Using digital camera of at least 10 mega pixels, Service Provider shall take photograph of each Ground Control points after finalizing writing etc. and submit it to Survey of India in digital form with proper indexing and labeling.
		<p>Establishment of Check Points</p> <ol style="list-style-type: none"> 1. Utilizing existing GCP Ground Control Points or CORS network provided by Survey of India whose adjusted coordinates are available, minimum 5 check points in each village polygon shall be provided by GNSS observation either in static or RTK mode. Check points shall be uniformly distributed in village polygon. 2. Check Points shall be made on conspicuous points be easily identifiable in images procured through drone / aerial Survey. 3. Check points shall be engraved neatly for their identification and will be painted by filling of engraving with contrast color paint. Unique ID of Point are to be written. 4. Check points are to be post pointed in image in digital form and submit it to SoI / KRSRAC along with processed coordinate in .xls sheet. 5. Using digital camera of at least 10 mega pixels, Service Provider shall also take photograph of each Check point after finalizing writing etc. and submit it to Survey of India in digital form with proper indexing and labeling. <p>All the GCP's and the Check points shall be pre-targetted so that the points are clearly visible on the photograph.</p> <p>The Pre-targets shall be painted with contrasting col-</p>

		our as that of the terrain so that those points are clearly visible and seen on the drone / aerial surveyed photograph
	Datum	GNSS data (Raw) for all Base station and Check Points will be processed in The World Geodetic Datum 84 (WGS-84). Heights shall be Ellipsoidal height.
		GNSS data (Raw and Processed) for all Base station and Check Points are to be provided in RINEX format (Receiver Independent Exchange Format) and GPS observation log sheets, raw and processed data sheet should be provided in PDF format or Excel spread-sheet if data is captured digitally.

3. SPECIFICATION OF ORTHO RECTIFIED IMAGE

	Description	Specifications
1	Coverage	As per AoI with 100 m buffer all around.
2	GSD	5 cm or better
4	Bands	RGB (Three band natural color imagery)
8	Image format	Uncompressed GeoTIFF and/or lossless Compressed JPEG2000 or ECW format
9	Horizontal accuracy	<= +/- 10 cm 95% confidence interval (1.96 x RMSE) A checklist shall be submitted for each grid / project area on the accuracies achieved against the surveyed check and control points.
10	Imagery Product	Seamless mosaic covering the project area and non-overlapping, edge matched.
11	Radiometric Resolution	Minimum 8 bit per band in accordance with chosen image format. In case of 4 band data, all band data should be part of ortho mosaic.
12	Delivery Dates	As per the project timeframe. Raw photograph to be submitted with Raw acquired data and processed Ortho Rectified Image
13	Horizontal Datum	The World Geodetic Datum 84 (WGS-84)
14	Map Projection	The coordinate system for all deliverables is the Universal Transverse Mercator (UTM).
15	Vertical Datum	All deliverables specified below as ellipsoidal will be in terms of the WGS-84 reference frame.
16	Survey Control	<ol style="list-style-type: none"> 1. Geo-tagging and Ortho-image generation: It is expected that On board GNSS/IMU and base Ground Control GNSS data established for aerial survey be used for Geo-tagging and ortho rectified image production.. 2. Supplemental ground control i.e (5 Check Points per village polygon or K-GIS grid) should be submitted that with purchaser for independent check of Ortho

		<p>rectified image.</p> <ol style="list-style-type: none"> 3. All raw survey control data used or derived from this contract must be supplied to purchaser to ensure independent Quality Assurance (QA) of the survey operations, and for possible use in other surveys requiring these. It is therefore essential that all base ground stations are permanently marked in accordance with the Survey of India standards. 4. The primary ground control and check point surveys must be referenced to the survey of India references. 5. As part of the ortho images, positional Accuracy report needs to be submitted along with every deliverable with respect to all GCP and check points. The overall accuracy shall not be more than the accuracy specified in this document.
17	Orthorectification	<ol style="list-style-type: none"> 1. The digital surface model shall be created after block adjustment through automatic mode. 2. The digital surface model shall be reviewed digitally and visually. Any anomalies and errors in the data should be removed and smoothed which can generate the ortho photo without distortion and meeting the accuracy requirements. 3. The DSM generated across models / project areas shall not have more than 20 cm height variation. 4. Stereomodel created in post processing from aerial image data shall be used for rectification process. 5. DEM / DTM is not the requirement under this RFP. However, the government shall generate the DEM/DTM and the contours at a later stage, as needed. 6. However, for generating the ortho photo and mosaic process, digitization of seamlines / breaklines if any shall be digitised which shall ensure the creation of accurate ortho photos with no distortions on the buildings outlines. 7. The rectification process shall use the suitable technique to ensure high accuracy and image quality. 8. The mosaicking process shall minimize image distortions and smearing and produce a seamless edge-matched product. 9. Processes will be used during ortho-rectification to avoid the presences of warped and misaligned above ground transportation features. 10. Orthorectified Image shall be tonally balanced prior to generation of an image mosaic. Relative join (misalignment) of transportation features between adjacent image chips/tiles shall be within the tolerance defined by the horizontal positional accuracy

		<p>requirement set out above.</p> <p>11. The rectification process shall involve a solution of the appropriate photogrammetric equations for each pixel in the output image. It is not preferable to solve photogrammetric equations at anchor points only and then warp the content of the original image between the anchor points.</p> <p>12. The service provider will describe its approach for ortho-rectification and get it approved from purchaser.</p>
18	Radiometry	<p>1. All images should be clear and sharp in detail with no light streaks, static marks, scratches, ice effect or other noticeable blemishes. The imagery should be free from defects, such as out-of-focus imagery, and should not contain inconsistencies in tone and/or density. The ortho-rectified image should be free from tilt and relief displacement. To ensure consistency, the imagery should be radiometrically and geometrically corrected to enable adjacent files to be displayed simultaneously without obvious distinctions between them.</p>

4. FINAL DELIVERABLES AND DATA SUPPLY SPECIFICATIONS

	Description	Specifications
1	File naming	File naming as defined by KRSRAC / SSLR which shall be shared with the service provider
2	GNSS Data for occupations of I base-stations and Check Points	<p>1. GNSS data (Raw and Processed) for all Base station and Check Points to be provided in RINEX format (Receiver Independent Exchange Format).</p> <p>2. GPS observation log sheets should include the following details:</p> <ul style="list-style-type: none"> a. Survey mark id b. Occupation time & date c. Antenna height measurements d. Instrument /antenna types & serial numbers <p>The GPS observation log sheets, raw and processed data sheet should be provided in pdf format and/or Excel spreadsheet.</p>
3.	Raw Aerial Data	Raw aerial surveyed data/images along with fly log, on board GNSS/IMU data
4.	Block Adjustment	<p>1. The village / grid wise block adjustment shall be carried out using all photographs.</p> <p>2. Adjacent block photographs shall be included in each block on overlapping areas</p> <p>3. Common photographs shall be included in each of the overlapping areas of blocks.</p> <p>4. The adjustment results shall be submitted and taken</p>

		approval from SoI / KRSAC before proceeding with the DSM / ortho image generation.
5.	Ortho Rectified Images	<p>5. Post Processed ORI of each village in ECW / JP2000 format with GSD 5 cm or better and Horizontal accuracy shall be 10 cm or better</p> <p>6. Digital surface Model with accuracy 20 cm or better</p> <p>7. Seamlines / breaklines used, if any for generating orthoimages shall be submitted.</p> <p>8. The QC report of positional accuracy against the measured control and check points shall be submitted. The format of QC report shall be shared to the service provider during start of the project.</p>
6.		1. All deliverables must conform to the projection, datum, and coordinate system specified in the tender document. File sizes cannot exceed 1 gigabyte, unless otherwise specified by the SoI. Each file must be organized to facilitate data manipulation and processing.
	Data Delivery Reports	<p>A delivery report describing the contents of the data supplied with every data delivery (interim, staged, final).</p> <p>1. Collection Report : Raw data collection report detailing mission planning and flight logs will be submitted.</p> <p>2. Survey Report: A survey report detailing the collection of all ground control including the following will be submitted:</p> <ul style="list-style-type: none"> • Base Ground Control points • Check points <p>3. Post Processing Report: Post Processing Report detailing GNSS data, Drone data / aerial image processing, DSM And ORI generation will be submitted. Any breaklines / DTM if generated for the generation of ORI shall also be part of the report.</p> <p>4. QA/QC Report: A QA/QC report, detailing procedures for analysis, accuracy assessment and validation of the following will be submitted.</p> <ul style="list-style-type: none"> • GNSS ground control Point data (Absolute vertical accuracy/relative vertical accuracy) • Drone / aerial image processing, • DSM and ORI generation
7	Delivery Media	<p>1. Data should be delivered on External Hard Drives. External hard drives will be retained by KRSAC/SOI.</p> <p>2. Data deliveries should be clearly labeled with name of Service Provider, date of supply and list of contents.</p>

8	Report Formats	All reports are to be provided in Word (.doc/.docx) format, Excel spreadsheet (.xls/.xlsx) or appropriate digital format as approved by SSLR.
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5. PROJECT PLANNING AND REPORTING SPECIFICATIONS AND QUALITY ASSURANCE SPECIFICATIONS

Quality Control/Quality Assurance (QC/QA) of the drone / aerial data is primarily the responsibility of the Service Provider. The Survey of India may perform additional QC/QA testing if needed. Pragmatic QA specifications would need be agreed by the Service Provider with the Survey of India (SoI) in regard to intermediate steps of data acquisition and post-processed data. The derived products will be evaluated for spatial accuracy and general conformation to prescribed requirements.

6. QUALITY ASSURANCE REPORT SPECIFICATIONS FOR ORI

I FOR ORTHO RECTIFIED IMAGE		
Sl. no	Description	Specifications
1	Horizontal accuracy and GSD	(a) Horizontal accuracy shall be 10 cm or better (b) GSD 5cm or better
3	Procedure	<ol style="list-style-type: none"> 1. Visual inspection of the mosaic to check blurred imagery, improper colour balancing, colour bleeding and shadow details, edge mis-matches. Orthorectified Images should be clear and sharp in detail with no light streaks, static marks, scratches, ice effects or other noticeable blemishes. The ORI should be free from defects, such as out-of-focus image/photo, and should not contain inconsistencies in tone and/or density. The ORI should have no distortions and smearing and should be seamless edge-matched and of highest quality. 2. No building edges shall have distortions posing difficulty in mapping the building / property edges. 3. Horizontal accuracy of the Ortho rectified image of all village polygon will be checked using GNSS coordinated of Check Points. 4. Should more than 5% of the ORI that are subjected to external QC fail to meet the specifications laid down in Tender Document, all products will be returned to the service provider for further QA to identify the extent and cause of the problems so established. The service provider will be expected to rectify these problems, and (where necessary to comply with the specification) make new products at his own cost.

		<p>5. DSM on overlapping areas shall not have more than 10 cm variation in elevation. The accuracy of DSM generated and used for ortho rectification shall not be less than 25 cm in height in areas of buildings and ground features.</p> <p>6. The mapping of land ownership boundary lines is the objective of the project and the ORI images shall not have any obstruction / distortion and quality errors. If present, the complete project / block area shall be rejected and shall be reflowed and submitted.</p>
II FOR GROUND CONTROL POINT		
Sl. no	Description	Specifications
1.	Horizontal Accuracy	2.5 cm or better For both I base Stations and Check Points
2.	Procedure	<p>The accuracy of the ground control points (I base stations & Check Points) will be checked by Network Adjustment Report/Post Processing Report submitted by service provider as deliverables. KRSRAC may process the GNSS data of Base station Base station and Check Points provided in RINEX format for independent check.</p> <p>Should more than 5% of the GNSS data that are subjected to external QC fail to meet the specifications the service provider is expected to rectify these problems, and (where necessary to comply with the specification) make fresh GNSS observation at his own cost to achieve the required accuracy.</p>

Format for Data Deliverables

- Orthoimage of 5 cm GSD - in uncompressed Tiff and/or lossless compression in ECW / JP2000 format
- DSM to be given as point cloud in LAS format. In case of grid format, 1 m grid shall be used
- DTM / Breaklines if generated for the generation of ortho images in ESRI 3D Shape file format / geo-database format
- GPS Control point data – RINEX formats wherever static data processing is observed. In case of Processing with CORS, the process reports matching to the accuracy requirements should be submitted.
- All report in Microsoft Excel / Word format. The same to be submitted in PDF format, as well.

Note

- Processing shall be done with in the premises of SSLR / KRSRAC in case of drone or aerial survey using large format camera provided that medium Format Digital Camera can be used which is capable of acquiring 5cm or better GSD and other outputs and de-

liverables required under this RFP – the decision of Technical Evaluation Authority in this regard shall be final. The bidder can establish their own processing facility in Karnataka. Such established processing facility shall be supervised and overseen by KRSAC / SSLR. In case of premises of the bidder, the work shall be done under the supervision of officers of SSLR if so desired by the Purchaser.

- Copy of the raw or processed data in any form shall not be retained by the service provider.
- All data (raw, processed and its derivatives) shall be the property of Government of Karnataka which shall be managed by KRSAC, the authorised agency.
- Data to be handed over in HDD, village / grid wise, as defined by SSLR / KRSAC
- The storage of HDD by KRSAC/SSLR shall be in the state data centre or in Cloud storage established by GoK.

- The submitted deliverable will be verified and reported for errors, if any within 30 days. In case of delay in submission of feedback by SSLR / KRSAC, the appropriate / equivalent additional time period shall be given for correcting the errors, if any.
- If data has no errors, the data acceptance shall also be provided. Acceptance of data by its virtue of time is not accepted.
- In case of errors, the penalties as per RFP terms shall be applicable. The additional time period for submission of the corrections shall be given without penalty in case of delay in providing the feedback on quality acceptance of data

8. RESPONSIBILITIES

Service Provider Responsibilities

- a) The Service Provider will have the responsibility for obtaining clearance from GoI agencies for flying over the survey area, acquiring and processing aerial data acquisition from Drone / Aircraft fitted with Lrgee format Camera data including QA/QC, and delivery of raw and processed products to Survey of India.
- b) The Service Provider shall set up a local office in Bengaluru for coordinating flying and data acquisition, and processing, and interaction with the SSLR / SoI / KRSAC. Necessary infrastructure for office and technical work will be created in the local office.
- c) The Service Provider will have the responsibility to ensure compliance of DGCA issued guidelines for Requirements for Operation of Civil Remotely Piloted Aircraft System (RPAS) as applicable. Similarly, the Service Provider shall ensure all legal and statutory compliances.
- d) Register with CORS system of SOI for carrying out the GPS processing on behalf of the government
- e) Carrying out the Drone / aerial survey and carryout the GPS surveys, data processing as per the terms of RFP and deliver the products meeting the quality conditions mentioned in the RFP.

SSLR Responsibilities

- Provide necessary documentation for obtaining clearance from GoI agencies if needed.
- Facilitation of interactions with GoI agencies and with state agencies if needed.

- The SSLR shall provide Static observation data of CORS network for Ground Control.
- Release of funds and review of reports according to the agreed schedule.
- Constitution of a Technical Committee to support for interaction with the Service Provider on technical issues through the contract period, and in reviewing reports and recommending follow-on actions, QA/QC and for evaluating digital products prior to acceptance.
- The Survey of India shall nominate suitable officer to coordinate the activities, and provide necessary interaction at appropriate times to avoid any disturbance and loss of time for carrying out the assignment.
- Notification for entry to the land for surveying & authorization letter to civil authorities shall be given to the Service Provider.
- Any other facilities mutually agreed upon by employer and the Service Provider.

Survey of India Responsibilities

- a. Provide document on the technical methodology to be adopted for aerial survey using Large Format Digital Camera OR Drone based image acquisition
- b. Defining the process of GNSS survey for GCP and Check points
 - i. Static Survey
 - ii. Using CORS network
 - iii. Sharing the GCP's of SOI, for control extension if static differential processing is to be adopted
- c. Defining the accuracy parameters of method of quality acceptance for GCP, Block setup/adjustment, DEM and Ortho images
- d. Providing Training and support to SSLR and Service providers on GCP, drone / aerial Survey, DEM / ORI generation and creating parcel data on the supplied ORI

KSRSAC Responsibilities

- a. To provide the Grid / Village boundaries and defining the project areas and prioritization in discussion with SSLR
- b. Approval of flight plans and GCP layout
- c. Verification of submitted data (Images, GCP, Check points, DSM, DEM, ORI), as per the defined parameters and giving approval
- d. Training to the service providers/ SSLR along with SOI
- e. Development of IT portal / application for project management and status tracking
- f. Generating the statistics of data delivered
- g. Performing QA/QC validation and providing acceptance report, areawise, as prioritized
- h. Publishing / making the ORI image available to SSLR surveyors for creating Land parcel maps.
- i. Such other technical and other help and support as assigned from time to time as per requirement.

4. DRAWINGS

(To be inserted if required)

5. INSPECTIONS AND TESTS

(Refer to Section VI Clause 6)

6. TENTATIVE AREA OF PROJECT SURVEY

Aerial Survey – Package/LOT 1A		
S.No	District Name	Area in Sq Km
1	Bagalkot	6575
2	Dharwad	4260
3	Udupi	3880
4	Dakshina Kannada	4560
	Total =	19275

Aerial Survey – Package/LOT 1B		
S.No	District Name	Area in Sq Km
1	Mysore	6854
2	Shimoga	8477
3	Haveri	4823
	Total	20154

Area figures provided above is indicative. Final area & shape file will be provided to the Service Provider at the time of award.

7. CHECKLIST / FORMS TO BE SUBMITTED BY THE BIDDERS

Instruments proposed for the project (to be submitted for each Package, separately)

Package/LOT No and Name of Districts to be mentioned.

Description of Checklist to be submitted by Bidder	Section / Page No in the Bid document - to refer during evaluation	Submitted as per the requirement / form given in the RFP (Yes / No)
Details of Company Registration		
GST Registration		
Authorisation letter for the Signatory / bid submission		
Current Address / Email and Contact details of authorised Person		
Self-declaration that bidder is not blacklisted / barred from providing services		
Financial Year Audit Statement - 2020-21		
Financial Year Audit Statement - 2019-20		
Financial Year Audit Statement - 2018-19		
Financial Year Audit Statement - 2017-18		
Financial Year Audit Statement - 2016-17		
CA certificate on revenue from related services for last 5 years		
Cash flow Certificate from Bank		
Bank Details		
Details of Packages being applied		
Details of Sub Contractors, if any		
Details of GPS Instruments		
Details of Aircraft proposed, if applicable		
Details of Camera and other sensors to be used in Drone		
Details of Medium / Large Format Digital Camera		
Details of the Software license		
Details of Server / Storage		
Details of Manpower - Details of CV		
Details of Qualifying Projects		
Technical Compliance of each make / model of instruments		
GPS /Drone / Camera / Aircraft / Large Format Aerial Camera		
Proof of ownership of all the instruments to be considered for evaluation.		

Methodology- Aerial Survey, GPS Survey, Data Processing, Deliverables		
Implementation Plan - Resource Estimates, Time lines		
QA / QC Plan - Flight Plan, GCP Plan, Block Adjustment, OrthoImage Creation		
Resource Plan		
Price Bid		

PART 3 – CONTRACT

SECTION VI – GENERAL CONDITIONS OF CONTRACT

Section VI. General Conditions of Contract

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Section VI. General Conditions of Contract

1. General Provisions

1. Definitions	<p>Unless the context otherwise requires, the following terms whenever used in this Contract have the following meanings:</p> <ul style="list-style-type: none">(a) The Adjudicator is the person appointed jointly by the Employer and the Service Provider to resolve disputes in the first instance, as provided for in Sub-Clause 8.2 hereunder.(b) “Activity Schedule” is the priced and completed list of items of Services to be performed by the Service Provider forming part of his Bid;(c) “Completion Date” means the date of completion of the Services by the Service Provider as certified by the Employer(d) “Contract” means the Contract signed by the Parties, to which these General Conditions of Contract (GCC) are attached, together with all the documents listed in Clause 1 of such signed Contract;(e) “Contract Price” means the price to be paid for the performance of the Services, in accordance with Clause 6;(f) “Dayworks” means varied work inputs subject to payment on a time basis for the Service Provider’s employees and equipment, in addition to payments for associated materials and administration.(g) “Employer” means the party who employs the Service Provider(h) “Foreign Currency” means any currency other than the currency of the country of the Employer;(i) “GCC” means these General Conditions of Contract;(j) “Government” means the Government of the India;(k) “Local Currency” means the currency of India;(l) “Member,” in case the Service Provider consist of a joint venture of more than one entity, means any of these entities; “Members” means all these entities, and “Member in Charge” means the entity specified in the SC to act on their
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	<p>behalf in exercising all the Service Provider’ rights and obligations towards the Employer under this Contract;</p> <p>(m) “Party” means the Employer or the Service Provider, as the case may be, and “Parties” means both of them;</p> <p>(n) “Personnel” means persons hired by the Service Provider or by any SubService Provider as employees and assigned to the performance of the Services or any part thereof;</p> <p>(o) “Service Provider” is a person or corporate body whose Bid to provide the Services has been accepted by the Employer;</p> <p>(p) “Service Provider’s Bid” means the completed bidding document submitted by the Service Provider to the Employer</p> <p>(q) “SCC” means the Special Conditions of Contract by which the GCC may be amended or supplemented;</p> <p>(r) “Specifications” means the specifications of the service included in the bidding document submitted by the Service Provider to the Employer</p> <p>(s) “Services” means the work to be performed by the Service Provider pursuant to this Contract, as described in Appendix A; and in the Specifications and Schedule of Activities included in the Service Provider’s Bid.</p> <p>(t) “SubService Provider” means any entity to which the Service Provider subcontracts any part of the Services in accordance with the provisions of Sub-Clauses 3.5 and 4.</p>
<p>1.2 Applicable Law</p>	<p>The Contract shall be interpreted in accordance with the laws of the Employer’s country, unless otherwise specified in the Special Conditions of Contract (SCC).</p>
<p>1.3 Language</p>	<p>This Contract has been executed in the language specified in the SCC, which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Contract.</p>
<p>1.4 Notices</p>	<p>Any notice, request, or consent made pursuant to this Contract shall be in writing and shall be deemed to have been made when delivered in person to an authorized representative of the Party to whom the communication is addressed, or when sent by registered mail, telex, telegram, or facsimile or e-mail to such Party at the address specified in the SCC.</p>

1.5 Location	The Services shall be performed at such locations as are specified in Section V in the specifications and, where the location of a particular task is not so specified, at such locations, whether in the Government of India or elsewhere, as the Employer may approve.
1.6 Authorized Representatives	Any action required or permitted to be taken, and any document required or permitted to be executed, under this Contract by the Employer or the Service Provider may be taken or executed by the officials specified in the SCC .
1.7 Inspection and Audit	Inspection and Audit shall be carried out as per provisions of GFR 2017
1.8 Taxes and Duties	The Service Provider, SubService Providers, and their Personnel shall pay such taxes, duties, fees, and other impositions as may be levied under the Applicable Law, the amount of which is deemed to have been included in the Contract Price.
2. Commencement, completion, modification and termination of contract	
2.1 Effectiveness of Contract	This Contract shall come into effect on the date the Contract is signed by both parties and such other later date as may be stated in the SCC .
2.2 Commencement of Services	
2.2.1 Program	Before commencement of the Services, the Service Provider shall submit to the Employer for approval a Program showing the general methods, arrangements, order and timing for all activities. The Services shall be carried out in accordance with the approved Program as updated.
2.2.2 Starting Date	The Service Provider shall start carrying out the services thirty (30) days after the date the Contract becomes effective, or at such other date as may be specified in the SCC .
2.3 Intended Completion Date	Unless terminated earlier pursuant to Sub-Clause 2.6, the Service Provider shall complete the activities by the Intended Completion Date, as is specified in the SCC . If the Service Provider does not complete the activities by the Intended Completion Date, it shall be liable to pay liquidated damage as per Sub-Clause 3.8. In this case, the Completion Date will be the date of completion of all activities
2.4 Modification	Modification of the terms and conditions of this Contract, including any modification of the scope of the Services or of the Contract Price, may only be made by written agreement between the Parties and shall not be effective until the consent of competent authority in Government of India, has been obtained.

<p>2.5 Force Majeure</p> <p>2.5.1 Definition</p> <p>2.5.2 No Breach of Contract</p> <p>2.5.3 Extension of Time</p> <p>2.5.4 Payments</p>	<p>For the purposes of this Contract, “Force Majeure” (FM) means extraordinary events or circumstance beyond human control such as an event described as an Act of God (like a natural calamity) or events such as war, strike, riots, crimes (but not including negligence or wrong-doing, predictable/seasonal rain and any other events specifically excluded in the clause). An FM clause in the contract frees both parties from contractual liability or obligation when prevented by such events from fulfilling their obligations under the contract. An FM clause does not excuse a party’s nonperformance entirely, but only suspends it for the duration of the FM. The firm has to give notice of FM as soon as it occurs and it cannot be claimed ex-post facto. There may be a FM situation affecting the purchase organization only. In such a situation, the purchase organization is to communicate with the supplier along similar lines as above for further necessary action. If the performance in whole or in part or any obligation under this contract is prevented or delayed by any reason of FM for a period exceeding 90 (Ninety) days, either party may at its option terminate the contract without any financial repercussion on either side.</p> <p>The failure of a Party to fulfill any of its obligations under the contract shall not be considered to be a breach of, or default under, this Contract insofar as such inability arises from an event of Force Majeure, provided that the Party affected by such an event (a) hastaken all reasonable precautions, due care and reasonable alternative measures in order to carry out the terms and conditions of this Contract, and (b) has informed the other Party as soon as possible about the occurrence of such an event.</p> <p>Any period within which a party shall, pursuant to this Contract, complete any action or task, shall be extended for a period equal to the time during which such Party was unable to perform such action as a result of Force Majeure.</p> <p>During the period of their inability to perform the Services as a result of an event of Force Majeure, the Service Provider shall be entitled to continue to be paid under the terms of this Contract, as well as to be reimbursed for additional costs reasonably and necessarily incurred by them during such period for the purposes of the Services and in reactivating the Service after the end of such period.</p>
<p>2.6 Termination</p> <p>2.6.1 By the Employer</p>	<p>The Employer may terminate this Contract, by not less than fifteen (15) days’ written notice of termination to the Service Provider, to be given after the occurrence of any of the events specified in paragraphs (a) through (f) of this Sub-Clause 2.6.1:</p>

	<p>(a) if the Service Provider does not remedy a failure in the performance of its obligations under the Contract, within fifteen (15) days after being notified or within any further period as the Employer may have subsequently approved in writing;</p> <p>(b) if the Service Provider fails to deliver ORIs and flying as per Monthly Implementation Schedule as approved and made part of the Contract unless the same is specifically extended or modified by the Purchaser.</p> <p>(c) if the Service Provider become insolvent or bankrupt;</p> <p>(d) if, as the result of Force Majeure, the Service Provider is unable to perform a material portion of the Services for a period of not less than ninety (90) days; or</p> <p>(e) if the Service Provider, in the judgment of the Employer has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.</p> <p>(f) If the Service Provider violates DGCA and other statutory/prescribed Guidelines in doing his work.</p> <p>In case of termination the Bid Winner/Service Provider is liable to be black listed – in addition to liquidated damages and forfeiture of PBG.</p> <p>The Service Provider may terminate this Contract, by not less than thirty (30) days’ written notice to the Employer, such notice to be given after the occurrence of any of the events specified in paragraphs (a) of this Sub-Clause 2.6.2:</p> <p>(a) if, as the result of Force Majeure, the Service Provider is unable to perform a material portion of the Services for a period of not less than ninety (90) days.</p> <p>2.6.2 By the Service Provider</p> <p>2.6.3 Shortage of Budget</p> <p>In the event the budget is curtailed by Govt of Karnataka or Government of India and it would not be possible to make future payments to Service provider due to shortage of budget, the Contract may be terminated with approval of competent authority of relevant Government.</p> <p>2.6.4 Payment upon Termination</p> <p>Upon termination of this Contract pursuant to Sub-Clauses 2.6.1 or 2.6.2, the Employer shall make the following payments to the Service Provider:</p> <p>(a) remuneration pursuant to Clause 6 for Services satisfactorily performed prior to the effective date of termination;</p> <p>(b) except in the case of termination pursuant to paragraphs (a), (b), (d) of Sub-Clause 2.6.1, reimbursement of any reasonable cost incident to the prompt and orderly termination of the Contract, including the cost of the return travel of the Personnel</p>
<p>3. Obligations of the Service Provider</p>	

<p>3.1 General</p>	<p>The Service Provider shall perform the Services in accordance with the Specifications and the Activity Schedule, and carry out its obligations with all due diligence, efficiency, and economy, in accordance with generally accepted professional techniques and practices, and shall observe sound management practices, and employ appropriate advanced technology and safe methods. The Service Provider shall always act, in respect of any matter relating to this Contract or to the Services, as faithful adviser to the Employer, and shall at all times support and safeguard the Employer’s legitimate interests in any dealings with SubService Providers or third parties.</p>
<p>3.2 Conflict of Interests</p> <p>3.2.1 Service Provider Not to Benefit from Commissions and Discounts</p> <p>3.2.2 Service Provider and Affiliates Not to be otherwise Interested in Project</p> <p>3.2.3 Prohibition of Conflicting Activities</p>	<p>The remuneration of the Service Provider pursuant to Clause 6 shall constitute the Service Provider’s sole remuneration in connection with this Contract or the Services, and the Service Provider shall not accept for their own benefit any trade commission, discount, or similar payment in connection with activities pursuant to this Contract or to the Services or in the discharge of their obligations under the Contract, and the Service Provider shall use their best efforts to ensure that the Personnel, any Sub-Service Providers, and agents of either of them similarly shall not receive any such additional remuneration.</p> <p>The Service Provider agree that, during the term of this Contract and after its termination, the Service Provider and its affiliates, as well as any Sub-Service Provider and any of its affiliates, shall be disqualified from providing goods, works, or Services (other than the Services and any continuation thereof) for any project resulting from or closely related to the Services.</p> <p>Neither the Service Provider nor its Sub-Service Providers nor the Personnel shall engage, either directly or indirectly, in any of the following activities:</p> <ul style="list-style-type: none"> (a) during the term of this Contract, any business or professional activities in the Government’s country which would conflict with the activities assigned to them under this Contract; (b) during the term of this Contract, neither the Service Provider nor their Sub-Service Providers shall hire public employees in active duty or on any type of leave, to perform any activity under this Contract; (c) after the termination of this Contract, such other activities as may be specified in the SCC.

<p>3.3 Confidentiality</p>	<p>The Service Provider, its Sub-Service Providers, and the Personnel of either of them shall not, either during the term or within two (2) years after the expiration of this Contract, disclose any proprietary or confidential information relating to the Project, the Services, this Contract, or the Employer’s business or operations without the prior written consent of the Employer.</p>
<p>3.4 Insurance to be Taken Out by the Service Provider</p>	<p>The Service Provider (a) shall take out and maintain, and shall cause any Sub-Service Providers to take out and maintain, at its (or the Sub-Service Providers’, as the case may be) own cost but on terms and conditions approved by the Employer, insurance against the risks, and for the coverage, as shall be specified in the SCC; and (b) at the Employer’s request, shall provide evidence to the Employer showing that such insurance has been taken out and maintained and that the current premiums have been paid.</p>
<p>3.5 Service Provider’s Actions Requiring Employer’s Prior Approval</p>	<p>The Service Provider shall obtain the Employer’s prior approval in writing before taking any of the following actions:</p> <ul style="list-style-type: none"> (a) entering into a subcontract for the performance of any part of the Services, (b) appointing such members of the Personnel not listed by name in Appendix C (“Key Personnel and Sub-Service Providers”), (c) changing the Program of activities; and (d) Changes in Monthly Implementation Plan of Flying and ORI generation. (e) any other action that may be specified in the SCC
<p>3.6 Reporting Obligations</p>	<p>The Service Provider shall submit to the Employer the reports and documents specified in Appendix B in the form, in the numbers, and within the periods set forth in the said Appendix.</p>
<p>3.7 Documents Prepared by the Service Provider to Be the Property of the Employer</p>	<p>All plans, drawings, specifications, designs, reports, and other documents and software submitted by the Service Provider in accordance with Sub-Clause 3.6 shall become and remain the property of the Employer, and the Service Provider shall, not later than upon termination or expiration of this Contract, deliver all such documents and software to the Employer, together with a detailed inventory thereof. The Service Provider may retain a copy of such documents and software. Restrictions about the future use of these documents, if any, shall be specified in the SCC.</p>
<p>3.8 Liquidated Damages</p> <p>3.8.1 Payments of Liquidated</p>	<p>The Service Provider shall pay liquidated damages to the Employer at the rate per day stated in the SCC for each day that the Completion Date is later than the Intended Completion Date. The total amount of</p>

<p>Damages</p> <p>3.8.2 Correction for Overpayment</p> <p>3.8.3 Lack of performance penalty</p>	<p>liquidated damages shall not exceed the amount defined in the SCC. The Employer may deduct liquidated damages from payments due to the Service Provider. Payment of liquidated damages shall not affect the Service Provider’s liabilities.</p> <p>If the Intended Completion Date is extended after liquidated damages have been paid, the Employer shall correct any overpayment of liquidated damages by the Service Provider by adjusting the next payment certificate. The Service Provider shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rates specified in SubClause 6.5.</p> <p>If the Service Provider has not corrected a Defect within the time specified in the Employer’s notice, a penalty for Lack of performance will be paid by the Service Provider. The amount to be paid will be calculated as a percentage of the cost of having the Defect corrected, assessed as described in Sub-Clause 7.2 and specified in the SCC. This penalty is in addition to termination, black-listing and PBG forfeiture which is be liable to be done as per Clause 2.6.1.</p>
<p>3.9 Performance Security</p>	<p>The Service Provider shall provide the Performance Security of amount as specified in the SCC to the Employer no later than the date specified in the Letter of acceptance. The Performance Security shall be issued in an amount and form and by a bank or surety acceptable to the Employer, and denominated in the types and proportions of the currencies in which the Contract Price is payable. The performance Security shall be valid until a date 28 days from the Completion Date of the Contract in case of a bank guarantee, and until one year from the Completion Date of the Contract in the case of a Performance Bond.</p>
<p>4. Service Provider Personnel</p>	
<p>4.1 Description of Personnel</p>	<p>The titles, agreed job descriptions, minimum qualifications, and estimated periods of engagement in the carrying out of the Services of the Service Provider’s Key Personnel are described in Appendix C. The Key Personnel and SubService Providers listed by title as well as by name in Appendix C are hereby approved by the Employer.</p>
<p>4.2 Removal and/or Replacement of Personnel</p>	<p>a. Except as the Employer may otherwise agree, no changes shall be made in the Key Personnel. If, for any reason beyond the reasonable control of the Service Provider, it becomes necessary to replace any of the Key Personnel, the Service Provider shall provide as a replacement a person of equivalent or better qualifications.</p> <p>b. If the Employer finds that any of the Personnel have (i) committed serious misconduct or have been charged with having committed a criminal action, or (ii) have reasonable cause to be dissatisfied with the performance of any of the Personnel, then the Service Provider shall, at the Employer’s written request specifying the grounds</p>

	<p>thereof, provide as a replacement a person with qualifications and experience acceptable to the Employer.</p> <p>c. The Service Provider shall have no claim for additional costs arising out of or incidental to any removal and/or replacement of Personnel.</p>
5. Obligation of the Employer	
5.1 Assistance and Exemptions	The Employer shall use its best efforts to ensure that the Government shall provide the Service Provider such assistance and exemptions as specified in the SCC.
5.2 Change in the Applicable Law	If, after the date of this Contract, there is any change in the Applicable Law with respect to taxes and duties which increases or decreases the cost of the Services rendered by the Service Provider, then the remuneration and reimbursable expenses otherwise payable to the Service Provider under this Contract shall be increased or decreased accordingly by agreement between the Parties, and corresponding adjustments shall be made to the amounts referred to in Sub-Clauses 6.2 (a) or (b), as the case may be.
5.3 Services and Facilities	The Employer shall make available to the Service Provider the Services and Facilities listed as stated in SCC.
6. Payment to the Service Provider	
6.1 Lump-Sum Remuneration	The Service Provider's remuneration shall not exceed the Contract Price and shall be a fixed lump-sum including all Sub-Service Providers' costs, and all other costs incurred by the Service Provider in carrying out the Services described in Appendix A. Except as provided in Sub-Clause 5.2, the Contract Price may only be increased above the amounts stated in Sub-Clause 6.2 if the Parties have agreed to additional payments in accordance with Sub-Clauses 2.4 and 6.3.
6.2 Contract Price	<p>(a) The price payable in local currency is set forth in the SCC.</p> <p>(b) The price payable in foreign currency is set forth in the SCC.</p>
6.3 Payment for Additional Services, and Performance Incentive Compensation	<p>1.3.1 For the purpose of determining the remuneration due for additional Services as may be agreed under Sub-Clause 2.4, a breakdown of the lump-sum price is provided in Appendices D and E.</p> <p>1.3.2 If the SCC so specify, the service provider shall be paid performance incentive compensation as set out in the Performance Incentive Compensation appendix.</p>
6.4 Terms and Conditions of Payment	Payments will be made to the Service Provider according to the payment schedule stated in the SCC. Unless otherwise stated in the SCC , the advance payment (Advance for Mobilization, Materials and Supplies) shall be made against the provision by the Service Provider of a

	<p>bank guarantee for the same amount, and shall be valid for the period stated in the SCC. Any other payment shall be made after the conditions listed in the SCC for such payment have been met, and the Service Provider have submitted an invoice to the Employer specifying the amount due.</p>
<p>6.5 Interest on Delayed Payments</p>	<p>If the Employer has delayed payments beyond fifteen (15) days after the due date stated in the SCC, interest shall be paid to the Service Provider for each day of delay at the rate stated in the SCC.</p>
<p>6.6 Price Adjustment</p>	<p>6.6.1 Prices shall be adjusted for fluctuations in the cost of inputs only if provided for in the SCC. If so provided, the amounts certified in each payment certificate, after deducting for Advance Payment, shall be adjusted by applying the respective price adjustment factor to the payment amounts due in each currency. A separate formula of the type indicated below applies to each Contract currency:</p> <p style="text-align: center;">$P_c = A_c + B_c L_{mc}/L_{oc} + C_c I_{mc}/I_{oc}$</p> <p>Where:</p> <p>P_c is the adjustment factor for the portion of the Contract Price payable in a specific currency “c”.</p> <p>A_c, B_c and C_c are coefficients specified in the SCC, representing: A_c the nonadjustable portion; B_c the adjustable portion relative to labor costs and C_c the adjustable portion for other inputs, of the Contract Price payable in that specific currency “c”; and</p> <p>L_{mc} is the index prevailing at the first day of the month of the corresponding invoice date and L_{oc} is the index prevailing 28 days before Bid opening for labor; both in the specific currency “c”.</p> <p>I_{mc} is the index prevailing at the first day of the month of the corresponding invoice date and I_{oc} is the index prevailing 28 days before Bid opening for other inputs payable; both in the specific currency “c”.</p> <p>If a price adjustment factor is applied to payments made in a currency other than the currency of the source of the index for a particular indexed input, a correction factor Z_o/Z_n will be applied to the respective component factor of p_n for the formula of the relevant currency. Z_o is the number of units of currency of the country of the index, equivalent to one unit of the currency payment on the date of the base index, and Z_n is the corresponding number of such currency units on the date of the current index.</p>

	6.6.2 If the value of the index is changed after it has been used in a calculation, the calculation shall be corrected and an adjustment made in the next payment certificate. The index value shall be deemed to take account of all changes in cost due to fluctuations in costs.
6.7 Day works	<p>6.7.1 If applicable, the Daywork rates in the Service Provider's Bid shall be used for small additional amounts of Services only when the Employer has given written instructions in advance for additional services to be paid in that way.</p> <p>6.7.2 All work to be paid for as Dayworks shall be recorded by the Service Provider on forms approved by the Employer. Each completed form shall be verified and signed by the Employer representative as indicated in Sub-Clause 1.6 within two days of the Services being performed.</p> <p>6.7.3 The Service Provider shall be paid for Dayworks subject to obtaining signed Dayworks forms as indicated in Sub-Clause</p>
7. Quality Control	
7.1 Identifying Defects	The principle and modalities of Inspection of the Services by the Employer shall be as indicated in the SCC . The Employer shall check the Service Provider's performance and notify him of any Defects that are found. Such checking shall not affect the Service Provider's responsibilities. The Employer may instruct the Service Provider to search for a Defect and to uncover and test any service that the Employer considers may have a Defect. Defect Liability Period is as defined in the SCC .
7.2 Correction of Defects, and Lack of Performance Penalty	<p>(a) The Employer shall give notice to the Service Provider of any Defects before the end of the Contract. The Defects liability period shall be extended for as long as Defects remain to be corrected.</p> <p>(b) Every time notice a Defect is given, the Service Provider shall correct the notified Defect within the length of time specified by the Employer's notice.</p> <p>(c) If the Service Provider has not corrected a Defect within the time specified in the Employer's notice, the Employer will assess the cost of having the Defect corrected, the Service Provider will pay this amount, and a Penalty for Lack of Performance calculated as described in Sub-Clause 3.8.</p>
8. Settlement of Disputes	
8.1 Amicable Settlement	The Parties shall use their best efforts to settle amicably all disputes arising out of or in connection with this Contract or its interpretation
8.2 Dispute Settlement	8.2.1 If any dispute arises between the Employer and the Service Provider in connection with, or arising out of, the Contract or

	<p>the provision of the Services, whether during carrying out the Services or after their completion, the matter shall be referred to the Adjudicator within 14 days of the notification of disagreement of one party to the other.</p> <p>8.2.2 The Adjudicator shall give a decision in writing within 28 days of receipt of a notification of a dispute.</p> <p>8.2.3 The Adjudicator shall be paid by the hour at the rate specified in the BDS and SCC, together with reimbursable expenses of the types specified in the SCC, and the cost shall be divided equally between the Employer and the Service Provider, whatever decision is reached by the Adjudicator. Either party may refer a decision of the Adjudicator to an Arbitrator within 28 days of the Adjudicator's written decision. If neither party refers the dispute to arbitration within the above 28 days, the Adjudicator's decision will be final and binding.</p> <p>8.2.4 The arbitration shall be conducted in accordance with the arbitration procedure published by the institution named and in the place shown in the SCC.</p> <p>8.2.5 Should the Adjudicator resign or die, or should the Employer and the Service Provider agree that the Adjudicator is not functioning in accordance with the provisions of the Contract, a new Adjudicator will be jointly appointed by the Employer and the Service Provider. In case of disagreement between the Employer and the Service Provider, within 30 days, the Adjudicator shall be designated by the Appointing Authority designated in the SCC at the request of either party, within 14 days of receipt of such request.</p>
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SECTION VII. SPECIAL CONDITIONS OF CONTRACT

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

GCC 1.1 (a)	The Adjudicator is Principal Secretary to Government of Karnataka, Revenue Department,
GCC 1.1 (d)	The contract name is HIRING OF DRONE OR AERIAL SURVEY AS A SERVICE FOR ORI GENERATION FOR LARGE SCALE MAPPING LOT 1 & LOT 2 (as the case may be)
GCC 1.1 (h)	The Employer is Survey Settlement and Land Records Department
GCC 1.1 (p)	The Service Provider is _____
GCC 1.2	The Applicable Law is: Laws of Union of India and rules / acts of Govt of Karnataka
GCC 1.3	The language is English
GCC 1.4	The addresses are: Employer or Purchaser: Commissioner, Survey Settlement and Land Records Department K.R.Circle, Bangalore Service Provider: Attention: e-Mail: Facsimile:
GCC 1.5	Location of Service will be in Karnataka State.
GCC 1.6	The Authorized Representatives are: For the Employer: Commissioner, SSLR For the Service Provider:
GCC 2.1	The date on which this Contract shall come into effect is date of signing of Contract by both the parties.
GCC 2.2.1	The work awarded will be divided in revenue villages/cluster of villages / geographical grids as defined by employer. These revenue villages/cluster of villages/grids shall be units of processing and delivery. Program submitted should contain Implementation plan, Details showing timelines, resource deployment for each revenue villages/cluster of villages and delivery dates for each revenue villages/cluster of villages. The updated Program should be consistent with the Method Statement, Work Plan, & Time Schedule submitted in Section IV as part of this RFB. However, the bidder may be permitted to re-deploy his resources and re-schedule the delivery plans during program update as per SCC 2.2.1, to prioritize submission of revenue villages/cluster of villages as specified by employer but without changing the final completion
GCC 2.2.2	The Starting Date for the 'Commencement of Services' shall be the ear-

	<p>lier of following dates:</p> <p>i. 15 days from date of signing of contract</p> <p>ii. Date of issue of necessary security & flight clearances,</p> <p>However the service provider will be allowed to start the activities which are not related to above clearances immediately after signing of the contract.</p>														
GCC 2.3	<p>Implementation Timelines for Activities for each Revenue Village</p> <table border="1"> <thead> <tr> <th>Sl No.</th> <th>Activity</th> <th>Av. daily out turn (Village)</th> <th>Time of completion (Days)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Drone OR Aerial Data Acquisition and base observation</td> <td rowspan="3">derived from the data submitted by bidder as his implementation plan</td> <td>-</td> </tr> <tr> <td>3.</td> <td>Provision of Ground controls including check points</td> <td>T+3</td> </tr> <tr> <td>4.</td> <td>Post Processing & Generation of DSM and ORI</td> <td>T+15</td> </tr> </tbody> </table> <p>T shall be the date of data acquisition</p> <p>The time mentioned above is indicative for completing the works. As the field survey is being done far from the base data processing facility, Weekly deliverable as defined in the RFP shall be considered.</p> <p>However, the Intended Completion Date for entire work including delivery of final deliverables as per Section V is 12 months from date of commencement of services. If the ‘actual area’ increases beyond that specified in Section V, the Project duration shall be extended beyond 2 months on pro rata basis by an explicit communication by the Purchaser.</p>	Sl No.	Activity	Av. daily out turn (Village)	Time of completion (Days)	1	Drone OR Aerial Data Acquisition and base observation	derived from the data submitted by bidder as his implementation plan	-	3.	Provision of Ground controls including check points	T+3	4.	Post Processing & Generation of DSM and ORI	T+15
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3.	Provision of Ground controls including check points		T+3												
4.	Post Processing & Generation of DSM and ORI		T+15												
GCC 3.2.3	<p>Activities prohibited after termination of this Contract are: Use or transmit in any form of maps/data supplied by employer or data/services generated by the service provider during the Project. The Service Provider will not use, transfer, propagate any of the deliverables, information etc.</p>														
GCC 3.4	<p>The risks and coverage by insurance shall be:</p> <p>(i) Aviation insurance to protect against Third Party property and bodily damage claims during drone / aerial survey Work (In accordance with the statutory requirements applicable to India)</p> <p>(ii) Personal injury or death insurance for Service Provider’s Employees (In accordance with the statutory requirements applicable to India)</p> <p>(iii) Loss or damage to equipment and data till project completion (Minimum Cover Contract Price)</p>														

GCC 3.5(a)	<p>Sub-Contracting is permitted which are part of the Technical Bid and approved and accepted therein.</p> <p>A change of the sub-contractor is NOT allowed without intimation to the purchaser. Any changes to the sub-contractor can be accepted only if the proposed sub-contractor meet all the qualification criteria mentioned in the RFP and such a change is aprior accepted and approved by the Purchaser. Every change (inclusion / exclusion) of the sub-contractor will lead to deduction of 2% of overall contract fee to the bidder</p>
GCC 3.5(d)	The other actions are: None
GCC 3.7	Restrictions on the use of documents prepared by the Service Provider are: All data, documents, reports generated during the Contract shall be exclusive property of Employer and the Service Provider shall have no claims over it. The Service Provider shall be bound by restrictions imposed by Security Classification of such data, documents and reports.
GCC 3.8.1	Delay in completion of the full work due to reasons attributable to the Service Provider shall attract Liquidated Damages @2% of Contract Price per month of delay to be computed on per day basis. The liquidated damage is over and above the penalties for delay in delivery of monthly deliverables as mentioned in the implementation plan which include (i) termination (ii) Black Listing (iii) forfeiture of PBG. The maximum amount of liquidated damages for the whole contract is Ten percent of the final Contract Price. Pursuant to SCC 2.3, if the project duration is extended, LD clause shall not apply in the extended period. However, LD clause shall resume for delay beyond the extended period
GCC 3.8.3	<p>The delivery in which defects have been detected and/or which have failed the Acceptance Test as per Section V, shall be returned to the Service Provider for further QA. In effect, Employer will pass responsibility to the service provider to provide adequate and clear internal Quality Audits to identify the extent and cause of the problems so established. The service provider will be expected to rectify these problems, and (where necessary to comply with the specification) make new products at his own cost. Redelivery of products will be followed by a further independent check on a new sample of the products. This procedure will continue until the products become finally acceptable under the terms above. The acceptance report (Pass/Fail) shall be given by the Employer within 4 weeks of each delivery/re-delivery of the data made by the Service Provider.</p> <p>If delivery fails the acceptance test of the Employer, it shall be construed as 'Lack of Performance' and the 100% of cost towards Acceptance Test by the Employer @ INR 1,00,000 for each subsequent delivery shall be imposed on Service Provider towards penalty for 'Lack of performance'.</p>
GCC 3.9	The amount of the Performance Security shall be of 5% of contract value.
GCC 5.1	The Employer shall use its best efforts to ensure that the Government shall provide the Service Provider
GCC 5.3	Following data, Service and facilities will be provided to the Service

	<p>Provider after award of Contract:</p> <p>(i) Area of Interest (AOI) in shp and kmz format (ii) Static Observation Data of CORS stations for post processing OR Description and co-ordinates of GCP library ground control points in and around the Project area on WGS 84 datum (as available) (iii) Facility of NRTK (Network RTK) if RTK rovers are used.</p> <p>Production Site: The Service Provider will be responsible for setting up secure and high performance Production Centre at _____. The production center should be adequate to handle and store raw Data, key intermediate data, data under process and Processed Data/deliverable. Survey of India will not be responsible for providing space or any other facility for production centers.</p>
GCC 6.2	All payments shall be made in Indian Rupees
GCC 6.1	<p>The incidence, extent and area provided in IFB & Section V of this RFB are limited by scale and accuracy (spatial & temporal) of existing maps on 1:50K scale. Considering this aspect, the payments made to the Service Provider shall be on the basis of ‘actual area’ and ‘area surveyed’.</p> <p>All submissions of deliverables shall be accompanied by ‘area polygons’ in .shp format. Shape file generated by KRSRAC shall be used to measure and ascertain the actual area completed by the Service Provider.</p> <p>However, if the ‘actual area’ comes out to be more than that mentioned in IFB & Section V of this RFB, approval of competent authority shall be taken before making payment beyond the ‘Contract Price’.</p>
GCC 6.3.2	<p>The performance incentive paid to the Service Provider shall be: An incentive @ 1% (one percent) of per square kilometer cost of the bid winner shall be paid for ORIs delivered and accepted for quantities beyond the monthly deliverable target for ORIs. For example if 3000 Sq KM ORI is deliverable and 4000 Sq KM ORI is delivered and accepted, say for the month of February, then for the extra 1000 Sq KM (4000 – 3000) the payment shall be made at a rate of Rs [Z x (1.01)] – where Z is the per Sq KM rate of the awarded contract. Provided that this incentive shall be paid only once for ahead to time delivery so the overall the incentive shall be 1% of the total awarded cost.</p>
GCC 6.4	<p>6.4.1. The Contract Price as specified in the Contract Agreement shall be paid as under.</p> <p>6.4.2. The payment made to the Service Provider shall be on the basis of ‘Actual area’ of revenue village. ‘Actual area’ of the revenue will be calculated on the basis of Shape file villages provided by the purchaser.</p> <p>6.4.3. Payment to the Service provider will be made on monthly basis (Calendar month) by the office after deduction of applicable taxes and</p>

	<p>recoveries if any at the quoted rates as per the contract. Monthly payment shall be calculated as per following formula</p> $= A*0.9*(\text{Total contract value}/\text{Total tendered Area})$ <p>Whereas A is ‘Actual area’ of revenue village delivered in particular month on successful completion and acceptance of activities (1), (2) & (3) as per Section V sub section 3:</p> <ul style="list-style-type: none"> • Provision of Ground controls including check points & Drone / aerial Data Acquisition • Post Processing for generation of DSM and ORI <p>Details of revenue village / grids that are successfully completed & accepted and its actual area will be maintained by service provider and will be provided to the purchaser for verification. The service provider shall become entitled for payment after completion and acceptance of ORI. No payment will separately be made for activities such as GNSS control, and drone / aerial flying.</p> <p>6.4.4 Remaining 10% retained will be released after submission and acceptance of final deliverables.</p> <p>6.4.5 The payment shall be released subject to certification by the Employer that services have been rendered satisfactorily. Acceptance test shall be carried out by Employer according to principle, modalities laid down in SCC Clause 7.1 & Section V of this RFB which shall form the basis of certification mentioned above. Should the certification (satisfactory or unsatisfactory) not be provided, by the employer within ‘one’ months of the date of receipt of the corresponding invoice, the certification will be deemed to have been provided, and the progress payment will be released at such date. “Payment of Local Taxes such as GST will be against valid Invoice as per GST ACT & Rules and submission of GST Registration Certificate along with declaration that GST Registration is valid and all liabilities towards GST have been discharged by the vendor. GST amount will be paid after submission of valid Invoice and all required documents and declaration by vendor”.</p> <p>6.4.6 Every month delay in delivery and submission of Deliverables (color balanced ortho mosaic) will lead to penalty of 2% per week based on the quantities (in Sqkm) that was not delivered but due as per plan. For the penalty, the amount will be computed based on per sqkm area cost quoted by the bidder</p>
GCC 6.5	Payment shall be made within 45 days of receipt of the invoice and the relevant documents specified in Sub-Clause 6.4, and within 60 days in the case of the final payment. No Interest shall be payable
GCC 6.6.1	Price adjustment is not to be applied in accordance with Sub-Clause 6.6.
GCC 7.1	The principle and modalities of inspection of the Services by the Employer are as follows:

	<p>The responsibility of Quality assurance that would include adoption of best practices, processes and sets of approaches leading to outcomes of quality specified in this Contract shall rest with the Service Provider. As part of Quality Assurance, the Service Provider shall submit quality control (or check) measures detailing clearly specified tasks that scrutinizes all, or a sample, of the items issuing during and/or at the end of various stages of processing in order to ensure that the final product is of satisfactory quality. The scrutiny involves review, inspection or quantitative measurement, against well-defined pass/fail criteria. The Service Provider shall systematically lodge Quality Control Records (QCRs) which may take various forms like Computer Generated Reports, Inspection notes, Stage Approvals etc. Service Provider shall ensure that every such QCR :</p> <ul style="list-style-type: none"> • marked with a date • uniquely identifies the item, operation or product to which it relates • identifies the operator who generated the QCR • Is countersigned by a supervisor or other independent inspector (for important records) • is stored in a well-defined and predictable location so that it can be found easily by others. <p>The responsibility for maintaining necessary versions of data during the QA/QC cycle till its final acceptance by Employer shall also rest with Service Provider.</p> <p>Employer will carry out Quality Audit as per Section V to ensure that that plan/methodology/ QA/QC measures etc. detailed are being properly followed. Employer shall also audit to ensure that the QCRs are being properly maintained.</p> <p>In addition following ‘Final Acceptance’ tests shall be carried out by the Employer on the delivery made by Service Provider.</p>						
<p>GCC 8.2.3</p>	<p>The Adjudicator proposed by the Employer is Principal Secretary to Government of Karnataka, Revenue Department or a person decided by him; whose fees, if applicable, shall be governed by the Article 11 of ‘Arbitration and Conciliation (Amendment) Act 2015’ as given below:</p> <table border="1"> <thead> <tr> <th><i>Sum in Dispute</i></th> <th><i>Model Fee</i></th> </tr> </thead> <tbody> <tr> <td>Up to Rs.5,00,000</td> <td>Rs. 45,000</td> </tr> <tr> <td>Above Rs.5,00,000 and Up to Rs. 20,00,000</td> <td>Rs. 45,000 plus 3.5 per cent of the claim amount over and above Rs. 5,00,000</td> </tr> </tbody> </table>	<i>Sum in Dispute</i>	<i>Model Fee</i>	Up to Rs.5,00,000	Rs. 45,000	Above Rs.5,00,000 and Up to Rs. 20,00,000	Rs. 45,000 plus 3.5 per cent of the claim amount over and above Rs. 5,00,000
<i>Sum in Dispute</i>	<i>Model Fee</i>						
Up to Rs.5,00,000	Rs. 45,000						
Above Rs.5,00,000 and Up to Rs. 20,00,000	Rs. 45,000 plus 3.5 per cent of the claim amount over and above Rs. 5,00,000						

	Above Rs. 20,00,000 and up to Rs. 1,00,00,000	Rs.97,500 plus 3 per cent of the claim amount over and above Rs. 20,00,000
	Above Rs. 1,00,000 and up to 10,00,000	Rs. 3,37,500 plus 1 per cent of the claim amount over and above Rs. 1,00,00,000
	Above Rs. 10,00,00,000 and up to Rs. 20,00,00,000	Rs.12,37,500 plus 0.75 per cent of the claim amount over and above Rs. 10,00,00,000
	Above Rs. 20,00,00,000	Rs. 19,87,500 plus 0.5 per cent of the claim amount over and above Rs.20,00,00,000 with a ceiling of Rs. 30,00,000
GCC 8.2.4	Provisions of Arbitration and Conciliation Act 2015 will apply.	
GCC 8.2.5	The designated Appointing Authority for a new Adjudicator is Principal Secretary to Government, Revenue Department, Govt of Karnataka.	
ADDITIONAL CLAUSE 9.0	<p>Add the following as GCC clause 9.0 :</p> <p>9. Security to be reviewed as per new guidelines Security instructions for raw data acquisition and pre-processing shall be as follows: (a) Aerial data- acquisition/photography/survey is to be strictly confined to the exact area for which permission obtained. Moreover, the undertakings given in the application shall be strictly adhered to. (b) No sensor, other than those mentioned in the application should be used. (c) The date of survey is to be intimated to ATC if applicable in advance indicating specific date and time to enable them to issue necessary clearance (d) The Service Provider should be ready to offer his Drone / aircraft with sensor for inspection by the service agencies of MoD, MHA, DGCA to check survey equipment /sensor before undertaking aerial surveys. (e) The data should not be taken out of the drone / aircraft to any place other than directed by Employer. (f) After completion of survey, no data should be left in storage in the equipment fitted in the drone / aircraft. (g) At the end of each day operation, the data should be copied and stored as directed by the Employer. (h) 'Restricted' security classification will be given to the data products. The data is to be handled by the Service Provider accordingly. (i) The data should be processed by Indian experts in India at the designated places within SoI complex. In case a foreign expert is required for</p>	

	<p>processing the data, the Service Provider shall be responsible for obtaining necessary clearances / permissions as per the latest government of india guidelines on geospatial products and services, to handle data ensuring the storage of data within India.</p> <p>(j) Whenever Inspecting Officer is placed with aerial acquisition team, it will be mandatory on the part of Operator to provide the following documents for his perusal:-</p> <p>(i) Copy of valid DGCA permit and ATC clearance.</p> <p>(ii) Copy of valid MOD clearance (if required).</p> <p>(iii) Proof of Insurance cover.</p> <p>(iv) valid UAS pilot Licence / certification</p> <p>(l) Any change/addition and equipment/sensors at any stage of work, can be made only after obtaining prior Employer clearance.</p> <p>(m) Fortnightly progress report is to be submitted to the Employer.</p> <p>(n) All required permits and clearances for drone / aerial surveys and data acquisition (DGCA permit, ATC clearance, valid MoD clearance etc) will be the responsibility of the Service Provider and all operations will be undertaken in accordance with Indian Air Safety Regulations.</p> <p>(o) The data acquired/intermediately or final products will not be permitted to be taken elsewhere. Proper account of daily production and distribution should be maintained.</p> <p>(p) Post Processing of data acquired by drone / aerial survey will be carried out inside the secure premises of purchaser or the service provider under the supervision of SSLR appointed officers. Necessary equipment/infrastructure should be installed at the premises by the successful bidder. The data acquired/intermediately or final will not be permitted to be taken elsewhere. Proper account of daily production and distribution should be maintained.</p> <p>The Security instructions to be followed by the Service Provider during the Post Processing of Data at the Production Centre shall be as follows:</p> <p>(a) No Data storage devices or electronic devices including mobile phones, laptops , CD , pen drives etc should be allowed inside the Production Centre except for specific clearances to be taken from Security Officer of Survey of India in exceptional circumstances arising out of any requirements.</p> <p>(b) No data should be allowed to be taken outside the Production Centre by the Service Provider</p> <p>(c) Systems and storage in Production Centre should not be connected to unsecured internet lines.</p> <p>(d) All the personnel working inside the Production Centre should have valid Identity card of the company. Any foreign national working inside the Production center should have valid visa and other documents verified by Ministry of External Affairs and permission from Ministry of Defense. Identity card of the company will be checked by the Security staff every day before the employee enters the Production Centre. Sur-</p>
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	<p>prise checks for the same will also be carried out by the Security Officer of Survey of India during the working hours.</p> <p>(e) Work should only be executed inside Production Centre only in the Presence of SSLR officials.</p> <p>(f) All the hardcopy plots and printouts, other Project related materials are to be kept in Almirahs whose key will be with SOI officials.</p> <p>(g) The Survey of India Security Officer reserves the right to frisk the working personnel every day / during surprise check.</p> <p>(h) There should be two separate segments in the Production centre, one for administrative and other for the production / processing.</p> <p>(i) The Production centre should strictly adhere to the security measures in terms of entry and exit to Production centre (preferably Biometric methods etc), accessing data (Administrator /user passwords , Networking etc) , disabling USB ports for theft of data , authorising persons to handle the data , log books , CCTV cameras , fire and smoke protection , lock and key system etc.</p> <p>(j)Storage disks of network storage, servers, workstations etc used at production center shall not be allowed to be taken outside of production center.</p>
<p>Additional Clause 10.0</p>	<p>Add the following as GCC clause 10.0 :</p> <p>Salient Features of Major Labour Laws in India applicable to Establishments is given below. The law as current on the date of bid opening will apply</p> <p>a) Workmen Compensation Act 1923: The Act provides for compensation in case of injury by accident arising out of and during the course of employment.</p> <p>b) Payment of Gratuity Act 1972: Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed 5 years' service or more or on death the rate of 15 days wages for every completed year of service. The Act is applicable to all establishments employing 10 or more employees.</p> <p>c) Employees P.F. and Miscellaneous Provision Act 1952 (since amended): The Act Provides for monthly contributions by the employer plus workers @ 10% or 8.33%. The benefits payable under the Act are :</p> <p>(i) Pension or family pension on retirement or death, as the case may be.</p> <p>(ii) Deposit linked insurance on the death in harness of the worker.</p> <p>(iii) Payment of P.F. accumulation on retirement/death etc.</p> <p>d) Maternity Benefit Act 1951: The Act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.</p> <p>e) Contract Labour (Regulation & Abolition) Act 1970: The Act provides for certain welfare measures to be provided by the Service Provider to contract labour and in case the Service Provider fails to provide, the same are required to be provided, by the Principal Employer by Law. The Principal Employer is required to take Certificate of Registration and the Service Provider is required to take license from the designated Officer. The Act is applicable to the establishments or Ser-</p>

	<p>vice Provider of Principal Employer if they employ 20 or more contract labour.</p> <p>f) Minimum Wages Act 1948: The Employer is supposed to pay not less than the Minimum Wages fixed by appropriate Government as per provisions of the Act if the employment is a scheduled employment. Constructions of Buildings, Roads, Runways are scheduled employments.</p> <p>Wage Code: to be included</p> <p>g) Payment of Wages Act 1936: It lays down as to by what date the wages are to be paid, when it will be paid and what deductions can be made from the wages of the workers.</p> <p>h) Equal Remuneration Act 1979: The Act provides for payment of equal wages for work of equal nature to Male and Female workers and for not making discrimination against Female employees in the matters of transfers, training and promotions etc.</p> <p>i) Payment of Bonus Act 1965: The Act is applicable to all establishments employing 20 or more employees. The Act provides for payments of annual bonus subject to a minimum of 8.33% of wages and maximum of 20% of wages to employees drawing Rs.3500/- per month or less. The bonus to be paid to employees getting Rs.2500/- per month or above upto Rs.3500/- per month shall be worked out by taking wages as Rs.2500/- per month only. The Act does not apply to certain establishments. The newly set-up establishments are exempted for five years in certain circumstances. Some of the State Governments have reduced the employment size from 20 to 10 for the purpose of applicability of this Act.</p> <p>j) Industrial Disputes Act 1947: The Act lays down the machinery and procedure for resolution of Industrial disputes, in what situations a strike or lock-out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.</p> <p>k) Industrial Employment (Standing Orders) Act 1946: It is applicable to all establishments employing 100 or more workmen (employment size reduced by some of the States and Central Government to 50). The Act provides for laying down rules governing the conditions of employment by the Employer on matters provided in the Act and get the same certified by the designated Authority.</p> <p>l) Trade Unions Act 1926: The Act lays down the procedure for registration of trade unions of workmen and employers. The Trade Unions registered under the Act have been given certain immunities from civil and criminal liabilities.</p> <p>m) Child Labour (Prohibition & Regulation) Act 1986: The Act prohibits employment of children below 14 years of age in certain occupations and processes and provides for regulation of employment of children in all other occupations and processes. Employment of Child Labour is prohibited in Building and Construction Industry.</p> <p>n) Inter-State Migrant workmen's (Regulation of Employment & Conditions of Service) Act 1979: The Act is applicable to an establishment which employs 5 or more inter-state migrant workmen through an in-</p>
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	<p>termediary (who has recruited workmen in one state for employment in the establishment situated in another state). The Inter-State migrant workmen, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as housing, medical aid, travelling expenses from home upto the establishment and bank etc.</p> <p>o) The Building and Other Construction workers (Regulation of Employment and Conditions of Service) Act 1996 and the Cess Act of 1996: All the establishments who carry on any building or other construction work and employs 10 or more workers are covered under this Act. All such establishments are required to pay cess at the rate not exceeding 2% of the cost of construction as may be modified by the Government. The Employer of the establishment is required to provide safety measures at the Building or construction work and other welfare measures, such as Canteens, First-Aid facilities, Ambulance, Housing accommodations for workers near the work place etc. The Employer to whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the Government.</p> <p>p) Factories Act 1948: The Act lays down the procedure for approval at plans before setting up a factory, health and safety provisions, welfare provisions, working hours, annual earned leave and rendering information regarding accidents or dangerous occurrences to designated authorities. It is applicable to premises employing 10 persons or more with aid of power or 20 or more persons without the aid of power engaged in manufacturing process.</p> <p>q) Code of Wages 2019 (implemented from 1st April, 2021)</p>
<p>Additional Clause 11.Non-Disclosure Obligations</p>	<p>The Service Provider will ensure that complete data (Raw, Geotagged, GPS observed, logs etc) is handed over to the purchaser representative and do not copy in any form & in any media for any other purpose without explicit approval/consent of the Service consumer will be kept by Service provider after completion of data capturing & pre-QC and final acceptance of the data by Service consumer.</p>

SECTION VIII– CONTRACT FORMS

Table of Forms

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1. LETTER OF ACCEPTANCE

[Letterhead paper of the Purchaser]

[date]

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

Subject: **Notification of Award Contract No.** for LOT 1/2

This is to notify you that your Bid dated . . . *[insert date]* . . . for execution of the *[insert name of the contract and identification number, as given in the SCC]* for the Accepted Contract Amount of *[insert amount in numbers and words in Rupees]*, as corrected and modified in accordance with the Instructions to Bidders is hereby accepted by our Agency.

You are requested to furnish the Performance Security within 15 days in accordance with the Conditions of Contract, using for that purpose the of the Performance Security Form included in Section VIII, Contract Forms, of the Bidding Document.

Authorized Signature: _____
Name and Title of Signatory: _____
Name of Agency: _____

Attachment: Contract Agreement

2. CONTRACT AGREEMENT

LUMP-SUM REMUNERATION

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

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

WHEREAS

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

NOW THEREFORE the parties hereto hereby agree as follows:

1. The following documents shall be deemed to form and be read and construed as part of this Agreement, and the priority of the documents shall be as follows:
 - (a) The letter of Acceptance
 - (b) The Service Provider’s Bid
 - (c) The Special Conditions of Contract
 - (d) The General Conditions of Contract
 - (e) Technical Requirements (including Schedule of Requirements and Technical Specifications and deliverables as per Section V)
 - (f) The Price Activity Schedule; and
 - (g) [Add here any other document(s) as part of contract]

3. The mutual rights and obligations of the Employer and the Service Provider shall be as set forth in the Contract, in particular:
 - a. the Service Provider shall carry out the Services in accordance with the provisions of the Contract; and
 - b. the Employer shall make payments to the Service Provider in accordance with the provisions of the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of *[insert the name of the Contract governing law country]* on the day, month and year indicated above.

For and on behalf of the Purchaser

Signed: *[insert signature]*
in the capacity of *[insert title or other appropriate designation]*
in the presence of *[insert identification of official witness]*

For and on behalf of the Supplier

Signed: *[insert signature of authorized representative(s) of the Supplier]*
in the capacity of *[insert title or other appropriate designation]*
in the presence of *[insert identification of official witness]*

3.PERFORMANCE SECURITY - BANK GUARANTEE

[Guarantor letterhead or SWIFT identifier code]

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

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

To: _____ *[name of Purchaser]*

_____ *[address of Purchaser]*

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

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

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

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Applicant, up to a total of _____ *[amount of guarantee³]* _____ *[in words]*, such sum being payable in the types and proportions of currencies in which the Contract Price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of _____ *[amount of guarantee]* as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

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

We further agree that no change or addition to or other modification of the terms of the Contract or of the Goods and related Services to be supplied thereunder or of any of the Contract documents which

³ *An amount shall be inserted by the Guarantor, representing the percentage of the Contract Price specified in the Contract and denominated in Indian Rupees.*

may be made between you and the Applicant shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid until (i.e.) 60 days following the Completion date of the Contract including any warranty obligations⁴, and any demand for payment under it must be received by us at this office on or before that date.

Signature and seal of the guarantor _____

Name of Bank _____

Address _____

Date _____

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

⁴ Completion date as described in GC Clause 18.4

NOTICE INVITING TENDER (NIT)

No:SSLR/STR/ORI/11/2022-23/CALL-2

Date **23-09-2022**

TENDER
HIRING OF DRONE OR AERIALSURVEYAS A SERVICE FOR ORI GENERA-
TION FOR LARGE SCALE MAPPING

UNDER RESURVEY/SURVEY PROJECT AND SVAMITVA PROJECT
(Two-Cover Bidding Process via e-Procurement Portal)

1. The Government of Karnataka has taken up Drone/Aerial Based Resurvey of Agricultural Lands as well as the Residential Properties in both rural and urban areas in Karnataka as part of its Resurvey / Large Scale Mapping (LSM) Program.
2. Additionally, the Government of India has taken up the project of SVAMITVA which is drone based survey of the residential properties or the aabadi area in the rural area.
3. The Government of Karnataka, as part of its Large Scale Mapping and Resurvey Project through department of Survey Settlement and Land Records (SSLR) in partnership with Survey of India (SoI) has initiated the works in 5 full districts (Tumkur, Ramnagar, Hassan, Uttara Kannada and Belgavi) as well as the Bengaluru City. Large scale maps and the revised RTC's (Record of Right, Tenancy and Crop data) are to be generated for these areas using drone based image acquisition.
4. It is decided to expand the Resurvey & LSM and SWAMITVA activities to the remaining 26 districts in phases using high resolution images of 5cm or better Ground Sampling Distance (GSD).
5. As 5 cm GSD images can be generated either from drone based image acquisition or from conventional aerial photography using color digital cameras, Government of Karnataka has decided to expand the resurvey project for the remaining 26 districts using Aerial / Drone based image acquisition process in two phases.
6. A tender was floated for 2 packages covering 13 districts and following the evaluation of bids submitted by the bidder, one package comprising of 7 districts covering 39429 Sqkm were allotted to the L1 bidder winner.
7. In Phase 2, covered by this tender, 19 district drone/aerial survey shall be completed covering an area of about 1,08,719 Sq KM. The Ortho Rectified Images (ORI) generated from this flying shall be used for generation of large scale topographic and Land Parcel Maps (LPM). The LPM's shall be used for generating the RTC and Property Records (PR) Cards for SVAMITVA and UPOR (Urban Property Ownership Records).
8. Therefore, this tender for **HIRING OF DRONE OR AERIALSURVEYAS A SERVICE FOR ORI GENERATION FOR LARGE SCALE MAPPING (LSM)** for 19 districts covering total area of about 1,08,719 Sq KM.

9. Karnataka State Remote Sensing Applications Centre (KSRSAC), the state nodal agency of Remote sensing and GIS activities shall be the technical partner of the Survey Settlement and Land Records Department of Government of Karnataka. Survey of India shall also be technical advisor and coordinator working with the Govt of Karnataka for this project.
10. KSRSAC shall define the methodology/process to be adopted including the QA/QC process and standard or accuracy parameters for data acceptance for this project and act as the technical and Implementation partner in the project. Survey of India will also be technical coordinator.
11. As implementation partner, KSRSAC shall supervise and provide the quality acceptance of the datasets generated by the service provider, as per the defined standard.
12. KSRSAC shall establish the process of data submission and provide its approval for compliance submitted by the service provider as per the defined standards of each product(s) – for each stage. Survey of India will also be technical coordinator.
13. The methodology mentioned in the RFP shall be followed. Detailed guidelines on the data submission process and file naming conventions to be adopted will be shared with the successful bidder during the contract award.
14. The project area of 19 districts in this tender is divided in to 7 packages or LOTs. Bidders can quote for any one or both the package/LOT subject to meeting the pre-qualification and eligibility criteria mentioned in the ITB.
15. In the context explained above, Additional Director, Office of Commissioner, Survey, Settlement and Land Records, Revenue Department, Bengaluru invites bids in e-Procurement Portal of the Government of Karnataka from the eligible bidders for supply of following goods and services listed below:

Drone/Aerial Survey – Package/LOT 1		
S.No	District Name	Area in Sq km
1	Bengaluru Urban (except BBMP)	1390
2	Bengaluru (Bangalore) Rural	2259
3	Mandya	4961
TOTAL =		8610

Drone/Aerial Survey – Package/LOT 2		
S.No	District Name	Area in Sq km
1	Kolar	3969
2	Chikballapur	4524
TOTAL =		8493

Drone/Aerial Survey – Package/LOT 3		
S.No	District Name	Area in Sq km
1	Ballari (Bellary)	4252
2	Vijayanagar	5644
TOTAL =		9896

Drone/Aerial Survey – Package/LOT 4		
S.No	District Name	Area in Sq km
1	Davangere	4460
2	Chitradurga	8440
TOTAL =		12900

Drone/Aerial Survey – Package/LOT 5		
S.No	District Name	Area in Sq km
1	Gadag	4656
2	Koppal	7189
TOTAL =		11845

Drone/Aerial Survey – Package/LOT 6		
S.No	District Name	Area in Sq km
1	Kodagu	4102
2	Chamarajanagar	5101
3	Chikkamagaluru (Chikmagalur)	7201
4	Vijayapura (Bijapur)	10498
TOTAL =		26902

Drone/Aerial Survey – Package/LOT 7		
S.No	District Name	Area in Sq km
1	Yadgir	5234
2	Bidar	5448
3	Raichur	8440
4	Kalaburagi (Gulbarga)	10951
TOTAL =		30073

* list of Districts covered are given in ITB

Area figures provided above is indicative. Final area & shape file will be provided to the Service Provider at the time of award.

Calendar of Events

The details of the Calendar of Events are as below:

Sl. No.	Description	Date	Time
1	Commencement of issue of Bid document through E-Procurement Portal of Government of Karnataka	23-09-2022	10:00 AM
2	Last date for downloading of Bid document	03-10-2022	-
3	Last date and time for receipt of Bid	03-10-2022	05:00 PM
4	Pre-Bid meeting (at Office of Commissioner SSLR, Bengaluru)	27-09-2022	12:00 PM
5	Opening of Bids (Technical)	06-10-2022	12: 00 PM onwards
6	Opening of Bids (Commercial – only of technically qualified bidders)	As per intimation given after technical evaluation.	-
7	Award of Contract	As per intimation given after financial evaluation.	-
8	Furnishing of Performance Security by the Successful Bidder	07-days from issue of LoI	
9	Signing of contract	Within 5-days of successful submission of PG	

1. Bidders may view and download the Bid document free of cost from the e-procurement portal of Government of Karnataka at <https://eproc.karnataka.gov.in>.
2. For participation in the bidding, it is mandatory for the bidder to obtain Class-III Digital Signature Certificate (DSC) from one of the authorized Certifying Authorities (CA) and then register with the Government of Karnataka e-procurement platform and submit bids by using their user ID and Digital Signature. Foreign bidders may obtain DSC from any Licensed Certifying Authority which has been recognized by the Controller of Certifying Authorities, Govt. of India as per details available at www.cca.gov.in. Bidders already possessing the Digital Signature issued from authorized CAs can use the same in this bid. Bidders should note that they are required to obtain separate DSCs for signing and encryption, issued by the same CA, for participating in the electronic bid submission.

3. A **pre-bid meeting** will be held at the Office of Commissioner Survey Settlement & Land Records, K R Circle, Opposite BESCO Head Office, Bengaluru, as per schedule given above, to clarify the issues and to answer questions on any matter that may be raised at that stage as stated in the bidding document.
4. Bid Processing Fee: Interested Tenderer who wish to participate shall pay tender processing fee through any of the 5 e-Payment options only:
 - a. Credit Card
 - b. Direct Debit
 - c. National Electronic Funds Transfer (NEFT)
 - d. Net banking
 - e. Over the Counter (OTC) – designated ICICI bank branches located across the country. Please note that payments submitted through cheque or demand draft shall not be accepted. Further details regarding e-Payment; please refer to e-Procurement website – <https://eproc.karnataka.gov.in>
5. Only online submission of tenders is permitted. Therefore, tenders must be submitted online on website <https://eproc.karnataka.gov.in> as per deadline fixed in the Calendar of Tender above and the applicable date and time shall be as per server date and time. The bids will be opened online by the authorized officers as per schedule given in the Calendar above.
6. Other details can be seen in the bidding documents.
7. The address for communication is as under:

Additional Director
Office of Commissioner,
Survey, Settlement & Land Records,
K R Circle, Opposite BESCO Head Office,
E-mail: Karnatakadaas2022@gmail.com

*Time and date of opening of Financial part of bid will be intimated after Technical acceptance of bid

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Section I. Instructions to Bidders

A. General

1. Scope of Bid

1.1 The Purchaser – Commissioner Survey, Settlement & Land Records, Revenue Department, Government of Karnataka, issues these Bidding Documents for the supply of Goods and Related Services incidental thereto as specified in Section V, Schedule of Requirements. The name, identification and number of lots (contracts) of this OPEN TENDER ENQUIRY (OTE) procurement are as follows

HIRING OF DRONE OR AERIALSURVEY AS A SERVICE FOR ORI GENERATION FOR LARGE SCALE MAPPING MAPPING for about 1,08,719[#] Sq KM area in 19districts in Karnataka in 7LOTS and the details specified in Section V Schedule of Requirement and as per Sub-section 3 Technical Specification.

Area figures provided above is indicative. Final area shape file will be provided to the Service Provider at the time of award.

The 19districts in this Phase 2 tender are divided into sevenpackages/LOTSas follows –

Drone/Aerial Survey – Package/LOT 1

S.No	District Name	Area in Sq km
1	Bengaluru Urban (except BBMP)	1390
2	Bengaluru (Bangalore) Rural	2259
3	Mandya	4961
TOTAL =		8610

Drone/Aerial Survey – Package/LOT 2

S.No	District Name	Area in Sq km
1	Kolar	3969
2	Chikballapur	4524
TOTAL =		8493

Drone/Aerial Survey – Package/LOT 3

S.No	District Name	Area in Sq km
1	Ballari (Bellary)	4252
2	Vijayanagar	5644
TOTAL =		9896

Drone/Aerial Survey – Package/LOT 4

S.No	District Name	Area in Sq km
1	Davangere	4460
2	Chitradurga	8440
TOTAL =		12900

Drone/Aerial Survey – Package/LOT 5

S.No	District Name	Area in Sq km
1	Gadag	4656
2	Koppal	7189
TOTAL =		11845

Drone/Aerial Survey – Package/LOT 6

S.No	District Name	Area in Sq km
1	Kodagu	4102
2	Chamarajanagar	5101
3	Chikkamagaluru (Chikmagalur)	7201
	Vijayapura (Bijapur)	10498
TOTAL =		26902

Drone/Aerial Survey – Package/LOT 7

S.No	District Name	Area in Sq km
1	Yadgir	5234
2	Bidar	5448
3	Raichur	8440
	Kalaburagi (Gulbarga)	10951
TOTAL =		30073

	<p>The whole geographical of these 19 districts, in 7 packages/ LOTs shall be covered as part of drone/aerial flying under this tender</p> <p>The scope of work includes:</p> <ul style="list-style-type: none"> ➤ Flight Planning ➤ Provision of ground control points by Dual frequency GNSS receivers either in relative static positioning mode OR by using existing NRTK CORS with Dual frequency RTK rovers required for Drone / Aerial survey. ➤ Planning and execution of Drone/ Aerial Survey with Professional survey grade PPK enabled Drones or with aircraft fitted with Large Format Digital Cameras. <ul style="list-style-type: none"> • Mission planning • Data acquisition, • Data pre-Processing / geo-tagging, • Data Post processing with suitable software, • DSM and Ortho Rectified Image (ORI) ➤ QA/QC at each stage of work and for the whole work ➤ Data management including daily incremental backup, monthly full backup of data as per the back-up plan submitted by the Service Provider and approved by the Purchaser. ➤ Delivery of products (softcopy) as per list of deliverables and delivery instructions. <p>The Intended Completion Date is Twelve (12) months from the date of ‘Commencement of Service’.</p> <p>1.2 Throughout these Bidding Documents: The term “in writing” means communicated in written form (e.g. by mail, e-mail, fax, telex, distributed or received through the electronic-procurement system used by the Purchaser) with proof of delivery – including electronic delivery; The Purchaser shall use the electronic-procurement system specified in 7.1 to manage this Bidding process.</p> <p>if the context so requires, “singular” means “plural” and vice versa; and “day” means calendar day.</p>
<p>2. Source of Funds</p>	<p>2.1 The Employer/Purchaser, as defined in the BDS, intends to apply part of the funds approved for Drone/Aerial based Survey/Resurvey & SVAMITVA, towards the cost of the Project, as defined in the BDS, to cover eligible payments under the Contract for the Services to be performed as per bid document</p>
<p>3. Corrupt & Fraudulent Practices</p>	<p>3.1 It is the Government of India’s (GoI) & Government of Karnataka’s (GoK) policy to require that the highest standards of ethics are observed during the procurement and execution of</p>

contracts. In pursuance of this policy, the officials of Procuring Entities and the bidders / suppliers/ contractors/ sub-contractors/consultants/ service-providers involved in procurement process must abide by the Code of Integrity for Public Procurement (CIPP).

3.2 Code of Integrity for Public Procurement: Procuring authorities as well as bidders, suppliers, contractors and consultants/contractor should observe the highest standard of ethics and should not indulge in the following prohibited practices, either directly or indirectly, at any stage during the procurement process or during execution of resultant contracts:

- i) “Corrupt practice”: making offers, solicitation or acceptance of bribe, rewards or gifts or any material benefit, in exchange for an unfair advantage in the procurement process or to otherwise influence the procurement process or contract execution;
- ii) “Fraudulent practice”: any omission or misrepresentation that may mislead or attempt to mislead so that financial or other benefits may be obtained or an obligation avoided. This includes making false declaration or providing false information for participation in a tender process or to secure a contract or in execution of the contract;
- iii) “Anti-competitive practice”: any collusion, bid rigging or anti-competitive arrangement, or any other practice coming under the purview of The Competition Act,2002, between two or more bidders, with or without the knowledge of the Procuring Entity, that may impair the transparency, fairness and the progress of the procurement process or to establish bid prices at artificial, non-competitive levels;
- iv) “Coercive practice”: harming or threatening to harm, persons or their property to influence their participation in the procurement process or affect the execution of a contract;
- v) “Conflict of interest”: participation by a bidding firm or any of its affiliates that are either involved in the consultancy contract to which this procurement is linked; or if they are part of more than one bid in the procurement; or if the bidding firm or their personnel have relationships or financial or business transactions with any official of Procuring Entity who are directly or indirectly related to tender or execution process of contract; or improper use of information obtained by the (prospective) bidder from the Procuring Entity with an intent to gain unfair advantage in the procurement process or for personal gain; and
- vi) “Obstructive practice”: materially impede the Procuring Entity’s investigation into allegations of one or more of the above mentioned prohibited practices either by deliberately destroying, falsifying, altering; or by concealing of evidence material to the investigation; or by making false statements to investigators and/or by threatening, harassing or intimidating any party to prevent it from disclosing its

	<p>knowledge of matters relevant to the investigation or from pursuing the investigation; or by impeding the Procuring Entity’s rights of audit or access to information;</p> <p>3.3 The bidders shall submit, as part of Bidding Document, a signed declaration to the effect that they shall abide by the Code of Integrity for Public Procurement in Letter of Bid-Technical Part at Section IV(Bidding Forms).</p> <p>3.4 Without prejudice to and in addition to the rights of the Purchaser to other penal provisions as per the bid documents or contract, if the Purchaser comes to a conclusion that a (prospective) bidder (including members of Joint Venture/ Sub-Contractor)/contractor/supplier/consultant/service-provider, directly or through an agent, has violated this Code of Integrity in competing for the contract or in executing a contract, the Purchaser may take appropriate measures including one or more of the following:</p> <p>i) <u>If his bids are under consideration in any procurement,</u></p> <p>a) forfeiture or encashment of bid security;</p> <p>b) calling off of any pre-contract negotiations; and</p> <p>c) rejection and exclusion of the bidder from the procurement process.</p> <p>ii) <u>If a contract has already been awarded,</u></p> <p>a) cancellation of the relevant contract and recovery of compensation for loss incurred by the Purchaser;</p> <p>b) forfeiture or encashment of any other security or bond relating to the procurement;</p> <p>c) recovery of payments made by the Procuring Entity along with interest thereon at the prevailing rate;</p> <p>iii) <u>Provisions in addition to above,</u></p> <p>a) removal from the list of registered suppliers and banning/debarment of the bidder from participation in future procurements of the Procuring Entity for a period not less than one year;</p> <p>b) in case of anti-competitive practices, information for further processing may be filed by the Purchaser, with the Competition Commission of India;</p> <p>c) initiation of suitable disciplinary or criminal proceedings against any individual or staff found responsible.</p>
	<p>3.5 Furthermore, Bidders shall be aware of the provision stated in Clause 3 of the General Conditions of Contract.</p>
<p>4. Eligible Bidders</p>	<p>4.1 All bidders shall provide in SectionIV, Bidding Forms, a statement that the Bidder (including all subcontractors) is not associated, nor has been associated in the past, directly or indirectly, with the consultant or any other entity that has prepared the design,</p>

	<p>specifications, and other documents for the Project or being proposed as Project Manager for the Contract. A firm that has been engaged by the Employer to provide Consultant Services for the preparation or supervision of the procurement, and any of its affiliates, shall not be eligible to bid.</p> <p>4.2 Bidders shall not be under Ban/Blacklisting/Debarment for corrupt and fraudulent practices or for lack in performance by any Government/Semi-Government entity.</p> <p>4.3 A Bidder shall be a company registered under the Company Act of India. A Joint Venture is not accepted.</p> <p>4.4 NOT Applicable</p> <p>4.5 Any false declaration and non-compliance of the above would be a ground for immediate termination of the contract and further legal action in accordance with the laws.</p> <p>4.6 Sub-contractors can be included as part of the bid to complete the project in time. There is no limit in having any number of sub-contractors. However, each subcontractor should fulfill the pre-qualification criteria mentioned in the RFP for the specific activity.</p>
<p>5. One Bid Per Bidder</p>	<p>5.1 Each Bidder shall submit only one Bid. A Bidder who submits or participates in more than one Bid (other alternatives that have been permitted or requested) will cause all the proposals with the Bidder's participation to be disqualified.</p> <p>5.2 A Sub Contractor is allowed for this tender.</p> <p>5.3 A subcontractor participating with one bidder can't be participating in another bidder. Such multiple participation of same sub-contractor with multiple bidders shall lead to disqualification of all bids participated by such a sub-contractor.</p>
	<p>B. Contents of Bidding Document</p>
<p>6. Sections of Bidding Documents</p>	<p>6.1 The Bidding Documents consist of Parts 1, 2, and 3, which include all the Sections indicated below, and should be read in conjunction with any Addendum issued in accordance with ITB Clause 8.</p> <p>PART 1 Bidding Procedures Section I. Instructions to Bidders (ITB) Section II. Omitted Section III. Evaluation and Qualification Criteria Section IV. Bidding Forms</p> <p>PART 2 Supply Requirements Section V. Schedule of Requirements</p> <p>PART 3 Contract Section VI. General Conditions of Contract (GCC) Section VII. Special Conditions of Contract (SCC) Section VIII. Contract Forms</p>

	<p>6.2 The NOTICE INVITING BIDS issued by the Purchaser is not part of the Bidding Document.</p> <p>6.3 Unless obtained directly from the Purchaser, the Purchaser is not responsible for the completeness of the document, responses to requests for clarification, minutes of pre-bid meeting (if any), or Addenda to the Bidding Document in accordance with ITB 8. In case of any contradiction, documents obtained directly from the Purchaser shall prevail. The tender or bidding document is uploaded and available in e-Procurement Portal of the Government of Karnataka viz https://eproc.karnataka.gov.in</p> <p>6.4 The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Documents and to furnish with its Bid all information or documentation as is required by the Bidding Documents.</p>
<p>7. Clarification of Bidding Documents</p>	<p>7.1 The clarifications/updation/addendum/corrigendum before opening up of the tender shall be solely through the eProcurement Portal of Government of Karnataka viz https://eproc.karnataka.gov.in and the bid therein for this tender. A prospective Bidder requiring any clarification on the Bidding Documents may raise the same in the Pre-Bid Conference provided in the Calendar of Events. Clarifications requested through any other mode shall not be considered by the Purchaser. The Purchaser will respond to any request for clarification, provided that such request is received at least one day prior to the date of Pre-Bid Conference. Description of clarification sought and the response of the Purchaser shall be uploaded for information of all Bidders without identifying the source of request for clarification. Should the Purchaser deem it necessary to amend the Bidding Documents as a result of a clarification, it shall do so following the procedure under ITB Clause 8 and ITB Sub-Clause 22.2. It is the bidder's responsibility to check on the e-procurement system, for any addendum/amendment/ corrigendum to the bidding document. The clarifications/corrigendum/addendum or any communication shall be through the said eProcurement portal of Government of Karnataka viz https://eproc.karnataka.gov.in</p>
<p>8. Amendment of Bidding Documents</p>	<p>8.1 At any time prior to the deadline for submission of bids, the Purchaser may amend the Bidding Documents by issuing addendum. The addendum will appear on the e-procurement system.</p> <p>8.2 Any addendum thus issued shall be part of the Bidding Documents and shall be deemed to have been communicated to all the bidders.</p> <p>8.3 To give prospective Bidders reasonable time in which to take an addendum into account in preparing their bids, the Purchaser may, at its discretion, extend the deadline for the sub-</p>

	<p>mission of bids, pursuant to ITB Sub-Clause 22.2</p> <p>8.4 The clarifications/corrigendum/addendum or any communication shall be through the said eProcurement portal of Government of Karnataka viz https://eproc.karnataka.gov.in</p>
	<p>C. Preparation of Bids</p>
<p>9. Cost of Bidding</p>	<p>9.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, and the Purchaser shall not be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.</p> <p>The Bidder, at the Bidder's own responsibility and risk, is encouraged to visit and examine the Site of required Services and its surroundings and obtain all information that may be necessary for preparing the Bid and entering into a contract for the Services. The costs of visiting the Site shall be at the Bidder's own expense.</p>
<p>10. Language of Bid</p>	<p>10.1 The Bid, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Purchaser, shall be written in Kannada or English language. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages into English language, in which case, for purposes of interpretation of the Bid, such translation shall govern.</p>
<p>11. Documents Comprising the Bid</p>	<p>11.1 The Bid shall comprise two Parts, namely the Technical Part and the Financial Part. These two Parts shall be submitted simultaneously.</p> <p>11.2 The Technical Part shall contain the following:</p> <ul style="list-style-type: none"> (a) Letter of Bid – Technical Part, in accordance with ITB Clause 12; (b) Bid Security, in accordance with ITB Clause 19.1, if required; (c) Alternative bids– Technical Part, if permissible, in accordance with ITB 13, the Technical Part of any Alternative Bid; (d) Written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB Clause 20.2; (e) Documentary evidence in accordance with ITB Clause 17 establishing the Bidder's qualifications to perform the contract if its bid is accepted; (f) Documentary evidence in accordance with ITB 17 establish-

	<p>ing the Bidder's eligibility to bid;</p> <p>(g) Documentary evidence in accordance with ITB Clauses 16, that the Services conform to the Bidding Documents; and</p> <p>(h) The following documents as part of the technical bid:</p> <ol style="list-style-type: none"> 1. Certification of incorporation of the bidder. 2. As e- procurement system is being used, there is no hard copy submission of bid. The relevant hard copies shall be brought at the time of technical evaluation and will be scrutinized as per need – including but not limited to the power of attorney, Bid Security Declaration Form, original affidavit regarding correctness of information furnished with bid document. 3. The bidder shall clearly confirm that all facilities (owned or leased or by procurement) including key and critical equipment as specified in section III exist with him for inspection and testing and these can be accessed by the Purchaser or his representative for inspection. 4. Technical schedules of services as required by technical specifications. 5. Qualification information including key personnel, Method Statement, Work Plan & Schedule as per section IV to meet employer technical specifications as per Section V to demonstrate substantial responsiveness of the Services. 6. The following details shall also be provided by Indian Bidders: <ol style="list-style-type: none"> a. Name, address, PAN and ward/circle where they are being assessed of the Directors of the Bidding Company. b. Company's PAN and Income Tax clearance certificate and ward/circle where it is being assessed, c. Registration details of the company under GST, local and Central Sales Tax, and other laws as may be applicable. 7. The bidders from outside India shall provide the corresponding details of Income Tax registration, Social Security Number, details regarding Registration under goods & services tax (as may be applicable) etc. 8. The bidder shall disclose instance of previous past performance that may have resulted into adverse actions taken against the bidder during the last five years. 9. All documents required in Section III: Evaluation & Qualification Criteria
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	<p>All Forms as required in Section IV</p> <p>11.3 The Financial Part shall contain the following:</p> <ul style="list-style-type: none"> (a) Letter of Bid – Financial Part: prepared in accordance with ITB 12 and ITB 14; (b) Price Schedules: completed prepared in accordance with ITB 12 and ITB 14; (c) Alternative Bid - Financial Part; if permissible in accordance with ITB 13, the Financial Part of any Alternative Bid; and (d) Any other document required in the AITB. <p>11.4 The Technical Part shall not include any financial information related to the Bid price. Where material financial information related to the Bid price is contained in the Technical Part, the Bid shall be declared non-responsive.</p> <p>11.5 The Bidder shall furnish in the Letter of Bid, information on commissions and gratuities, if any, paid or to be paid to agents or any other party relating to this Bid.</p>
<p>12. Process of Bid Submission</p>	<p>12.1 The Letter of Bid – technical Part, Letter of Bid – Financial Part and Price Schedules shall be prepared using the relevant forms furnished in Section IV, Bidding Forms. The forms must be completed without any alterations to the text, and no substitutes shall be accepted except as provided under ITB 20.2. All blank spaces shall be filled in with the information requested. The submission shall be in the eProcurement Portal https://eproc.karnataka.gov.in.</p> <p>12.2 Entire Bid including the Letter of Bid and filled-up Price Schedules shall be submitted online on e-procurement system specified in ITB 7.1. Details and process of online submission of the tender and relevant documents are given in the website mentioned above. Scanned copies of documents listed in clauses 11 and 12.3 should also be uploaded on this website.</p> <p>12.3 Submission of Original Documents: The bidders are required to separately bring during the technical scrutiny/evaluation (i) written confirmation authorizing the signatory of the Bid to commit the Bidder as per ITB Clause 11.2(d); (ii) original bid security declaration form in approved form; and (iii) original affidavit regarding correctness of information furnished with bid document.</p>
<p>13. Alternative Bids</p>	<p>13.1 The alternative bid shall not be considered.</p>

<p>14. Bid Prices and Discounts</p>	<p>14.1 The prices and discounts quoted by the Bidder in the Letter of Bid – Financial Part and in the Price Schedules shall conform to the requirements specified below:</p> <p>14.2 All lots (contracts) and items must be listed and priced separately in the Price Schedules.</p> <p>14.3 The price to be quoted in the Letter of Bid – Financial Part, in accordance with ITB 12.1, shall be the total price of the bid, excluding any discounts offered.</p> <p>14.4 The Bidder shall quote any discounts and indicate the methodology for their application in the Letter of Bid – Financial Part in accordance with ITB 12.1.</p> <p>14.5 Prices quoted by the Bidder shall be fixed during the Bidder’s performance of the Contract and not subject to variation on any account. A bid submitted with an adjustable price quotation shall be treated as nonresponsive and shall be rejected, pursuant to ITB 31.</p>
	<p>14.6 Not applicable</p>
	<p>14.7 The Bidder, at the Bidder’s own responsibility and risk, is encouraged to visit and examine the locations of required Services and its surroundings and obtain all information that may be necessary for preparing the Bid and entering into a contract for the Services. The costs of visiting the locations of required Services and its surroundings shall be at the Bidder’s own expense.</p> <p>14.8 Prices shall be quoted in the eProcurement Portal viz https://eproc.karnataka.gov.in as specified in the Price Schedule included in Section IV, Bidding Forms. Prices shall be entered in the following manner:</p> <p>(i) Bidder shall fill in rates and prices for all items of the Services described in the Specifications, and listed in the Activity Schedule in Section V, Schedule of Requirements. Items for which no rate or price is entered by the Bidder will not be paid for by the Employer when executed and shall be deemed covered by the other rates and prices in the Activity Schedule</p> <p>(ii) All duties, taxes, and other levies payable by the Service Provider under the Contract, or for any other cause, as of the date 28 days prior to the deadline for submission of Bids, shall be deemed to have been included in the total Bid price submitted by the Bidder.</p> <p>14.9 Deemed Exemption Benefits Bidders may like to ascertain availability of tax/duty exemption benefits, if any. They are solely responsible for ob-</p>

	<p>taining such benefits, which they have considered in their bid and in case of failure to receive such benefits for reasons whatsoever, the Purchaser will not compensate the bidder.</p> <p>Where the bidder has quoted taking into account such benefits, it must give all information required for issue of necessary Certificates in terms of the Government of India's relevant Notification along with its bid as proforma stipulated in Section IV Bidding Forms.</p> <p>If the Bidder has considered the Deemed Export Benefits in its bid, the Bidder shall confirm and certify that the Purchaser will not be required to undertake any responsibilities of the deemed export scheme or the benefits available during contract execution except issuing the required certificates. Bids which do not conform to this provision or any condition by the Bidder which makes the bid subject to availability of deemed export benefits or compensation on withdrawal of or any variations in the deemed export benefits scheme will make the bid non responsive and hence liable to rejection.</p>
15. Currencies of Bid & Payment	15.1 The Bidder shall quote the Price in Indian Rupees only.
16. Documents Establishing the Eligibility and conformity of the Services	<p>16.1 To establish the conformity of the Non-Consulting Services to the bidding document, the Bidder shall furnish as part of its Bid the documentary evidence that Services provided conform to the technical specifications and standards specified in Section V, Schedule of Requirements.</p> <p>16.2 Standards for provision of the Non-Consulting Services are intended to be descriptive only and not restrictive. The Bidder may offer other standards of quality provided that it demonstrates, to the Employer's satisfaction, that the substitutions ensure substantial equivalence or are superior to those specified in the Section V, Schedule of Requirements.</p>
17. Documents Establishing the Eligibility & Qualifications of the Bidder	<p>17.1 To establish Bidder's eligibility in accordance with ITB 4, Bidders shall complete the Letter of Bid – Technical Part, included in Section IV, Bidding Forms.</p> <p>17.2 The documentary evidence of the Bidder's qualifications to perform the contract if its bid is accepted shall establish to the Purchaser's satisfaction: that the Bidder meets each of the qualification criteria specified in Section III, Evaluation and Qualification;</p> <p>17.3 All Bidder shall provide in Section IV, Bidding Forms, a preliminary description of the proposed methodology work</p>

	plan and schedule
18. Period of Validity of Bids	<p>18.1 Bids shall remain valid for the period of 90-days after the bid submission deadline date prescribed by the Purchaser in accordance with ITB 22.1. A bid valid for a shorter period shall be rejected by the Purchaser as non-responsive.</p> <p>18.2 In exceptional circumstances, prior to the expiration of the bid validity period, the Purchaser may request bidders to extend the period of validity of their bids. The request and the responses shall be made in writing. If a Bid Security is requested in accordance with ITB Clause 19, it shall also be extended for a corresponding period. A Bidder may refuse the request without forfeiting its Bid Security. A Bidder granting the request shall not be required or permitted to modify its bid, except as provided in ITB Sub-Clause</p>
19. Bid Security	<p>19.1 The Bidder shall furnish as part of the Technical Part of its bid, a Bid Security/EMD (Earnest Money Deposit) Declaration Form included in Section IV Bidding Forms..</p> <p>19.2 Not used.</p> <p>19.3 The Bid Security/EMD shall be in the amount shall be as per the table given in the RFP, mentioned separately for each package/lot and denominated in Indian Rupees or a freely convertible currency, and shall:</p> <p>(a) The bidder shall calculate the cumulative EMD amount, as per the packages / LOT proposed for submission.</p> <p>(b) Out of total EMD, Rs 5 Lakhs shall be paid through the eProcurement Portal of Government of Karnataka as permitted therein.</p> <p>(c) The rest of EMD shall be paid as Bank Guarantee from a Scheduled Commercial Bank having turnover not less than Rs 5000 Crores in the previous financial year. The Bank Guarantee shall be substantially in the format prescribed in this regard and uploaded in e-Procurement Portal as part of the Technical Bid.</p> <p>(d) The Bank Guarantee in original form shall be submitted, for all packages cumulatively or independently – packagewise – at the time of technical evaluation. Also the Bank Guarantee should be scanned and uploaded in the eProcurement Portal as part of technical evaluation.</p> <p>(e) be substantially in accordance with one of the forms of Bid Security/EMD included in Section IV,</p> <p>(f) Bidding Forms, or other form approved by the Purchaser prior to bid submission;</p> <p>(g) be payable promptly upon written demand by the Purchaser in case the conditions listed in ITB Clause 19.7</p>

	<p>are invoked;</p> <ul style="list-style-type: none"> (h) be submitted within 3 working days from the last date of submission of bids to the tender inviting authority for technical evaluation in its original form; copies will not be accepted; (i) Remain valid for a period of 45 days beyond the original validity period of the 3-months bids that shall remain valid for 135 days or beyond that as per any period of extension of bid validity, if so requested under ITB Clause 18.2. (j) Absence of submission of BG for EMD in original shall lead to disqualification of bids and shall not entitle to any refund of amount paid in e-procurement portal towards EMD. (k) EMD shall be paid for each LOT separately. In case of EMD is not paid in full and cumulative for packages/LOTs applied for, the purchaser shall decide on the package/LOT to be considered for evaluation at its own discretion. (l) BG Shall be in favour of The Commissioner Survey, Settlement & Land Records Department, K R Circle, Opposite BESCOM Head Office, Bengaluru (m) Beneficiary bank details shall be shared with the bankers at the time of claim in discussion with the finance department of Government of Karnataka. <p>19.4 If a Bid Security/EMD is required in accordance with ITB Sub-Clause 19.1, any bid not accompanied by a substantially responsive Bid Security shall be rejected by the Purchaser as non-responsive.</p> <p>19.5 MSME companies can't claim for waiver of EMD / performance security as this is a critical and high value tender.</p> <p>19.6 The Bid Security/EMD of the unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder's signing the contract and furnishing the Performance Security pursuant to ITB Clause 44.</p> <p>19.7 The Bid Security/EMD of the successful Bidder shall be returned as promptly as possible once the successful Bidder has signed the contract and furnished the required performance security.</p> <p>19.8 The originals of BG towards Bid Security/EMD and all associated letters from the bank shall be submitted to the purchaser as per the date mentioned in the RFP which will be used for evaluation of bids.</p> <p>19.9 The originals shall be returned to the bidders on the completion</p>
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	<p>of evaluation process and initiating the return of EMD for unsuccessful bidders.</p> <p>19.10 But the scanned copies should be submitted in eProcurement portal as part of the technical bid.</p> <p>19.11 The Bid Security/EMD may be forfeited:</p> <ul style="list-style-type: none"> (a) if a Bidder <ul style="list-style-type: none"> (iii) withdraws its bid during the period of bid validity specified by the Bidder in the Letter of Bid (Technical Part and/or Financial Part), except as provided in ITB Sub-Clause 18.2; OR (iv) does not accept the correction of errors in pursuant to ITB 35, OR (b) if the successful Bidder fails to: <ul style="list-style-type: none"> (i) sign the Contract in accordance with ITB Clause 43; or (ii) Furnish a Performance Security in accordance with ITB Clause 44. <p>19.12 The Employer may declare the Bidder ineligible to be awarded a contract in case of forfeiture of Bid Security/EMD and will be suspended for the period of 5 years from being eligible to submit Bids/Proposals for contract with the Procuring Entity.</p>
<p>19 Format and Signing of Bid</p>	<p>20.1 The Bidder shall prepare the Bid as per details given in ITB</p> <p>20.2 The bid shall be signed by a person duly authorized to sign on behalf of the Bidder. The authorization shall consist of a written confirmation as per this tender document and shall be uploaded along with the bid in eProcurement portal viz https://eproc.karnataka.gov.in.</p> <p>20.3 Not Applicable</p> <p>20.4 Corrections if any in the bid can be carried out by editing the information before electronic submission on e-procurement portal.</p>
	<p>D. Online Submission of Bids</p>
<p>20 Preparation of Bids</p>	<p>21.1 Bids, both Technical and Financial Parts, shall be submitted online on the e-procurement system viz https://eproc.karnataka.gov.in. Detailed guidelines for viewing bids and submission of online bids are given on the website. The NOTICE INVITING BIDS under this Project is published on this website. Any citizen or prospective bidder can logon to this website and view the NOTICE INVITING BIDS and can view the details of goods for which bids are invited. A prospective bidder can submit its bid online;</p>

	<p>however, the bidder is required to have enrolment/registration in the website, and should have valid Digital Signature Certificate (DSC) obtained from any authorised certifying agency of Government of India (for class of DSC Class III). The bidder should register in the website using the relevant option available. Then the Digital Signature registration has to be done with the e-token, after logging into the website. The bidder can then login the website through the secured login by entering the password of the e-token & the user id/ password chosen during registration. After getting the bid schedules, the Bidder should go through them carefully and submit the specified documents, along with the bid; otherwise the bid will be rejected.</p> <p>21.2 The completed bid comprising of documents indicated in ITB 11, should be uploaded on the e-procurement portal along with scanned copies of requisite certificates as are mentioned in different sections in the bidding document and scanned copy of the bid security.</p> <p>21.3 All the documents are required to be signed digitally by the bidder. After electronic on line bid submission, the system generates a unique bid identification number which is time stamped as per server time. This shall be treated as acknowledgement of bid submission.</p> <p>21.4 Physical, Email, Telex, Cable or Facsimile bids will be rejected as non-responsive.</p>
<p>21 Deadline for Submission of Bids</p>	<p>22.1 Bids must be uploaded online no later than the date and time specified in this tender.</p> <p>22.2 The Purchaser may, at its discretion, extend the deadline for the submission of bids by amending the Bidding Documents in accordance with ITB Clause 8, in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended. All such extensions shall be communicated only through eProcurement Portal viz https://eproc.karnataka.gov.in</p>
<p>22 Late Bids</p>	<p>23.1 The electronic bidding system would not allow any late submission of bids after due date & time as per server time.</p>
<p>23 Withdrawal, Substitution, and Modification of Bids</p>	<p>24.1 Bidders may modify their bids by using appropriate option for bid modification on the e-procurement portal, before the deadline for submission of bids. For this the bidder need not make any additional payment towards the cost of bid document. For bid modification and consequential re-submission, the bidder is not required to withdraw his bid submitted earlier. The last modified bid submitted by the bidder within the bid submission time shall be considered as the bid. For</p>

	<p>this purpose, modification/withdrawal by other means will not be accepted. In online system of bid submission, the modification and consequential re-submission of bids is allowed any number of times. A bidder may withdraw his bid by using appropriate option for bid withdrawal, before the deadline for submission of bids, however, if the bid is withdrawn, re-submission of the bid is allowed as per eProcurement portal policy and system in this regard.</p> <p>24.2 Bids requested to be withdrawn in accordance with ITB Sub-Clause 24.1 shall not be opened and dealt with as per eProcurement portal system.</p> <p>24.3 No bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Letter of Bid (Technical Part and/or Financial Part) or any extension thereof.</p>
<p>24 Public Opening of Technical Parts of Bids</p>	<p>25.1 The Purchaser shall publicly open Technical Parts of all bids received by the deadline, at the date, time and place specified in this tender, in the presence of Bidder's designated representatives and anyone who chooses to attend, and this could also be viewed by the bidders online. The Financial Parts of the bids shall remain unopened in the e-procurement system, until the subsequent public opening, following the evaluation of the Technical Parts of the Bids. In all cases, original documents submitted as specified in ITB 12.3 shall be first scrutinized, and Bids that do not comply with the provisions of ITB 12.3 will be declared non-responsive and will not be opened. Thereafter, bidder's names, and such other details as the Purchaser may consider appropriate will be notified online as Technical Part bid opening summary.</p> <p style="padding-left: 40px;">In the event of the specified date of bid opening being declared a holiday for the Purchaser, the bids will be opened at the appointed time and location on the next working day.</p> <p>25.2 The electronic summary of the bid opening will be generated and uploaded online. The Purchaser will prepare and upload the Technical Evaluation of the bids in the eProcurement Portal. Only Technical Parts of Bids, alternative bids - Technical Parts if permitted in ITB 13 that are opened at Bid opening shall be considered further for evaluation.</p>
	<p>E. Evaluation of Bids – General Provisions</p>
<p>26 Confidentiality</p>	<p>26.1 Information relating to the examination, evaluation, comparison, and post-qualification of bids, and recommendation of contract award, shall not be disclosed to bidders or any other persons not officially concerned with such process until information on Contract Award is communicated to all Bid-</p>

	<p>ders in accordance with ITB 42.</p> <p>26.2 Any effort by a Bidder to influence the Purchaser in the examination, evaluation, comparison, and post-qualification of the bids or contract award decisions may result in the rejection of its Bid.</p> <p>26.3 Notwithstanding ITB Sub-Clause 26.2, from the time of bid opening to the time of Contract Award, if any Bidder wishes to contact the Purchaser on any matter related to the bidding process, it should do so in writing.</p>
27 Clarification of Bids	<p>27.1 To assist in the examination, evaluation, comparison of the bids and post-qualification of the Bidders, the Purchaser may, at its discretion, ask any Bidder for a clarification of its Bid including breakdown of prices in the Activity Schedule, and other information that the Employer may require. Any clarification submitted by a Bidder in respect to its Bid, that is not in response to a request by the Purchaser shall not be considered. The Purchaser's request for clarification and the response shall be in writing. No change, including any voluntary increase or decrease, in the prices or substance of the Bid shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Purchaser in the Evaluation of the bids, in accordance with ITB Clause 35.</p> <p>27.2 If a Bidder does not provide clarifications of its bid by the date and time set in the Purchaser's request for clarification, its bid may be rejected.</p>
28 Deviations, Reservations, Omissions	<p>28.1 During the evaluation of bids, the following definitions apply:</p> <ul style="list-style-type: none"> (a) "Deviation" is a departure from the requirements specified in the Bidding Documents; (b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Documents; and (c) "Omission" is the failure to submit part or all of the information or documentation required in the Bidding Documents.
29 Nonconformities, Errors and Omissions	<p>29.1 Provided that a Bid is substantially responsive, the Purchaser may waive any nonconformities or omissions in the Bid which do not constitute a material deviation, reservation or omission.</p> <p>29.2 Provided that a Bid is substantially responsive, the Purchaser may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities or omissions in the Bid related to documentation requirements. Such omission shall not be related to any aspect of the price or sub-</p>

	<p>stance of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.</p> <p>29.3 Provided that a Bid is substantially responsive, the Purchaser shall rectify quantifiable nonmaterial nonconformities related to the Bid Price. To this effect, the Bid Price shall be adjusted, for comparison purposes only, to reflect the price of a missing or non-conforming item or component in the manner specified below –</p> <p>The adjustment shall be based on the Average Price of the item or component as quoted in other substantially responsive Bids, subject to a maximum of the estimated price of the item. If the price of the item or component cannot be derived from the price of other substantially responsive Bids, the Purchaser shall use its best estimate.</p>
<p>30 Evaluation of Technical Parts</p>	<p>30.1 In evaluating the Technical Parts of each Bid, the Purchaser shall use the criteria and methodologies listed in ITB 31, ITB 32, and Section III, Evaluation and Qualification Criteria. No other evaluation criteria or methodologies shall be permitted.</p>
<p>31 Determination of Responsiveness</p>	<p>31.1 The Purchaser’s determination of a bid’s responsiveness is to be based on the contents of the bid itself as defined in ITB 11.</p> <p>31.2 A substantially responsive Bid is one that meets the requirements of the Bidding Documents without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that:</p> <ul style="list-style-type: none"> (a) If accepted, would <ul style="list-style-type: none"> (i) affect in any substantial way the scope, quality, or performance of the Non- Consulting Services specified in the Contract; or (ii) limit in any substantial way, inconsistent with the Bidding Documents, the Purchaser’s rights or the Bidder’s obligations under the Contract; or (b) If rectified would unfairly affect the competitive position of other bidders presenting substantially responsive bids. <p>31.2.1 Bids from Agents, without proper authorization from the manufacturer as per Section IV, shall be treated as non-responsive.</p> <p>31.3.1 The Purchaser shall examine the bids to confirm that all documents and technical documentation requested in ITB Clause 11 have been provided, and to determine the completeness of each document submitted.</p>

	<p>31.3.2 The Purchaser shall examine the bid to confirm that the Bidder has accepted all terms and conditions specified in GCC and the SCC without material deviations or reservations. Deviations from or objections or reservations to critical provisions such as those concerning Performance Security (GCC Clause 3.9). Correction of Defects and Lack of Performance Penalty(GCC Clause 7.1), Force Majeure (Clause 2.5),Applicable law (GCC Clause 1.2) and Taxes & Duties (GCC Clause 1.8) will be deemed to be a material deviation. The Purchaser’s determination of a bid’s responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence.</p> <p>31.4 If a bid is not substantially responsive to the Bidding Documents, it shall be rejected by the Purchaser and may not subsequently be made responsive by the Bidder by correction of the material deviation, reservation, or omission.</p>
<p>32 Qualification of the Bidders</p>	<p>32.1 The Purchaser shall determine, to its satisfaction, whether all eligible Bidders, whose Bids have been determined to be substantially responsive to the bidding document, meet the Qualification Criteria specified in Section III, Evaluation and Qualification Criteria.</p> <p>32.2 The determination shall be based upon an examination of the documentary evidence of the Bidder’s qualifications submitted by the Bidder, pursuant to ITB 17. The determination shall not take into consideration the qualifications of other firms such as the Bidder’s subsidiaries, parent entities, affiliates, subcontractors (other than specialized subcontractors if permitted in the bidding document), or any other firm(s) different from the Bidder).</p> <p>32.3 If a Bidder does not meet the qualifying criteria specified in Section III, Evaluation and Qualification Criteria, its Bid shall be rejected by the Purchaser and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.</p> <p>32.4 Only Bids that are both substantially responsive to the bidding document, and meet all Qualification Criteria shall have the Financial Parts of their Bids opened at the second public opening</p>
<p>33 Public Opening of Financial Parts</p>	<p>33.1 Following the completion of the evaluation of the Technical Parts of the Bids, and approval of Competent authority, the</p>

	<p>Purchaser shall notify in writing those Bidders who have failed to meet the Qualification Criteria and/or whose Bids were considered non-responsive in the Technical Evaluation giving them the following information in the form of a Proceedings:</p> <ul style="list-style-type: none">(a) their Technical Part of Bid failed to meet the requirements of the bidding document;(b) their Financial Part of the Bid shall not be opened; and(c) notify them of the date and time for public opening of the Financial Parts of the Bids. Financial Parts of the bids shall not be opened earlier than three (3) days from the communication of technical evaluation results to the bidders. <p>33.2 The Purchaser shall, simultaneously, notify in writing those Bidders whose Technical Parts have been evaluated as substantially responsive to the bidding document and met the Qualification Criteria, advising them of the following information:</p> <ul style="list-style-type: none">(a) their Bid has been evaluated as substantially responsive to the bidding document and met the Qualification Criteria;(b) their Financial Part of Bid will be opened at the public opening of Financial Parts;(c) Notify them of the date and time of the second public opening of the Financial Parts of the Bids, as specified in this tender. <p>The opening date should allow Bidders sufficient time to make arrangements for attending the opening. The Financial Part of the Bid shall be opened publicly in the presence of Bidders' designated representatives and anyone who chooses to attend, and this could also be viewed by the bidders online on eProcurement portal viz https://eproc.karnataka.gov.in. The bidder's names, the Bid prices, the total amount of each bid, including any discounts and Alternative Bid – Financial Part, and such other details as the Purchaser may consider appropriate will be notified online via eProcurement portal viz https://eproc.karnataka.gov.in by the Purchaser at the time of bid opening.</p> <p>In the event of the specified date of bid opening being declared a holiday for the Purchaser, the bids will be opened at</p>
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	<p>the appointed time and location on the next working day.</p> <p>33.4 The electronic summary of the bid opening will be generated and uploaded online. The Purchaser will also prepare minutes of the Bid opening, including the information disclosed and upload the same for viewing online. Only Financial Part of Bids, Financial Parts of Alternative Bids and discounts that are opened and read out at Bid opening shall be considered further for evaluation.</p>
34 Evaluation of Financial Parts	<p>34.1 To evaluate the Financial Part of each Bid/LOT, the Purchaser shall consider the following:</p> <ul style="list-style-type: none"> (a) evaluation will be done as per the Financial Bid document; and the Bid Price as quoted in accordance with ITB 14; (b) Not used; (c) Not Used (d) Not used; (e) Nt Used <p>34.2 Not used</p> <p>34.3 Not Applicable</p> <p>34.4 Not used</p> <p>34.5 Omitted</p> <p>34.6 Employer reserves the right to accept or reject any variation, deviation, or alternative offer. Variations, deviations, and alternative offers and other factors, which are in excess of the requirements of the bidding documents or otherwise result in unsolicited benefits for the Employer will not be taken into account in Bid evaluation.</p>
35 Correction of Arithmetical Errors	<p>35.1 The e-procurement system automatically calculates the total amount from unit rates and quantities and the system also automatically populates the amount in words from the amount in figures and therefore there is no scope of discrepancy and need for arithmetic correction.</p>
36 Conversion to Single Currency	<p>36.1 Not applicable.</p>
37 Preference	<p>Omitted</p>
38 Comparison of Financial Parts	<p>38.1 The Purchaser shall compare the evaluated prices of all substantially responsive bids to determine the lowest-evaluated bid for each LOT in accordance with ITB Clause 34.</p>

<p>39 Purchaser’s Right to Accept Any Bid, and to Reject Any or All Bids</p>	<p>39.1 The Purchaser reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to Bidders. In case of annulment, all documents submitted and specifically, bid securities, shall be promptly returned to the Bidders.</p>
	<p>F. Award of Contract</p>
<p>40 Award Criteria</p>	<p>40.1 Subject to ITB 39.1, the Purchaser shall award the Contract to the Bidder whose bid has been determined to be the lowest evaluated bid and is substantially responsive to the Bidding Documents, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily.</p>
<p>41 Purchaser’s Right to Vary Quantities at Time of Award</p>	<p>41.1 At the time the Contract is awarded, the Purchaser reserves the right to increase or decrease the quantity originally specified in Section V, Schedule of Requirements, provided this does not exceed the 25%, and without any change in the unit prices or other terms and conditions of the bid and the Bidding Documents.</p> <p>41.2 If the quantity has not been increased at the time of the awarding the contract, still the purchaser reserves the right to increase or decrease, the quantity originally specified in Section V. Schedule of Requirements, provided this does not exceed 25%, and without any change in the unit prices or other terms and conditions of the bid and the Bidding Documents, during the currency of the contract.</p> <p>41.3 Further, during the execution of the contract in case any bid winner of a LOT fails to execute the project as per this tender document and agreement signed pursuant thereto and the same leads to cancellation of the contract, then the Purchaser reserves the right, pending finalization of such a cancelled contract in a new tender, to assign the cancelled LOT to the BID winner of the other LOT in this tender; who shall duly execute the such an assigned work of the cancelled LOT until the cancelled LOT is awarded to a bid winner in a new tender. Such in-between assignment shall be on same terms and conditions (including the payments) as per the contractor’s own agreement and the contract.</p>

<p>42 Notification of Award, Publication of Award & Recourse to Unsuccessful Bidders</p>	<p>42.1 Prior to the expiration of the period of bid validity, the Purchaser shall notify the successful Bidder, in writing, that its Bid has been accepted. The notification letter (hereinafter called “Letter of Acceptance”) shall specify the sum that the purchaser will pay in consideration of the supply of Goods (hereinafter called “the Contract Price”).</p> <p>42.2 At the same time the Purchaser shall publish in eProcurement Portal of Government of Karnataka – viz https://eproc.karnataka.gov.in or on the Purchaser’s website with free access, or in the official gazette, the results identifying the bid and lot numbers and the following information: (i) name of each Bidder who submitted a Bid; (ii) bid prices as read out at bid opening; (iii) name and evaluated prices of each Bid that was evaluated; (iv) name of bidders whose bids were rejected and the reasons for their rejection; and (v) name of the successful Bidder, and the price it offered, as well as the duration and summary scope of the contract awarded. Provided the same may be informed through a suitable Proceedings of the Purchaser.</p> <p>42.3 The Purchaser shall promptly respond in writing to any unsuccessful Bidder who, after Publication of contract award, requests in writing the grounds on which its bid was not selected.</p> <p>42.4 Until a formal Contract is prepared and executed, the notification of award shall constitute a binding Contract.</p> <p>42.5 Upon the successful Bidder’s furnishing of the performance security and signing the Contract Form pursuant to ITB Clause 43, the Purchaser will promptly notify each unsuccessful Bidder and will discharge its bid security, pursuant to ITB Clause 19.5</p> <p>42.6 If after notification of award, a bidder wishes to ascertain the grounds on which its bid was not selected, it should address its request to the Tender Accepting Authority as per KTPP Act. The Employer will respond suitably in writing to the unsuccessful Bidder.</p>
<p>43 Signing of Contract</p>	<p>43.1 Promptly after notification, the Purchaser shall send the successful Bidder the Contract Agreement.</p> <p>43.2 Within fifteen (15) days of receipt of the Contract Agreement, the successful Bidder shall sign, date, and return it to the Purchaser.</p>
<p>44 Performance Security</p>	<p>44.1 Within twenty-one (21) days of the receipt of notification of award from the Purchaser, the successful Bidder, if required, shall furnish the Performance Security in accordance with the GCC, using for that purpose the Performance Security Form included in Section VIII Contract forms, or another Form ac-</p>

	<p>ceptable to the Purchaser. Failure of the successful Bidder to submit the above-mentioned Performance Security or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security.</p>
<p>45 Adjudicator</p>	<p>45.1 The Adjudicator shall be a person that is nominated by Principal Secretary Revenue Department, Government of Karnataka under the Contract, and paid a suitable fee, plus reimbursable expenses. If the Bidder disagrees with this proposal, the Bidder should so state in the Bid. If, in the Letter of Acceptance, the Purchaser has not agreed on the appointment of the Adjudicator, the Adjudicator shall be appointed by the Appointing Authority designated in the Special Conditions of Contract at the request of either party.</p>

SECTION III. EVALUATION AND QUALIFICATION CRITERIA

This Section complements the Instructions to Bidders. It contains the criteria that the Purchaser shall use to evaluate a bid and determine whether a Bidder qualifies in accordance with criteria specified in this bidding document. No other criteria shall be used.

Contents

1. Evaluation Criteria (ITB 34)
2. Multiple Contracts (ITB 30.4)
3. Qualification Requirements (ITB 32.1)

1. Evaluation Criteria (ITB 34)

The Employer shall determine the Most Advantageous Bid, which is the Bid of the Bidder whose Technical Parts have been evaluated as substantially responsive to the bidding document and met the Qualification Criteria and whose Bid has been determined to be the lowest evaluated cost after considering total prices of all items of the Services described in the in Specifications, and listed in the Activity Schedule in Section V, Schedule of Requirements and all duties, taxes, and other levies payable by the Service Provider under the Contract.

Evaluation of the Bidder's Technical Proposal will include an assessment of the Bidder's technical capacity to mobilize key equipment and personnel for the contract consistent with its proposal regarding work methods, scheduling, and material sourcing in sufficient detail and fully in accordance with the requirements stipulated in Section V, Schedule of Requirements.

2. Multiple Contracts (ITB 30.4)

Not applicable

Qualification Criteria (ITB 32.1)

The Purchaser shall assess each Bid against the following Qualification Criteria Requirements for selection of agency for hiring of drone/Aerial Surveyas a service for ORI generation for large scale mapping:

- A. The Bidder's Assets (equipment and technically qualified manpower)
- B. Bidder's Credentials (Turn Over & Work Experience)
- C. Methodology, Work Plan and Organization Staff Plan in response to the Terms of Reference:

A. The Bidder's Assets

The quantification of instruments/resources required for evaluation of bid capacity are given **per package/LOT**. The bidders who wish to apply for more than one package/LOT shall meet the requirements, cumulatively and should be substantiated in the bids submitted. In case a bidder has bid for more than one LOT but does not meet the requirements of all the LOTs summed together; but meets requirements of some of the LOTs that he has bid, then in such a case the PURCHASER reserves complete right to qualify the bidder – subject to satisfying other technical qualification conditions – in only such number of LOTs for which the bidder technically qualifies for. The Purchaser shall have, in such a case, complete discretion to qualify the bidder for the specific the LOTs out of total LOTs bidder bids for. Bidder shall have no say or control over selection of LOTs that he may be technically qualified for. For example, if a bidder bids for 6 Lots but he meets technical requirements for only 3 Lots. Then which 3-LOTs he will be technically qualified for shall be decided by the PURCHASER. Bidder shall have no say in the same.

The qualification criteria of the Instruments related GPS / Drone / Aircraft with sensors can be met by the bidder along with his authorized sub-contractor. The numbers mentioned are the preliminary requirements that should be available with the bidder or its authorized sub-contractor at the time of bidding and will be used for technical evaluation of bid. The ownership of the instruments should be with the bidder or its authorized its sub-contractor only.

The bidder shall however give the detailed implementation plan separately for each LOT that he bids as part of the technical bid describing the actual number of instruments that they will deploy for project execution. The proposed additional number of instruments / equipment's / manpower resources, if any shall be explained in details with per sqkm / per day outputs that are estimated. The detailed implementation plan that is mandatory to be submitted as part of the Technical Bid must include month wise square kilometer of the ORI generation. The same shall be correlated with the deployment of the resources mentioned in the implementation plan. This shall be mandatory criteria in technical evaluation. An unsatisfactory or unscientific implementation plan shall lead to rejection of the bid at the technical evaluation stage itself.

The bidder shall also explain the process and plan of engaging such requisite quantities as per the implementation plan. The declaration stating the additional quantity of resources (instrument / manpower, computing resources etc) that are required to complete the project within the scheduled time shall be submitted by the bidder with the schedule plan detailing the source of supply of such resources and their technical details. The schedule plan of such increase in resources should be linked and substantiated in the implementation plan which shall be used as a key factor in evaluating the bidders capability of understanding the project scope and its capacity in ensuring the deliverables, on time. The failure to give a proper implementation plan showing completion of the work within 12-months period shall lead disqualification of the bidder in the technical evaluation. Further, failure to deliver output every month as per the said implementation plan shall be treated as a critical breach of the contract and shall result in cancellation of the award apart from delay penalties in payments.

a) Instrument and Software-

a. Aerial data Acquisition Platform

• Professional survey grade PPK enabled UAS/Drone –

Bidder must have such minimum nos. of Professional survey grade PPK enabled UAS/Drone with associated camera for achieving at least 5 cm GSD at the time of submission of bid as prescribed for each Lot separately in the RFP. Note: If bidder bids for more than one Lot then the requirement in this regard will be arrived at by summing up requirement for each Lot.

- Supporting documents should consist of copy of the valid proof of ownership of each drone to be engaged for providing services along with its Unique Identification Number (UIN) of each drone.

- **Aircraft with Large Format Digital Camera**– 1 or 2 nos of aircraft, as per the LOT the bidder bids for, with large format digital camera and associated accessories required for carrying out aerial survey to achieve at least 5 cm GSD. details of aircraft with sensors and its ownership need to be submitted. Provided that for Aerial Survey Bid based on aircraft, availability of 2 number of aircrafts, at the time of bid, shall technically qualify, subject to fulfilment of other technical criteria, the bidder for more than one LOT and number of aircraft requirement need not be summed up for each LOT that the bidder bids for.

Bidders are expected to complete 1000 sqkm area of flying per week (per package). The details of number of drone/aircraft and sensors which shall be used for completing the project and the desired output should be planned and detailed in the implementation plan as part of the technical bid.

Proof of Ownership of aircraft by the bidder or its subcontractor can be proved with the ownership / lease documents already in place.

b. **GNSS receiver**

- Minimum units of Dual frequency GPS instruments Capable of tracking and logging Multi frequency & multi constellation signals OR RTK rovers as per LOT wise number prescribed in the RFP.

c. **Aerial Data Processing**

- The bidder must achieve on average of not less than 1000 Sq KM per week (per package) of ORI generation and prove his capacity to do so during the technical evaluation of the bid by way of per day drone or aerial data acquisition and the number of drone/aircrafts that would be deployed. Details of source of deployment – equipment and funds availability for the same shall be mentioned.
- The per week 1000 Sq KM is deliverable on average per week basis. Therefore, fluctuations in one week to another is permitted. The core point in this regard is that the bid winner must execute the project as per the Implementation Schedule that the bidder submits as part of technical bid.
- The bidder shall detail the plan on the following, **package or LOT wise**
 - Completion of acquisition in terms of number of instruments and per day coverage
 - Number of days planned along with number of instruments. The monsoon days / high wind days, cloud cover, etc shall be considered and mentioned in the proposal – for each geographical area / package.
 - The implementation plan shall give full clarity on the number of instruments proposed with the estimated targets per day / activity with respect to the methodology proposed and the reasons.
 - The number of days of pre-processing of the acquired data for making them ready for generation of DSM and ORI data. Pre-processing includes GPS data processing, project / block setup, Block adjustment, stereo – model generation etc

d. **Workstations for Data Processing:** minimum nos, per package as mentioned in the Table

- Bidder must have minimum 15 Middle level Workstations and for the rest, as per the implementation plan, the undertaking can be submitted by the bidder OR an agreement with the MEITY empanelment cloud provider in case service provider chooses to process and store data in cloud. Such agreement should clearly describe the storage, processing resources, timelines etc
- The workstation proposed shall have the following minimum configuration
 - RAM – 16 GB
 - Processor Speed – As necessary
 - Internal storage – 1 TB
 - Graphics card – Nvidia Quadro 4 1 GB or equivalent
 - Monitor Size – 19 inches or better

e. **Network Storage System:** 02(two) no. of Minimum 50 TB (in RAID 5 configuration) OR An agreement with the MEITY empanelment cloud provider in case service provider chooses to process and store data in cloud.

In case of processing and storing the data on cloud, the lead bidder or its proposed cloud service provider should produce a certificate from MeitY that the cloud server and processing environment proposed is located in India only

f. **Servers:** minimum 02 nos and during the actual implementation as per the Implementation Plan submitted during the technical evaluation. The proposed server configuration shall have the following minimum configuration.

- RAM – 64 GB
- Processor Speed - As necessary
- Internal storage – 1 TB

g. Software Suite for generation of DSM / ORI

- Should have minimum 10 no Software for data processing like Px4D / UAS master / AGI etc. per package for drones and any of the industry standard photogrammetry software suite (LPS, DAT/EM, Inpho etc). During the actual implementation this shall be as per the Implementation Plan submitted during the technical evaluation. The proposed estimates on number of system, output that can be achieved per system and the plan of completion of project should be explained in the implementation plan, in detail – as part of technical bid.

b) Manpower:

The minimum Qualification and number of key- personnel proposed to be deployed in the Project should be as follows. The numbers stated are the minimum required for qualification. Bidder/Service provider shall deploy sufficient additional resources as per Detailed Implementation Plan submitted as part of the technical bid for each LOT as are required to meet the delivery timelines during actual execution.

For the purpose of this Bid Document for each package/LOT, Key Personnel shall include:

- a. Project Manager: At least 01 (one), Project Manager with minimum 3 years in working projects of similar nature & complexity.
- b. Pilot: with Remote Pilot License / Certificate as per Drone Rules 2021 and updated from time to time and minimum number for each LOT as prescribed in the RFP
- c. Operator: Post-processing for generation DSM and ORI : technical persons having minimum three years' experience in post-processing in projects of similar nature & complexity on its payroll at the time of submission of technical bid and minimum number for each LOT as prescribed in the RFP
- d. Ground Controller: The technical persons having minimum two years' experience in GNSS observations and computation/processing, on its payroll at the time of submission of technical bid and minimum number for each LOT as prescribed in the RFP.
- e. System Manager cum Data Manager: At least 01 (one), technical person having minimum 3 years of experience in system management & Data Management in Data Production Centre, on its payroll at the time of submission of technical bid
- f. QA/QC Expert: Person having at least five years' experience in post-processing of data in projects of similar nature & complexity, on its payroll at the time of submission of technical bid and minimum number for each LOT as prescribed in the RFP
- g. Overseas experts can be included. However, the same experts should be available in Karnataka, India during the execution of project. The necessary security clearance from MEA/MHA should be obtained for engaging the resources for the said work. In case of non-receipt of approvals from the respective authorities, better qualified and experienced personnel should be involved for the processing. However, any delays due to this should be the responsibility of the successful bidder. Delay in plans / schedule shall not be acceptable for the purchaser.

B. Bidder's Credentials:

(a) Financial Capability

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

- a. The Minimum required AVERAGE annual turnover for the last five (5) Financial Years i.e. 2016-17 to 2020-21 should be as mentioned for the LOT in the RFP or an equivalent amount in other currency. The bidder should also submit the concerned documents in support of the above to the satisfaction of the purchaser.
- b. Capacity to have a cash flow: The bidder must provide a letter from a reputed Nationalized / Scheduled Bank stating the availability of liquid assets and/or credit facilities exclusively for the contract of value less than amount mentioned for the LOT in the RFP.

Notes:

- a. The financial turnover will be taken as given under the head "Income" in audited Profit and Loss Account and excluding non-recurring income, income from other sources and stock. It is clarified that the Financial Turnover means relevant revenue as recorded in the Income side of Profit and Loss Account. It does not mean Profit.
- b. Closing stocks in whatsoever manner should not form part of turnover.
- c. The Bidder should furnish Annual Financial Turnover for each of the last 5 Financial Years in tabular form and give reference of the document (with page no.) relied upon in support of meeting the Qualification Criterion.
- d. The Bidder should submit self-attested copy of Auditor's Report along with Balance Sheet and Profit and Loss Statement along with Schedules for the relevant Financial Year in which the minimum criterion is met. Provisional audit reports or certified statements will not be accepted.
- e. If the Audited Balance Sheet for the immediately preceding year is not available in case of tender opened before 30th Sept., audited Balance Sheets, Profit and Loss Statements and other financial statements of the five Financial Years may be adopted for evaluating the credentials of the Bidder.

(b) Work Experience:

- (i) The experience required to be demonstrated by the Bidder should include as a minimum that he has executed during the last 5 years the following:

Bidder must have experience as service provider in the provision of at least one service contract in Drone/ Aerial Survey and its data processing of similar nature and complexity and the said single contract having a minimum value of Rs 1 Crore in the last 5 years. The Service Contract cited must necessarily include all activities viz. acquisition of raw data by Drone, post-processing of data for creation of DSM/ORI.

OR

Bidder must have experience as service provider in the provision of upto 5 service contracts in Drone/ Aerial Survey and its data processing of similar nature and complexity and the cumulative value of these contracts together should not be less than Rs. 1 Crore in the last 5 years. These Service Contracts taken together must necessarily include all activities viz. acquisition of raw data by Drone, post-processing of data for creation of DSM / ORI.

- (ii) Proof of work experience should include generation and processing of at least 1000 Sqkm area of Ortho rectified image from drone / aerial or high resolution satellite data with DEM/DTM.

The above work experience can be met by the bidder or its sub-contractor qualified for data processing. Experience of mere mapping or digitization from ortho rectified images or any other image classification / change analysis is not adequate for meeting this above criteria

Notes:

- a. Only such works shall be considered where physical completion of entire work is over or commissioning of work has been done, whichever is earlier.
 - b. The Bidder should submit the details of such similar completed works as per the format enclosed.
 - Name and address of client with contact details as email address/ Phone No.
 - Contract No. and Date.
 - Scheduled completion date and actual completion date.
 - Details of Complaint, if any, received from the purchaser about the performance of the Equipment/items.
 - c. Works carried out by another Service Provider on behalf of the Bidder on a back to back basis will not be considered for satisfaction of the Qualification Criterion by the Bidder.
 - d. Credential certificates issued by Government Organizations / Semi Government Organizations of Central or State Government; or by Public Sector Undertakings/ Autonomous Bodies of Central/State Government or their subsidiaries / by Public Ltd. Companies listed in Stock exchange in India or Abroad or subsidiaries of such companies shall only be accepted for assessing the eligibility of a Tenderer. Certificates issued by one of the aforesaid organizations as a lead member (having equity stake of 51% or more) of a Joint Venture (JV) for a work executed for the JV, will also be acceptable. In case of PPP projects, if the bidder has executed a work for a concessionaire who is one of the aforesaid organizations, then the certificate issued by such concessionaire or by the public authority concerned, will also be acceptable.
 - e. The cutoff date shall be 31/07/2022.
- (iii) As part of project experience, experience of previous work using 50 cm or better high resolution stereo satellite data processing with proper editing of DTM for generating the Ortho images can be considered, provided while considering the value of work done in this, the cost of procurement of satellite images will be excluded. (This is done as the focus of the RFP is to evaluate capacity to process aerial/drone photography data in addition to ability to generate such a data from drone/aerial survey. A bidder with experience only with satellite images needs to demonstrate their experience in data and image processing and hence the exclusion of the cost of purchase of satellite images).
- (iv) The bidder should provide profile of their company including its Infrastructure, technical manpower and their expertise.
- (v) The eligibility conditions mentioned in the RFP is neutral. Drone or Aircraft is for acquisition. Data processing for ortho image and DSM generation need to be done in both categories.

- ries. The number of software / hardware is based on the area covered for each package. It shall be noted that the pre-qualification number of licenses / equipment's is for the purpose of pre-qualification. Each bidder must give detailed Implementation Plan which is mandatory part of the technical evaluation. The deployment of resources including the software shall match the implementation plan. In case of inadequacy in resources or implementation plan, the bid will be rejected at the technical evaluation stage itself.
- (iii) Both the aerial and drone bidder shall have to prove the adequacy of their Implementation Plan as well as the resources that they will deploy.
 - (iv) The bidder or OEM must have office and firm arrangement in Karnataka to provide support as well as comprehensive management of work.
 - (v) The bidder should submit the details of agreements entered into with various manufacturers/partners for the equipment and providing services and their experience to meet the qualification & experience criterion for the turn-key solution.
 - (vi) Changes in the make / model of the instruments, if any shall be acceptable, only if the proposed changes are better than the current make / model mentioned and approved as Detailed Implementation Plan as the part of the Technical Bid. This shall be substantiated by the bidder and accepted by the technical evaluation committee appointed by the purchaser.
 - (vii) It is the bidder's responsibility of completing all activities of the project within the scheduled time as per the RFP.
 - (viii) A change in the sub-contractor is NOT allowed without intimation to the purchaser. Any changes to the sub-contractor can be accepted only if the proposed sub-contractor meet all the qualification criteria mentioned in the RFP. Every change (inclusion / exclusion) of the sub-contractor will lead to deduction of 2% of overall contract fee to the bidder.
 - (ix) The lead bidder should ensure that the sub-contractor identified by them is capable of delivering the project, as defined and scheduled. As part of the evaluation, the sub-contractor assets and credentials of the lead bidder will also be evaluated.
 - (x) It is to be noted that the aircraft and sensor can be owned by different agencies. However, Proof of earlier projects wherein the lead bidder had availed the services from such agencies with the same combination of aircraft and the sensor should be produced. The same shall be submitted as proof of documentary evidence, endorsed by the client for whom the services are provided should be submitted as part of bid – for evaluation.
 - (xi) The purchaser is not in favour or against for any specific technology. The requirement is of 5 cm GSD ortho rectified image suitable for land parcel mapping. Since the required output can be generated from Drone / Aerials the technologies, bidder can have their own choice of preferred technology and submit the bids.

Pre-Qualification Criteria – Consolidated form (the number mentioned in this table shall be considered for evaluation, in case of any discrepancies noted in the similar references in the RFP)

Description of Items / LOT or Package	Remarks / Explanation	Lot 1	Lot 2	Lot 3	Lot 4	Lot 5	Lot 6	Lot 7
Total Area in Sq Km		8610	8493	9896	12900	11845	26902	30073
A. Bid Security / EMD								
EMD - 5 Lakhs	Amount to be paid in e-Procurement Portal of Karnataka	5 lakhs for this tender (Common for all packages in this tender& to paid in e-Procurement Portal)						
Additional Bid Security in BG, Value in Lakhs	Amount in Rupees, in Lakhs	5	5	10	12	12	25	30
B. Bidder's Credentials (Financial & Work Experience)								
Average Annual Turnover of Lead bidder	Amount in Rupees, in Crore	8	8	10	12	12	25	30
Work Experience								
1 Crore worth of related Service in the last 5 yrs from any one or upto 5 projects (<u>to be satisfied by the lead bidder</u>)	Common for one bidder							
Generation and processing of at least 1000 Sqkm area of Ortho rectified image from drone / aerial or high resolution satellite data with DEM/DTM	(<u>can be satisfied thru sub-contractor for data processing</u>)	Common for one bidder (if multiple sub contractors are shown for each package, then the condition shall be satisfied by each sub-contractor)						
C. The Bidder's Assets (Equipment and technically qualified Manpower)								
Drone with Sensor Details (Camera / LIDAR) - nos		4	4	4	5	5	10	10

Description of Items / LOT or Package	Remarks / Explanation	Lot 1	Lot 2	Lot 3	Lot 4	Lot 5	Lot 6	Lot 7
per Package is mentioned here								
Aircraft with Sensor Details (Camera / LIDAR) - nos per package is mentioned here. (one aircraft shall be quoted for every 15,000 sqkm shall be considered)	Ie. If a bidder wishes to deploy 2 aircraft, then number of packages covering upto 30,000 sqkm area (upto 3 lot / packages) can be considered, as eligible	1	1	1	1	1	2	2
GNSS receiver - nos per Package is mentioned here		3	3	4	5	5	10	10
Middle level Workstations - nos per Package, mentioned here		5	5	5	8	8	15	15
50 TB Network Storage System- nos per Package mentioned here		1	1	1	1	1	2	2
Servers – nos per Package, mentioned, here		1	1	1	1	1	2	2
Software – nos per Package		5	5	5	5	5	10	10
Whether Processing in the Cloud is mentioned	Mention Yes / No.	If yes, details of provider, terms and conditions of contract engagement detailing storage, servers, time of engagement need to be mentioned						
Technically Qualified Manpower, no per package is mentioned here								
Project Manager - 3 years Experience	Mention whether the quantity of resources and the experience/expertise men-	1	1	1	1	1	1	1
Certified Remote License Pilot for Drone\		4	4	4	5	5	10	10

Description of Items / LOT or Package	Remarks / Explanation	Lot 1	Lot 2	Lot 3	Lot 4	Lot 5	Lot 6	Lot 7
Pilot for Air Craft - 3 years experience	tioned are meeting the requirements. For certification, proof of the certificate should be submitted and verified. Names of experts shall also be listed	1	1	1	1	1	2	2
Surveyors for GCP survey and processing		3	3	4	5	5	10	10
Data Processing Operator - 3 years experience		10	10	10	10	10	20	20
System cum Data Manager - 3 years experience		1	1	1	1	1	1	1
QA/QC Expert - 5 years experience		2	2	2	2	2	5	5

- a. If a bidder wishes to participate in more than one lot / package, then the evaluation criteria mentioned for each package shall be satisfied by the bidder, cumulatively – that is by summing up requirement for all the LOTS he bids for.
- b. There is no limit on number of sub-contractors which can be included. However, each sub-contractor shall satisfy the criteria mentioned in the RFP.
- c. One bidder can participate in as many LOTS as he wants but he has to meet the technical requirements of all bids he makes independently and equal to sum of requirements of all such LOTS
- d. One bidder / sub-contractor cannot bid more than one bid for each LOT. In such event, all the associated bids for that LOT will be disqualified.

C. Technical Methodology Evaluation

- As part of technical evaluation, the bidders who propose to use image acquisition and data processing using drone or aircraft shall be given one village each. The bidders shall generate all the deliverables for the specific village – as per the methodology proposed.
- The results / deliverables shall be evaluated as per the requirements mentioned in the RFP. The solutions / deliverables that meet and comply with the requirements mentioned in the tender shall only be qualified for further evaluation and opening of commercial bids.
- The said field testing of the bidders otherwise eligible in the technical evaluation shall form the part of the technical evaluation. Those who fail to successfully demonstrate their solution shall be declared disqualified in technical evaluation.
- In case of bid received propose to use aircrafts for data acquisition the bidder should demonstrate capturing data of GSD and accuracies prescribed in the RFP in any area of their choice anywhere within India or abroad acquired with the same Sensor as are being offered for deployment in this tender along with the latest calibration certificates. The GSD to be demonstrated shall be better than 10 cm for the pilot project.
 - The bidder should submit the latest calibration certificate of the offered sensor and other instruments for the given GSD requirements mentioned in the RFP.
 - In case such an Aerial Survey bidder emerges winner in the bid, the Purchaser has the right to seek actual demonstration in the field of the requisite GSD and other accuracies as per the RFP before the work is permitted to be carried out for the full scope of award.
 - In case of failure of bid winner in such a demonstration, the Purchaser reserves absolute right to cancel the tender and not issue the workorder or cancel the workorder in case it has already been issued.
- In absence of complying with above requirements by the bidders, the bid shall be rejected as technically non-responsive.

Note: Purchaser may have the option of not to evaluate the methodology of data acquisition and processing of a bidder, if the bidder had earlier participated in the earlier tender of SSLR and had successfully qualified in the technical evaluation process – provided the same methodology, instrumentation and process are adopted. However, the decision of the purchaser is final in this regard. Every bidder shall be ready for the methodology evaluation.

- The evaluation of methodology and output for texturised 3D city models shall however be demonstrated as it was not part of earlier tender. For the aircraft based data acquisition, the 3D texturised model can be demonstrated from data acquired from other areas within India or abroad – however, meeting the requirements of the RFP.

Section IV BIDDING Forms

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1A. LETTER OF BID– TECHNICAL PART

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

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

No alterations to the text except as provided in ITB20.2, shall be permitted and no substitutions shall be accepted except as provided in ITB 12.]

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

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

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

To:

Commissioner,
Survey, Settlement & Land Records,
Revenue Department,
Government of Karnataka,
K R Circle,
Bengaluru – 560 001

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Documents as per the RFP No (mention the RFP No and Date)and Proceedings/Clarifications/Addendum as per Pre-Bid Meeting.
- (b) We meet the eligibility requirements and have no conflict of interest in accordance with the RFP;
- (c) We are submitting our bids for HIRING OF DRONE OR AERIAL SURVEY AS A SERVICE FOR ORI GENERATION FOR LARGE SCALE MAPPING for the following packages **(list out the packages which are being applied for)**
- (d) We have not been suspended nor declared ineligible by the Purchaser/any Government/Semi-Government entity in the Purchaser's country in accordance with the provisions of the RFP (ITB 4.2);
- (e) We offer to supply in conformity with the Bidding Documents and in accordance with the Delivery Schedules specified in the Schedule of Requirements the following Services and deliverables as per the tender document;
- (f) Our bid shall be valid for the period of time specified in ITB Sub-Clause 18.1, from the date fixed for the bid submission deadline in accordance with ITB Sub-Clause 22, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (g) If our bid is accepted, we commit to obtain a performance security in accordance with the Bidding Documents;

- (h) We are not participating, as a Bidder or as a subcontractor, in more than one bid in a single LOT in this bidding process. We understand that I can bid for as many or all the 7 (seven) LOTs but for each LOT I cannot bid more than once either as Bidder or as a Sub-Contractor;
- (i) We, along with any of our subcontractors, suppliers, consultants, manufacturers, or service providers for any part of the contract, are not subject to, and not controlled by any entity or individual that is subject to a suspension or a debarment imposed by the Government of Karnataka or Govt of India as per the RFP in this regard. Further, we are not ineligible under the Purchaser's Country laws or official regulations.
- (j) We confirm that Principal Secretary to Government, Revenue Department be appointed as the Adjudicator in case of dispute as per this tender document.
- (k) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed;
- (l) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive;
- (m) We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in any type of fraud and corruption; and we will strictly observe the laws against fraud and corruption in force in India namely, "Prevention of Corruption Act 1988."
- (n) We, along with all our sub-contractors, undertake to abide by the Code of Integrity in public Procurement of Government of India,

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

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

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

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

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

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

1B. LETTER OF BID- FINANCIAL PART

The Bidder must submit the FINANCIAL BID only in the eProcurement Portal of the Government of Karnataka and in the forms and space made available therein.

Note: ANY DISCLOSURE OF FINANCIAL BID IN ANY FORM OTHER THAN THROUGH eProcurement's Financial Bid Form or AT ANY OTHER STAGE SHALL LEAD TO DISQUALIFICATION OF THE BIDDER

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

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

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

To:

Commissioner,
Survey, Settlement & Land Records,
Revenue Department, Government of Karnataka,
K R Circle, Bengaluru – 560 001

We, the undersigned Bidder have submitted the Financial Bid in eProcurement Portal of Government of Karnataka. In this regard we make the following additional declarations:

- (a) We understand that this is a tender through eProcurement portal of Government of Karnataka viz <https://eproc.karnataka.gov.in> and the financial bid shall be filled up therein and will be evaluated accordingly. **Other than in eProcurement Portal at no other place or form the financial bid shall be disclosed or given.**
- (b) Our bid shall be valid for the period of time specified in ITB Sub-Clause 18.1, from the date fixed for the bid submission deadline in accordance with ITB Sub-Clause 22, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (c) No commissions, gratuities, or fees have been paid or are to be paid with respect to the bidding process or execution of the Contract:
- (d) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed.

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

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

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

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

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

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

2. BIDDER INFORMATION FORM

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

Date: *[insert date (as day, month and year) of Bid Submission]*
NIT No.: *[insert number of bidding process]*

Page _____ of _____ pages

1. Bidder's Legal Name <i>[insert Bidder's legal name]</i>
2. Bidder's Registration Number: <i>[insert Registration number]</i>
3. Bidder's Year of Registration: <i>[insert Bidder's year of registration]</i>
4. Bidder's Legal Address in Country of Registration: <i>[insert Bidder's legal address in country of registration] (All communication by post shall be sent to this address)</i>
5. Bidder's Authorized Representative Information Name: <i>[insert Authorized Representative's name]</i> Address: <i>[insert Authorized Representative's Address]</i> Telephone/Fax numbers: <i>[insert Authorized Representative's telephone/fax numbers]</i>
Email Address: <i>[insert Authorized Representative's email address]</i>
6. Attached are copies of original documents of: <i>[check the box(es) of the attached original documents]</i> <input type="checkbox"/> Articles of Incorporation or Registration of firm named in 1. <input type="checkbox"/> GST Registration. <input type="checkbox"/> Included are the organizational chart, a list of Board of Directors, and the beneficial ownership

2A. BIDDER SUB-CONTRACTOR'S INFORMATION FORM

[The Bidder shall fill in this Form for each Sub-Contractor Partner separately in accordance with the instructions indicated below. No alterations to its format shall be permitted and no substitutions shall be accepted.]

Date: *[insert date (as day, month and year) of Bid Submission]*
 NIT No.: *[insert number of bidding process]*

Page _____ of _____ pages

1. Bidder's Legal Name <i>[insert Bidder's legal name]</i>
2. Bidder's Sub-Contractor Member's Name <i>[insert Subcontractor Member legal name]</i>
3. Bidder's Sub-Contractor Registration: <i>[insert Sub-Contractor Member's Registration]</i>
4. Bidder's Sub-Contractor Member's Year of Registration: <i>[insert Bidder's Sub-Contractor Member's year of registration]</i>
5. Bidder's Sub-Contractor Member's Address in Country of Registration: <i>[insert Bidder's Sub-Contractor Member's address in country of registration]</i>
6. Bidder's Sub-Contractor Member's Authorized Representative Information Name: <i>[insert Sub-Contractor Member's Authorized Representative's name]</i> Address: <i>[insert Sub-Contractor Member's Authorized Representative's Address]</i> Telephone/Fax numbers: <i>[insert Sub-Contractor Member's Authorized Representative's telephone/fax numbers]</i> Email Address: <i>[insert Sub-Contractor Member's Authorized Representative's email address]</i>
7. Attached are copies of original documents of: <i>[check the box(es) of the attached original documents]</i> <input type="checkbox"/> Articles of Incorporation (or equivalent documents of constitution or association), and/or registration documents of the legal entity named above. <input type="checkbox"/> GST Registration. <input type="checkbox"/> Included are the organizational chart, a list of Board of Directors, and the beneficial ownership
8. Activity to be performed by the sub-contractor in this project (<i>[Encircle the items from the below list for which the sub-contractor will perform the role]</i>) a. Drone Data Acquisition with GPS Control b. Aerial Image Acquisition with GPS Control c. DGPS Control Survey

3. QUALIFICATION INFORMATION

1. Individual Bidders

1.1 Constitution or legal status of Bidder: *[attach copy]*

Place of registration: *[insert]*

Principal place of business: *[insert]*

Power of attorney of signatory of Bid: *[attach]*

1.2 Total annual volume of Services performed in five years, in INR, Convert to INR if internationally traded currency is specified in the work order submitted as proof: *[insert]*

1.3 Services performed as prime Service Provider on the provision of Services of a similar nature and volume over the last five years. The values should be indicated in the same currency used for Item 1.2 above. Also list details of work under way or committed, including expected completion date.

Project name	Country in which the project is executed	Name of employer and contact person	Type of Services provided	year of completion	Value of contract (in INR)	% completed (in terms of payment received)

1.4 Major items of Service Provider's Equipment proposed for carrying out the Services. List all information requested below. Refer also to Section III 3(a). *(include separate row for each make / model of the instrument)*. **The below information need to be submitted for all packages, cumulatively.** Total no of packages applied for shall be mentioned, **explicitly.**

Mention all the LOTs or Packages Numbers for which Bids given = _____
 (The table below should be filled up by summing up for all the LOTs bid by you)

Item of equipment	Availability Proposal				Proposed total Quantity to be used for the project
	Make & Model & ID Number	Owned by bidder / Sub contractor	Nos.	Age/ Condition	
(a) Professional survey grade PPK enabled UAS/Drone OR Large format digital Aerial Camera and Aircraft detail					
(b) Dual Frequency GNSS receivers/RTK					

rover					
(c) Middle level Work-stations					
(d) Network Storage system					
(g) Backup Device (Minimum 50 TB)					
(h) Servers					
(i) Software of Mission planning & data acquisition					
(j) Post processing software for DSM & ORI					

Note: - Pl refer Section III for minimum requirement of equipment's. Proof of ownership of the equipment's should be submitted

- 1.5 Qualifications and experience of key personnel proposed for administration and execution of the Contract. Attach biographical data. Refer also to Section III 3(b) and GCC Clause 4.1. **The below information need to be submitted for all packages, cumulatively.** Total no of packages applied for shall be mentioned, **explicitly.**

Mention all the LOTs or Package Numbers for which Bids given = _____
(The table below should be filled up by summing up for all the LOTs bid by you)

Table 1.5(a)

Sl. No.	Title of Position	Minimum required as per RFP	No of Persons proposed	Average years of experience in proposed position
1	Project Manager			
2	Pilot and Co Pilot			
	Operator – Pre-Processing and Block Setup			
3	Operator – Post-processing of DSM & ORI			
4	GNSS Surveyor			
5	System Manager cum Data Manager			
6	Expert QA/QC			

b) Details of Proposed Positions (Names):

Table 1.5(b)

Include separate row for each staff to be considered as part of qualification criteria. (*Detailed CV of each staff to be enclosed*)

The below information need to be submitted for all packages, cumulatively. Total no of packages applied for shall be mentioned, **explicitly.**

Mention all the LOTs or Package Numbers for which Bids given = _____

(The table below should be filled up by summing up for all the LOTs bid by you)

Sl. No.	Title of Position	Name of the Person	Qualification	Experience	Bidder / Sub contractor name
1	Project Manager				
2	Pilot and Co Pilot				
	Operator – Pre-Processing and Block Setup				
3	Operator – Post-processing of DSM & ORI				
4	GNSS Surveyor				
5	System Manager cum Data Manager				
6	Expert QA/QC				

c) Resume of every Proposed Personnel should be enclosed as per format given below:

Table 1.5(c)

Title Position as per Table 1.5(b): _____

[e.g. for Project Manager, Pilot, Supervisor, Operator, System Manager & QA/QC Expert etc]

Name of Bidder:	
Position:	
Personnel Information	Name: _____ Date of Birth: _____
	Professional Qualification: _____
	General of Experience: _____
	Experience in Proposed Position: _____
Present	Name of Employer: _____ Address of Employer: _____
	Telephone: _____ Contact (Manager/Personnel officer)
	Fax: _____ E-mail: _____
	Job Title: _____ Years with present employer

Summarize professional experience over the last 10 years, in reverse chronological order. Indicate particular technical and managerial experience relevant to the project.

S.No.	Period (From-To)	Details of experience in Drone Survey work
1		Company : Project Name : Brief description of project : Position (in which worked) : Details of work handled :
2		Company : Project Name : Brief description of project : Position (in which worked) : Details of work handled :
3		Company : Project Name : Brief description of project : Position (in which worked) : Details of work handled :

1.6 Proposed subcontracts and firms involved. Refer to GCC Clause 3.5 and 4.1. **The below information need to be submitted for each packages, separately.** Total no of packages applied for shall be mentioned, **explicitly.**

Mention all the LOTs or Package Numbers for which Bids given = _____
(The table below should be filled up by summing up for all the LOTs bid by you)

Sections of the Services	Subcontractor (name and address)	Experience in providing similar Services
(a)		
(b)		
(c)		

1.7 Financial reports for the last five years: balance sheets, profit and loss statements, auditors' reports, etc. List below and attach copies.

- 1.8 Evidence of access to financial resources to meet the qualification requirements: cash in hand, lines of credit, etc. List below and attach copies of support documents. We certify/confirm that we comply with eligibility requirements as per Section III
- 1.9 Name, address, and telephone, email, and facsimile numbers of banks that may provide references if contacted by the Employer.
- 1.10 Information regarding any litigation, current or within the last five years, in which the Bidder is or has been involved.

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

- 1.11 Statement of compliance with the requirements of ITB Sub-Clause 4.2.
- 1.12 Proposed Program (service work method and schedule). Descriptions, drawings, and charts, as necessary, to comply with the requirements of the bidding documents. Refer also to ITB 17.3.

2. Joint Ventures

NOT PERMITTED

3. Additional Requirements

- 3.1 Bidders should provide any additional information required in the Bid.

4. METHOD STATEMENT

[Bidder shall provide information and write-up as per points listed below. The bidder shall furnish the sufficient details in respect of all headings/sub-headings and documentary evidences as per format given below.]

1. DRONE/AERIAL DATA ACQUISITION & POST-PROCESSING

A) Technology: Details of Technology for data Acquisition using Drone / Aerial Survey using Large Format Digital Camera:

- i. Workflow showing various stages of work and their inter-dependencies.
- ii. Details of Processes at every stage viz. planning, mission/flight planning, actual execution
- iii. Details of approvals / clearance that need to be obtained for data acquisition and processing. The bidders understanding on the security clearance process need to be established.
- iv. Best Practices that will be adopted at each stage
- v. Details of manual/semi-automatic/automatic QA/QC measures to be taken during/at end of each stage.
- vi. Brief write up based on information provided on above points justifying the adequacy of processes and practices to meet the technical specifications stipulated in bid document. (fundamental & supplementary accuracy)

B) Equipment: Make, model and specifications of key equipment's viz. aerial survey platform OR UAS/DRONE, On-board and base GNSS receivers, On-board IMU, Camera/Sensors for raw data acquisition, hardware & software to be used for flight planning, flight monitoring, and justification of equipment to meet the technical specifications stipulated in bid document

C) Details of Previous Work:

- i. Key Specifications of similar work executed by the bidder listed in section III in which Drone/ Aerial survey Technology has been. References to be cited of Indian & International Projects (from bidder's own experience)
- ii. Brief write-up based on information provided above clearly bringing out how by suitable modifications(if any) to the Flying/Acquisition parameters the specifications stipulated in this bid document shall be met requirements of this Project

2. PROVISION OF GROUND CONTROL POINTS

Full use of the established CORS station by Survey of India for Karnataka should be done to get the best out the said infrastructure. Further and in conjunction with that –

- i. Density & distribution of Ground Stations to be established for correction to onboard GNSS
- ii. Equipment to be used for Observations
- iii. Hardware & Software to be used for computation
- iv. Description of observation methods
- v. Description of computation method
- vi. Density and distribution of check-points for Internal QA/QC in order to meet the Fundamental & Supplemental accuracy stipulated in Section V

3. POST PROCESSING

- (i) Details of Hardware & IT Infrastructure to be set up in Production Centre justifying its adequacy to handle and store raw Data, key intermediate data, data under process and Processed Data/deliverables.
- (ii) Software to be used for Post-Processing for generating DSM & ORI
- (iii) Workflow showing various stages of Post-Processing and their interdependencies
- (iv) Best Practices that will be adopted at each stage
- (v) Details of manual/semi-automatic/automatic QA/QC measures to be taken
- (vi) Brief write-up based on information provided above justifying the adequacy of hardware, software, methods & processes proposed to meet the specifications stipulated in the bid-document

5. WORK PLAN & SCHEDULE

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

1. Resource Deployment

- i. Activity wise Effort Estimate viz. Raw Data Acquisition, Provision of Ground Control, Pre-processing and Block setup, Generation of ORI and DEM.
- ii. Activity wise expected out-turns
- iii. Manpower resources proposed based on effort estimate calculation & expected out-turns for all the activities
- iv. Details of resource deployment for Internal QA/QC by the bidder shall also be provided.
- v. Number of shifts proposed
- vi. Quantity of equipment (Drone fitted with on-board GNSS, Camera), instruments, hardware and software for every activity.

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

3. Bidder shall provide details of resource deployment in similar services performed by them in previous projects to justify that the proposed work plan from their previous experience

4. The work-plan, schedule and resource deployment has to be submitted separately for different lots/phase/districts clearly bringing out the details of resources/works that are clubbed (if any).

5. The implementation plan need to be explained in detail. The table below need to be filled and submitted by the bidder.

- Mention quantity (in numbers) and the estimated area (in Sq Km) that would be completed in a month, explicitly.
- On the timelines, please colour the cells. The numbers and colours mentioned are indicative. The bidder needs to calculate and update them, appropriately.
- The descriptive explanation of Implementation Plan should clearly reflect the estimates per day / week and month - for each activity. The Plan of scaling of resources and equipment's should be clear so that it reflects the proper understanding of the project, practical timelines and understanding of field realities.

- In case of procurement of new equipment's or instruments like drones / GPS devices etc, the timelines for such procurements and its delivery for project implementation should be considered. The same should be properly reflected and mentioned in the plan
- Clarity in the implementation plan - in terms of resources, estimates, field conditions and deliverables shall be reviewed critically. The understanding of the bidder on the complexities will be reviewed based on it. If clarity is not provided in the implementation plan, the bids will not be considered as technically qualified.
- The human resources / equipment's that would be deployed should meet the qualification / experience and the specification mentioned in the RFP.
- Penalties will be levied for delay in submission of proposed deliverables, every month.
- Every month delay in submission of Deliverables (colour balanced ortho mosaic) will lead to penalty of 2% per week based on the quantities (in Sqkm) that was not delivered for the month as per plan. For the penalty, the amount will be computed based on per Sqkm area cost quoted by the bidder.
- Every Delivery (either grids / tiles) shall be having minimum area of 100 Sqkm, exclusive of overlapping region. Overlaps of 50 m on all sides of tiles / villages shall be provided for DSM and ortho mosaic.
- The QA / QC process should be explained in detail and clearly. Methods of achieving the accuracy and the parameters / process that would be adopted for verification and acceptance shall be detailed.

6. Price Schedule Forms

*[The Bidder shall fill in these Price Schedule Forms in accordance with the instructions indicated. The list of line items in column 1 of the **Price Schedules** shall coincide with the List of Goods and Related Services specified by the Purchaser in the Schedule of Requirements.]*

HIRING OF DRONE OR AERIAL SURVEY AS A SERVICE FOR ORI GENERATION FOR LARGE SCALE MAPPING UNDER RESURVEY/SURVEY PROJECT AND SVAMITVA PROJECT

6. PRICE BID FOR LOT _____

Date: _____ OTE No: _____

SI No	Description	Unit of Payment	Total Area of the LOT	Unit price per Sq KM	Total Price	GST and other taxes payable per item if Contract is awarded		Total Price
1	2	3	4	5	6 = (col 4*5)	7 (Percentage)	8 (Actual amount of GST & Taxes)	9 = Col. 6+8
1	Drone or Aerial Survey based Generation and delivery of Ortho-Rectified Images (ORI) \, duly meeting the specifications and conditions specified in the tender document - including all costs associated with the same for – Package no <n>	Per Square Kilometer of final output delivered and accepted (excluding buffer area)	<area> Sq KM					

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

NB: The cost of setting up Production Centre and mobilization , deployment and use-rate of equipment, h/w, s/w, other costs associated with Preparation of site wages/salary of manpower deployed and all other expenses incurred shall be deemed to be included in above price bid

The above bid format is indicative and shall not be submitted as part of technical bid. The commercial bid format shall be filled and submitted as per the e-procurement portal of Govt of Karnataka. The cost quoted shall be inclusive of all taxes. The tax components shall be detailed separately, as per the provisions in the e-procurement portal

7. BID SECURITY DECLARATION FORM

To

Commissioner,
Survey, Settlement & Land Records,
Revenue Department,
Government of Karnataka,
K R Circle,
Bengaluru – 560 001

Dear Sir,

Ref: Your OTE document No _____ dated _____

We, the undersigned, declare that:

We, M/s.....(herein referred as bidder)¹ understand that, according to bid document, bids must be supported with a Bid Securing Declaration as part of the EMD, therefore in addition to submission of the EMD (Rs 5 Lakhs through e-Procurement Portal and additional **Rs XX Lakhs** in the form of a Bank Guarantee from a Scheduled Commercial Bank as per conditions laid in this RFP), bidder gives the declaration that:-

Bidder will automatically be, in addition to forfeiture of the EMD of **Rs XX Lakhs**, suspended from being eligible for bidding in any contract with any of the Government of Karnataka, for a period of 2 years from the date of debarment, if bidder are in breach of any of the following obligation(s) under the bid conditions:-

- (a) If a Bidder withdraws the proposal or increases the quoted prices after opening of the Proposal and during the period of Bid validity period or its extended period, if any.
- (b) In case of a successful Bidder, if the Bidder fails to sign the Agreement in accordance with the terms and conditions (including timelines for execution of the Agreement) of this Bid Document or fails to furnish the Performance Bank Guarantee in accordance with the terms and conditions (including time lines for furnishing PBG) of this Bid Document.
- (c) During the Bid process, if a Bidder indulges in any act as would jeopardize or unnecessarily delay the process of bid evaluation and finalization.
- (d) if the Purchaser comes to a conclusion that bidder (including members of Joint Venture/ Sub-Contractor)/ contractor/ supplier/ consultant/ service-provider), directly or through an agent, has violated Code of Integrity in competing for the contract.

Bidder understand that this declaration shall expire if Bidder is not the successful Bidder and on receipt of purchaser's notification of the award to another Bidder; or thirty days after the validity of the Bid; whichever is earlier.

(Signature)

Authorized Signatory

Name : _____

Designation: _____

Office Seal: _____

Place: _____

Date: _____

BID SECURITY/EARNEST MONEY DEPOSIT (EMD) - BANK GUARANTEE

[Guarantor letterhead or SWIFT identifier code]

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

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

To:

The Commissioner
Survey, Settlement & Land Records Department,
K R Circle, Opposite BESCOM Head Office,
Bengaluru

WHEREAS _____ *[name and address of Bidder]* (hereinafter called "the Applicant") has undertaken, in pursuance of Tender No. **SSLR/STR/ORI/11/2022-23/CALL-2** dated 23-09-2022 to participate in the bidding process for *HIRING OF DRONE OR AERIALSURVEYAS A SERVICE FOR ORI GENERATION FOR LARGE SCALE MAPPING* (hereinafter called "the tender");

AND WHEREAS it has been stipulated by you in the said tender that the Applicant shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as part of Earnest Money Deposit (EMD) for compliance with his obligations in accordance with the tender;

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

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Applicant, up to a total of _____ *[amount of guarantee¹]* _____ *[in words]*, such sum being payable in the types and proportions of currencies in which the EMD for tender is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of _____ *[amount of guarantee]* as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

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

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

This guarantee shall be valid until (i.e.) remain valid for a period of 45 days beyond the original validity period of the 3-months bids that is shall remain valid for 135 days or beyond that as per any period of extension of bid validity, if so requested including any warranty obligations², and any demand for payment under it must be received by us at this office on or before that date.

¹ An amount shall be inserted by the Guarantor, representing the amount based on the number of packages being quoted by the bidder as EMD as specified in the tender and denominated in Indian Rupees.

² Completion date as described in ITB Clause 18.2

Signature and seal of the guarantor _____

Name of Bank _____

Address _____

Date _____

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

8. PROFORMA FOR PERFORMANCE STATEMENT

[Please see ITB Clause 36.2 and Section III-Evaluation and Qualification Criteria]

Proforma for Performance Statement (for a period of last five years)

Bid No. _____ Date of opening _____ Time _____ Hours
 Name of the Firm _____

<u>Order placed by (full address of Client)</u>	<u>Order No. and date</u>	<u>Description of services and quantity of ordered in terms of area</u>	<u>Value of order (in INR)</u>	<u>Date of completion of service</u>		<u>Remarks indicating reasons for late delivery, if any</u>	<u>Attach a certificate from the concerned employer for satisfactory performance of service contract</u>
				As per contract	Actual		
1	2	3	4	5	6	7	8

Signature and seal of the Bidder _____

Note:

1. In support of having completed above works, attach self-attested copies of the completion certificate from the owner/client or Executing Agency / Consultant appointed by owner / Client indicating the name of work, the description of work done by the Bidder, date of start, date of completion (contractual & actual) and contract value as awarded and as executed by the Bidder. "Contract Value" shall mean gross value of the completed work including cost of materials supplied by the owner/client but excluding those supplied free of cost.
2. Credential certificates issued by Government Organizations/ Semi Government Organizations of Central or State Government; or by Public Sector Undertakings/Autonomous Bodies of Central/State Government or their subsidiaries / by Public Ltd. Companies listed in Stock exchange in India or Abroad shall only be accepted for assessing the eligibility of a Tenderer. Certificates issued by one of the aforesaid organizations as a lead member (having equity stake of 51% or more) of a Joint Venture (JV) for a work executed for the JV, will also be acceptable. In case of PPP projects, if the bidder has executed a work for a concessionaire who is one of the aforesaid organizations, then the certificate issued by such concessionaire or by the public authority concerned, will also be acceptable.
- 3 Information must be furnished for works carried out by the Bidder in his own name or proportionate share as member of a Joint Venture. In the latter case details of contract value including extent of financial participation by partners in that work should be furnished.
- 4 If a Bidder has got a work executed through a Subcontractor on a back to back basis, the Bidder cannot include such a work for his satisfying the Qualification Criterion even if the Client has issued a Completion Certificate in favour of that Bidder.
- 5 Use a separate sheet for each partner in case of a Joint Venture.
6. Only similar works completed during the last 5 years prior to the last stipulated date for submission of Bid, which meet the Qualification Criterion need be included in this list.

PART 2 - SUPPLY REQUIREMENTS

SECTION V – SCHEDULE OF REQUIREMENTS

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1.LIST OF GOODS AND DELIVERY SCHEDULE

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2. ACTIVITY SCHEDULE

1. The flying and ORI generation shall be done district wise and within the district, taluk-wise and within the taluk – village wise/ Gridwise.
2. The district wise, taluk wise and village wise flying and ORI handover plan should be done, as per the implementation plan.
3. The Activity Schedule shall be as per Detailed Implementation Plan included in the technical bid and as finalized as part of the signing of the Contract with the Bid Winner.
4. In 12-months the complete flying and delivery of all deliverables for all the villages in all the districts in the LOT shall be completed. The Activity Schedule shall be accordingly drawn up.
5. Every delivery should be accompanied with its QA/QC report, as detailed in the bid/implementation plan.

3. TECHNICAL SPECIFICATIONS

1. General:

Aerial image acquisition using Drone Survey or Aerial survey shall be carried out for of the defined packages or LOTs with a GSD of 5cm or better.. Data will be captured with reference to control network already established by CORS Network/SoI GCP's in State of Karnataka. To achieve the required accuracy, the bidder will have to establish ground control points and check points prior to flying.

The following data will be provided to the Service Provider:

- Area of Interest (AOI) in shp and kmz format
- Static Observation Data of CORS stations/SoI GCP's for post processing OR
- Facility of NRTK (Network RTK) if RTK rovers are used.

Broadly, the Service Provider would need to provide the following services:

- (i) Provision of Ground controls for Base stations as per requirements of project to achieve the required accuracy and also for check points.
- (ii) Procuring necessary clearances from DGCA & Ministry of Defense, other agencies of Government of India for flying over the AOI to acquire Drone data, Imagery etc.
- (iii) Compliance of Requirements for Operation of Civil Remotely Piloted Aircraft System (RPAS) issued by Ministry of Civil Aviation, Government of India as per the Drone Act 2021 dated 25th August 2021. In case of Aerial survey using aircraft fitted with Large Format Digital Camera, the standard conditions defined by Ministry of Defence for conduct of aerial survey / photography using aircraft /UAV's dated 28th Dec 2018 shall be followed.
- (iv) The purchaser shall provide all necessary letters and authorization to the service provider. It is the responsibility of the service provider to obtain the necessary clearance for aerial surveys for all authorities concerned.
- (v) Preparation of Mission planning
- (vi) Post-processing of Drone / aerial survey captured data to produce the following:
 - a. Digital Surface Model (DSM)
 - b. Ortho Rectified Images (ORI) and submitting as seamless color balanced mosaic for the project area.
- (vii) Conducting Quality Control/Quality Assurance (QC/QA) to establish correctness at each stage.
- (viii) Validating horizontal and vertical accuracy through independent means
- (ix) Compliance with other product requirements such as file naming, datum and projection, units, etc
- (x) Delivery of raw data, other products and supporting reports

2. Scope of Work

a. Clearances for flying

The Service Provider is responsible to obtain necessary clearances from Director General of Civil Aviation, Ministry of Defence and other agencies of Government of India or concerned State Government as may be required to complete the job of flying over the AoI, acquire image data using Drone / Aerial Survey etc. The purchaser would provide necessary documentation; however, getting clearance would be the entirely the responsibility

of the Service Provider. Scope of this activity shall include operational requirements for Civil Remotely Piloted Aircraft System (RPAS) as per Drone Rules 2021 notified by Ministry of Civil Aviation, dated 25th August 2021 and also in obtaining Unique Identification Number (UIN), and the type certificate, Insurance etc.

b. Mission Planning

The flight path shall cover the desired area completely including enough cross flight lines to eliminate shadowing and allow for proper quality control. Flight line forward overlap should be 80% & side overlap should be 70% or greater for the urban (towns and cities) areas. For the rest of area, the overlap shall be 80% forward overlap and 50% side overlap as required for Drone and for large format aerial cameras it shall be 60 % and 30%, to ensure that there are no data gaps between the usable portions of the swaths. In the highrise areas, the overlap has to be increased so that the most nadir pictures are used for ortho generation which shall have minimal tilt from high altitude buildings / trees. Data collections in high relief terrain should have greater overlap. Any data with gaps between the geometrically usable portions of the swaths will be rejected. Buffer area of 100m shall be covered for the given boundaries. The data coverage / processing for the buffer areas are not considered as additional area in terms of total area both for physical progress and financial calculations.

c. Ground Control Survey

The Service Provider must use ground control network already established by SOI or CORS Network to establish the ground control for the base stations for drone / aircraft based aerial survey flying activities. The proposed control network should be provided to KRSAC for its approval prior to commencement of work. The control network points shall be surveyed using GNSS of dual frequency (L1 and L2) and multi-channel capability with on-the-fly ambiguity resolution and be able to log GPS data at 1-second epochs or better. Sufficient no. of check points must also be made with reference to existing ground control network or CORS network to check the accuracy of ORI.

Network RTK solution from SOI established CORS network is preferred. In the absence of CORS signals, static surveys and post processing shall be carried out. However, in both the cases, the expected GPS accuracy should be achieved, as mentioned in this RFP.

Check points shall be provided with 5 points per village. In Urban areas, for every 500 m x 500m grid area, one check point should be provided

d. Data Acquisition

The Service Provider will acquire high-resolution 5 cm GSD or better images using drone or Large format digital cameras as per the technical specifications with forward overlap of 80% & side overlap of 70% / 60% forward overlap and 40% side overlap or greater, respectively. The Service Provider must use ground control already established with reference to SOI GCP library or CORS network for the base stations for drone / aerial flying activities.

e. Post-Processing

The Service Provider will provide high-resolution 5 cm GSD or better ORI and DSM of 25 cm or better to achieve the desired ortho image accuracy after post processing of drone / aerial data. The accuracy the ORI will be checked using the check points. The Service

Provider will ensure Proper versioning, file naming. The naming convention shall be defined by KRSAC (as per LGD code, in case of villages OR K-GIS Grid codes) and management of data in various Production Cycles.

f. Quality Control/ Quality Assurance

Quality Control/Quality Assurance (QC/QA) of the Drone or aerial data and/or derived data at various stages of Project including validating horizontal and vertical accuracy as per specifications laid down in RFB will be the responsibility of the Service Provider. The purchaser may perform additional QC/QA testing. This shall include (a) Carrying out corrections as per Quality Audit Report and security vetting report provided by KRSAC/SOI (b) Facilitating quality audit, stage approvals , security vetting and final acceptance tests by KRSAC/SOI

3.0 TECHNICAL SPECIFICATION:

1. SPECIFICATIONS OF UAS/DRONE BASED SYSTEM

Technical Specifications			
S.No.	Description	Required Specification without operator	Bidder's Offered Specifications / Compliance /Deviation Statement (to be filled up by BIDDER)
1.	UAS Type	Up to the service provider	
2.	Mission	Surveying and Mapping /Professional Grade	
3.	(i) Landing &Takeoff	Vertical Take Off and Landing (VTOL)	
4.	MaximumTakeoff weight (MTOW)	Up to the service provider	
5.	Flight Height above Ground Level	Maximum of 120m AGL with Terrain tracing Capability	
6.	Endurance or Max flight time	Minimum 40Minutes	
7.	Sensor or Camera	One high resolution RGB camera with minimum resolution 20 MP or more. Drone camera should capture the image in fix mode.	
8.	GNSS Grade	Both PPK/RTK Enabled onboard GNSS along with Base(Master) GNSS receiver with L1 & L2	

		quencies capable to achieve accuracies stipulated in bid-document.	
9.	Nominal Coverage at 120 m (400 ft) Forward Overlap : 80 % Side Overlap :70%	1sq kmwith less than 5cm GSD	
10.	Operational wind Speed	Minimum 8 m/s or higher	
11.	Ground Sampling Distance (GSD)	5 cm or better	
12.	Average X,Y accuracy	<10cm(95% of total checked values(absolute accuracy) should be less than 10 cm)	
13.	Average Z accuracy	< 20 cm(95% of total checked values (absolute accuracy) should be less than 20 cm)	
14.	Battery Type	Li-Po/Li-ion or more efficient, international Standard Compliant	
15.	Emergency Recovery Mode	Ability to return back to launch pad or home position with landing accuracy of 1 meter or better in case of communication failure, low battery/power and high wind (more than operational wind speed) etc.	
16.	Onboard storage	Minimum 64 GB or more (Expandable)	
17.	Security	128 bit encryption	
18.	Flight planning & control software	A navigation software package that enables the user to plan and perform complex flight patterns for different surveying applications (Corridor and Area mapping) and should allow the combination of telemetry data with the recorded images/data. The software should feature the functions that enable to plan, fly and prepare the data for post processing for different applications.Package should include at least following features: <ul style="list-style-type: none"> • Flight Plan editor & monitoring Flight book • Photo count display during flight • Should permit use of 3D data for flight planning in hilly/rolling terrain. Should 	

		<p>have the interface to insert SRTM data and K-GIS DEM data other than default</p> <ul style="list-style-type: none"> • Real time tracking and live data Preview • Link loss time should be flexible/Drone pilot centric so that he/she can fix the same on the basis of flight duration. • Should have the capability of flight/mission planning of adjacent villages/polygon (more than one village/polygon) simultaneously at once before commencement of flight simultaneously and also automatic navigation of Drone after completion of one polygon to another planned polygon without specific command of Pilot • Should have one software for both flight planning & Geo-tagging and should have optimal input for GNSS coordinates • Should have capability of recording more than one flight data without being downloading the same after each flight. All the flight data can be downloaded at once after closing the everyday • Should have capability to store each day data of different flights separately • The geo-tagged images should provide the INS data along with the coordinates for input into the image processing software • On board GNSS observation file should be available separately. Drone camera should capture photos of mission polygon only with specified overlap i.e it should not capture 	
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		unwanted photos while moving from one flight line to another in particular mission polygon.	
19.	Data Link	Communication data link complying with International standard and certification. Frequencies used should not interfere with other users allocated frequency spectrum	
20.	Communication distance between GCS and flying Drone/UAV	Upto VLOS as per CAR guidelines	
21.	Operational Temperature	-5 to +50°C	
22.	The UAV/ RPAS provided by bidder shall also be equipped with the following serviceable components/ equipment	i. GNSS for horizontal and vertical position fixing	
		ii. Autonomous Flight Termination System or Return Home (RH) option	
		iii. Flashing anti-collision strobe lights	
		iv. No permission – No Take-off (NPNT) compliant for APP based real time tracking. NPNT Hardware and Firmware shall be tamper proof.	
		v. Fire resistant identification plate inscribed with UIN	
		vi. Flight controller with flight data logging capability	
		viii. Barometric equipment with capability for remote sub-scale setting	
		ix. Geo-fencing capability	
		xi. Manufacture Serial Number	
23.	DGCA Guideline	i. The Professional Survey Grade manned Aerial Vehicle /Drone shall have all necessary permits and should be registered with DGCA as per (or conform to) the latest Drone Rules 2021 notified by Ministry of Civil Aviation dated 25 th August 2021. Obtaining type certificate, flying approval in various zones as per the digital sky platform, , DGCS ance for import, DGFT license for	

		<p>import, security clearance or any other clearance along with obtaining UIN for the drones shall rest with service provider. SSLR shall act only as cilitator. UAV survey operations to be carried out in the field shall also conform to the above mentioned DGCA standards.</p> <p>ii. The operator provided should have undergone proper training, should have proper clearances and permits/licenses to operate UAV as per (or conform to) the latest Drone Rules 2021and other guidelines as and when issued by DGCA in future.</p>	
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2. SPECIFICATION FOR AIRCRAFT WITH LARGE FORMAT DIGITAL CAMERA

Technical Specifications			
S.No.	Description	Required Specification without operator	Bidder's Offered Specifications / Compliance /Deviation Statement (to be filled up by BIDDER)
24.	Aircraft Type	Up to the service provider (fixed wing / Rotary (Helicopter)	
25.	Mission	Professional large format aerial photography for large scale mapping	
26.	Flight Height above Ground Level	upto 10,000 ft. GSD of aerial imag acquired shall be 5cm or better	
27.	Endurance or Max flight time	Minimum 4 hrs	
28.	Sensor or Camera	Large format digital camera which can acquire upto 2 cm GSD of image.	
29.	Focal Length	50 cm or above	

30.	Channels	4 band – R, G,B, NIR	
31.	Pan sharpened Ratio	1 : 4 or better (ex 1: 3)	
32.	Flying height	Upto 5000 ft	
33.	Ground Coverage per flight/frame	Coverage of more than 750 m in swath @ 5 cm GSD when flown at 1000 m height	
34.	GNSS Grade	Both PPK/RTK Enabled onboard GNSS along with Base (Master) GNSS receiver with L1 & L2 frequencies capable to achieve accuracies stipulated in bid-document.	
35.	Mount	Gyro stabilized mount with IMU with 20 Hz minimum	
36.	Ground Sampling Distance (GSD)	5 cm or better	
37.	Average X,Y accuracy	<10cm (95% of total checked values (absolute accuracy) should be less than 10 cm)	
38.	Average Z accuracy	< 20 cm (95% of total checked values (absolute accuracy) should be less than 20 cm)	
39.	Onboard storage	Minimum 2 TB or more (Expandable)	
40.	Security	128 bit encryption	
41.	Flight planning & control software	<p>A navigation software package that enables the user to plan and perform complex flight patterns for different surveying applications (Corridor and Area mapping) and should allow the combination of telemetry data with the recorded images/data. The software should feature the functions that enable to plan, fly and prepare the data for post processing for different applications. Package should include at least following features:</p> <ul style="list-style-type: none"> • Flight Plan editor & monitoring Flight book • Photo count display during flight • Should permit use of 3D data for flight planning in 	

		<p>hilly/rolling terrain. Should have the interface to insert SRTM data and K-GIS DEM data other than default</p> <ul style="list-style-type: none"> • Real time tracking and live data Preview • Should have the capability of flight/mission planning of adjacent villages/polygon (more than one village/polygon) simultaneously at once before commencement of flight simultaneously. • Should have software for both flight planning & processing of GPS / IMU to derive the better accurate Photo orientation parameters and co-ordinates. • Processing software (block setup) shall be able to import the data and generate the blocks / tie points as part of triangulation adjustment. • Should have capability of recording more than one flight data without being downloading the same after each flight. All the flight data can be downloaded at once after closing the everyday • Should have capability to store each day data of different flights separately • The geo-tagged images should provide the INS data along with the coordinates for input into the image processing software • On board GNSS observation file should be available separately. 	
42.	Operational Temperature	-5 to +50°C	

2. SPECIFICATION OF DRONE OR AERIAL SURVEY DATA ACQUISITION

Coverage	1. Area finalized & approved by SSLR / KRSAC with 100 m buffer surrounding the AOI polygon.
Collection condition	2. Sun angle - no less than 30 degree to minimize shadow. 3. The project site has relief changes due to built-up area therefore photograph should be captured at high sun angle to avoid shadows due to these high relief formations. 4. Cloud free with minimal smoke, smog, fog and dust. 5. To avoid breaks within individual flight lines. 6. Open space should be chosen for the flight and landing of drone to avoid endanger to public or property.
Outturn	It is expected that Service provider will carry out drone flying in average 05 villages / grids per day ready Service Provider is expected to complete aerial data acquisition for over 1000 Sqkm in a week.

3. SPECIFICATION OF PROVISION OF GROUND CONTROL POINT

Sl No.	Description	Specifications
1.	GNSS Control Point	<p>1. Installation of Control Points for Drone / Aerial Survey</p> <p>Using existing ground control network of CORS Network or GCP library, 1 base Control Points for Drone flying shall be established. Density of these control points will be finalized by Service Provider in consultation with Survey of India to achieve stipulated accuracy of Drone survey.</p> <p>The following points shall be kept in mind while selecting control point locations:</p> <ul style="list-style-type: none"> • Clear of HT/LT lines, radio / mobile towers, high frequency dish antennas, radar etc. • Free from multipath problems associated with tall features in the vicinity. • Free from foliage • Free from major obstructions / obstacles • Easily accessible to the survey team. • Open to sky with a clear view towards sky at 15-degree angle with horizontal plain. • Marker numbering scheme shall be finalized in consultation with Survey of India before start of work.
		<p>1. Scheme and schedule of observation</p> <ul style="list-style-type: none"> • Base control points must be located on pillars/permanent structures. • The Service Provider shall prepare a scheme i.e net-

		<p>work of base control stations along with the proposed flight plan, in advance and get it approved from KRSAC/SOI. The network shall be presented on satellite imagery. This should also contain description of proposed base control stations.</p> <ul style="list-style-type: none"> • When observation scheme containing location of base control stations which is adequately connecting to Existing ground control points forming a network is approved by KRSAC, the Service Provider shall submit schedule of observation indicating tentative date and time of observation at base control stations specifying their locations. • The bidder should submit its flight plan and block layout of processing for approval with the client and the statutory authorities for approval. As part of the block layout, the tentative location of GCP / check points with its distribution should be submitted and approved by the client. • It shall be noted, all GCP's and check points shall be pre-targeted so that the points are available on the image and it is preferred to have such pre-target points be on pillar / semi permanent structured. However, in the absence of such pillar / permanent structures, the pre-targets can be placed on the plain ground which is visible clearly in the aerial image acquired. • It is to be noted that the pre-target established should not obscure any corner point of the property which is intended to be mapped from the images / ground.
		<p>Establishment and Observation of base control points</p> <ul style="list-style-type: none"> • Base control stations shall be engraved neatly for their identification and will be painted by filling of engraving with contrast color paint. Unique ID of Point and date information are to be engraved. Necessary jungle clearance and approach to site for proper execution of work wherever required shall have to done by the Service Provider at no extra cost. • Utilizing existing GCP Ground Control Points or CORS network provided by Survey of India can be considered which shall enable to achieve the adjusted coordinates from the GNSS measurement. Such coordinates shall meet the accuracy requirements, specified in this RFP. • The pre-target points shall be established in each of the proposed locations of GCP which shall be neatly painted with contrasting colours with respect to the terrain. These points shall be uniquely seen on the drone / aerial survey photographs. • Dual frequency GNSS receivers with the required ac-

		<p>cessories and software in Static mode are to be used for observations. The GNSS used shall be multi channels. A minimum of 6 healthy satellites should be available during entire duration of observation. The GNSS receivers should not be older than three years from the date of award of contract. Compatible GNSS instrument and accessories of LEICA /Trimble/ASTECH/Spectraprecision/Topcon/Hemisp here or of any other reputed brand having similar specifications only shall be used so as to achieve the required accuracy. Chinese models of any brand shall not be allowed to use. Observations taken with Geometric Dilution of Precision (GDOP) exceeding 4 should not be considered. During observations, satellite mask angle should be above 15 degree.</p> <ul style="list-style-type: none"> • Using digital camera of at least 10 mega pixels, Service Provider shall take photograph of each Ground Control points after finalizing writing etc. and submit it to Survey of India in digital form with proper indexing and labeling.
		<p>Establishment of Check Points</p> <ol style="list-style-type: none"> 1. Utilizing existing GCP Ground Control Points or CORS network provided by Survey of India whose adjusted coordinates are available, minimum 5 check points in each village polygon shall be provided by GNSS observation either in static or RTK mode. Check points shall be uniformly distributed in village polygon. 2. Check Points shall be made on conspicuous points be easily identifiable in images procured through Drone Survey. 3. Check points shall be engraved neatly for their identification and will be painted by filling of engraving with contrast color paint. Unique ID of Point are to be written. 4. Check points are to be post pointed in image in digital form and submit it to SoI / KSRSAC alongwith processed coordinate in .xls sheet. 5. Using digital camera of at least 10 mega pixels, Service Provider shall also take photograph of each Check point after finalizing writing etc. and submit it to Survey of India in digital form with proper indexing and labeling. <p>All the GCP's and the Check points shall be pre-targetted so that the points are clearly visible on the photograph.</p> <p>The Pre-targets shall be painted with contrasting col-</p>

		our as that of the terrain so that those points are clearly visible and seen on the drone / aerial surveyed photograph
	Datum	GNSS data (Raw) for all Base station and Check Points will be processed in The World Geodetic Datum 84 (WGS-84). Heights shall be Ellipsoidal height.
		GNSS data (Raw and Processed) for all Base station and Check Points are to be provided in RINEX format (Receiver Independent Exchange Format) and GPS observation log sheets, raw and processed data sheet should be provided in PDF format or Excel spread-sheet if data is captured digitally.

3. SPECIFICATION OF ORTHO RECTIFIED IMAGE

	Description	Specifications
1	Coverage	As per AoI with 100 m buffer all around.
2	GSD	5 cm or better
4	Bands	RGB (Three band natural color imagery)
8	Image format	Uncompressed GeoTIFF and/or lossless Compressed JPEG2000 or ECW format
9	Horizontal accuracy	<= +/- 10 cm 95% confidence interval (1.96 x RMSE) A checklist shall be submitted for each grid / project area on the accuracies achieved against the surveyed check and control points.
10	Imagery Product	Seamless mosaic covering the project area and non-overlapping, edge matched.
11	Radiometric Resolution	Minimum 8 bit per band in accordance with chosen image format. In case of 4 band data, all band data should be part of ortho mosaic.
12	Delivery Dates	As per the project timeframe. Raw photograph to be submitted with Raw Drone data and processed Ortho Rectified Image
13	Horizontal Datum	The World Geodetic Datum 84 (WGS-84)
14	Map Projection	The coordinate system for all deliverables is the Universal Transverse Mercator (UTM).
15	Vertical Datum	All deliverables specified below as ellipsoidal will be in terms of the WGS-84 reference frame.
16	Survey Control	<ol style="list-style-type: none"> 1. Geo-tagging and Ortho-image generation: It is expected that On board GNSS/IMU and base Ground Control GNSS data established for aerial survey be used for Geo-tagging and ortho rectified image production.. 2. Supplemental ground control i.e (5 Check Points per village polygon or K-GIS grid) should be submitted that with purchaser for independent check of Ortho

		<p>rectified image.</p> <ol style="list-style-type: none"> 3. All raw survey control data used or derived from this contract must be supplied to purchaser to ensure independent Quality Assurance (QA) of the survey operations, and for possible use in other surveys requiring these. It is therefore essential that all base ground stations are permanently marked in accordance with the Survey of India standards. 4. The primary ground control and check point surveys must be referenced to the survey of India references. 5. As part of the ortho images, positional Accuracy report needs to be submitted along with every deliverable with respect to all GCP and check points. The overall accuracy shall not be more than the accuracy specified in this document.
17	Orthorectification	<ol style="list-style-type: none"> 1. The digital surface model shall be created after block adjustment through automatic mode. 2. The digital surface model shall be reviewed digitally and visually. Any anomalies and errors in the data should be removed and smoothed which can generate the ortho photo without distortion and meeting the accuracy requirements. 3. The DSM generated across models / project areas shall not have more than 20 cm height variation. 4. Stereomodel created in post processing from aerial image data shall be used for rectification process. 5. DEM / DTM is not the requirement under this RFP. However, the government shall generate the DEM/DTM and the contours at a later stage, as needed. 6. However, for generating the ortho photo and mosaic process, digitization of seamlines / breaklines if any shall be digitised which shall ensure the creation of accurate ortho photos with no distortions on the buildings outlines. 7. The rectification process shall use the suitable technique to ensure high accuracy and image quality. 8. The mosaicking process shall minimize image distortions and smearing and produce a seamless edge-matched product. 9. Processes will be used during ortho-rectification to avoid the presences of warped and misaligned above ground transportation features. 10. Orthorectified Image shall be tonally balanced prior to generation of an image mosaic. Relative join (misalignment) of transportation features between adjacent image chips/tiles shall be within the tolerance defined by the horizontal positional accuracy

		<p>requirement set out above.</p> <p>11. The rectification process shall involve a solution of the appropriate photogrammetric equations for each pixel in the output image. It is not preferable to solve photogrammetric equations at anchor points only and then warp the content of the original image between the anchor points.</p> <p>12. The service provider will describe its approach for ortho-rectification and get it approved from purchaser.</p>
18	Radiometry	<p>1. All images should be clear and sharp in detail with no light streaks, static marks, scratches, ice effect or other noticeable blemishes. The imagery should be free from defects, such as out-of-focus imagery, and should not contain inconsistencies in tone and/or density. The ortho-rectified image should be free from tilt and relief displacement. To ensure consistency, the imagery should be radiometrically and geometrically corrected to enable adjacent files to be displayed simultaneously without obvious distinctions between them.</p>

4. FINAL DELIVERABLES AND DATA SUPPLY SPECIFICATIONS

	Description	Specifications
1	File naming	File naming as defined by KRSAC / SSLR which shall be shared with the service provider
2	GNSS Data for occupations of I base-stations and Check Points	<p>1. GNSS data (Raw and Processed) for all Base station and Check Points to be provided in RINEX format (Receiver Independent Exchange Format).</p> <p>2. GPS observation log sheets should include the following details:</p> <ul style="list-style-type: none"> a. Survey mark id b. Occupation time & date c. Antenna height measurements d. Instrument /antenna types & serial numbers <p>The GPS observation log sheets, raw and processed data sheet should be provided in pdf format and/or Excel spreadsheet.</p>
3.	Raw Aerial Data	Raw aerial surveyed data/images along with fly log, on board GNSS/IMU data
4.	Block Adjustment	<p>1. The village / grid wise block adjustment shall be carried out using all photographs.</p> <p>2. Adjacent block photographs shall be included in each block on overlapping areas</p> <p>3. Common photographs shall be included in each of the overlapping areas of blocks.</p> <p>4. The adjustment results shall be submitted and taken</p>

		approval from SoI / KRSAC before proceeding with the DSM / ortho image generation.
5.	Ortho Rectified Images	<p>5. Post Processed ORI of each village in ECW / JP2000 format with GSD 5 cm or better and Horizontal accuracy shall be 10 cm or better</p> <p>6. Digital surface Model with accuracy 20 cm or better</p> <p>7. Seamlines / breaklines used, if any for generating orthoimages shall be submitted.</p> <p>8. The QC report of positional accuracy against the measured control and check points shall be submitted. The format of QC report shall be shared to the service provider during start of the project.</p>
6.		1. All deliverables must conform to the projection, datum, and coordinate system specified in the tender document. File sizes cannot exceed 1 gigabyte, unless otherwise specified by the SoI. Each file must be organized to facilitate data manipulation and processing.
	Data Delivery Reports	<p>A delivery report describing the contents of the data supplied with every data delivery (interim, staged, final).</p> <p>1. Collection Report : Drone data collection report detailing mission planning and flight logs will be submitted.</p> <p>2. Survey Report: A survey report detailing the collection of all ground control including the following will be submitted:</p> <ul style="list-style-type: none"> • Base Ground Control points • Check points <p>3. Post Processing Report: Post Processing Report detailing GNSS data, Drone image processing, DSM And ORI generation will be submitted. Any breaklines / DTM if generated for the generation of ORI shall also be part of the report.</p> <p>4. QA/QC Report: A QA/QC report, detailing procedures for analysis, accuracy assessment and validation of the following will be submitted.</p> <ul style="list-style-type: none"> • GNSS ground control Point data (Absolute vertical accuracy/relative vertical accuracy) • Drone image processing, • DSM and ORI generation
7	Delivery Media	<p>1. Data should be delivered on External Hard Drives. External hard drives will be retained by KRSAC/SOI.</p> <p>2. Data deliveries should be clearly labeled with name of Service Provider, date of supply and list of contents.</p>
8	Report Formats	All reports are to be provided in Word (.doc/.docx) for-

		mat, Excel spreadsheet (.xls/.xlsx) or appropriate digital format as approved by SSLR.
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5. PROJECT PLANNING AND REPORTING SPECIFICATIONS AND QUALITY ASSURANCE SPECIFICATIONS

Quality Control/Quality Assurance (QC/QA) of the Drone derived data is primarily the responsibility of the Service Provider. The Survey of India may perform additional QC/QA testing if needed. Pragmatic QA specifications would need be agreed by the Service Provider with the Survey of India (SoI) in regard to intermediate steps of Drone data acquisition and post-processed Drone data. The derived products will be evaluated for spatial accuracy and general conformation to prescribed requirements.

6. QUALITY ASSURANCE REPORT SPECIFICATIONS FOR ORI

I FOR ORTHO RECTIFIED IMAGE		
Sl. no	Description	Specifications
1	Horizontal accuracy and GSD	(a) Horizontal accuracy shall be 10 cm or better (b) GSD 5cm or better
3	Procedure	<ol style="list-style-type: none"> 1. Visual inspection of the mosaic to check blurred imagery, improper colour balancing, colour bleeding and shadow details, edge mis-matches. Orthorectified Images should be clear and sharp in detail with no light streaks, static marks, scratches, ice effects or other noticeable blemishes. The ORI should be free from defects, such as out-of-focus image/photo, and should not contain inconsistencies in tone and/or density. The ORI should have no distortions and smearing and should be seamless edge-matched and of highest quality. 2. No building edges shall have distortions posing difficulty in mapping the building / property edges. 3. Horizontal accuracy of the Ortho rectified image of all village polygon will be checked using GNSS coordinated of Check Points. 4. Should more than 5% of the ORI that are subjected to external QC fail to meet the specifications laid down in Tender Document, all products will be returned to the service provider for further QA to identify the extent and cause of the problems so established. The service provider will be expected to rectify these problems, and (where necessary to comply with the specification) make new products at his own cost. 5. DSM on overlapping areas shall not have more than

		<p>10 cm variation in elevation. The accuracy of DSM generated and used for ortho rectification shall not be less than 25 cm in height in areas of buildings and ground features.</p> <p>6. The mapping of land ownership boundary lines is the objective of the project and the ORI images shall not have any obstruction / distortion and quality errors. If present, the complete project / block area shall be rejected and shall be reflown and submitted.</p>
II FOR GROUND CONTROL POINT		
Sl. no	Description	Specifications
1.	Horizontal Accuracy	2.5 cm or better For both I base Stations and Check Points
2.	Procedure	<p>The accuracy of the ground control points (I base stations & Check Points) will be checked by Network Adjustment Report/Post Processing Report submitted by service provider as deliverables. KRSRAC may process the GNSS data of Base station Base station and Check Points provided in RINEX format for independent check.</p> <p>Should more than 5% of the GNSS data that are subjected to external QC fail to meet the specifications the service provider is expected to rectify these problems, and (where necessary to comply with the specification) make fresh GNSS observation at his own cost to achieve the required accuracy.</p>

Format for Data Deliverables

- Orthoimage of 5 cm GSD - in uncompressed Tiff and/or lossless compression in ECW / JP2000 format
- DSM to be given as point cloud in LAS format. In case of grid format, 1 m grid shall be used
- DTM / Breaklines if generated for the generation of ortho images in ESRI 3D Shape file format / geo-database format
- GPS Control point data – RINEX formats wherever static data processing is observed. In case of Processing with CORS, the process reports matching to the accuracy requirements should be submitted.
- All report in Microsoft Excel / Word format. The same to be submitted in PDF format, as well.

Note

- Processing shall be done with in the premises of SSLR / KRSRAC in case of aerial survey using large format camera / Drone. The bidder can establish their own processing facility in Karnataka. Such established processing facility shall be supervised and overseen

by KRSAC / SSLR. In case of premises of the bidder, the work shall be done under the supervision of officers of SSLR if so desired by the Purchaser.

- Copy of the raw or processed data in any form shall not be retained by the service provider.
- All data (raw, processed and its derivatives) shall be the property of Government of Karnataka which shall be managed by KRSAC, the authorised agency.
- Data to be handed over in HDD, village / grid wise, as defined by SSLR / KRSAC
- The storage of HDD by KRSAC/SSLR shall be in the state data centre or in Cloud storage established by GoK.

- The submitted deliverable will be verified and reported for errors, if any within 30 days. In case of delay in submission of feedback by SSLR / KRSAC, the appropriate / equivalent additional time period shall be given for correcting the errors, if any.
- If data has no errors, the data acceptance shall also be provided. Acceptance of data by its virtue of time is not accepted.
- In case of errors, the penalties as per RFP terms shall be applicable. The additional time period for submission of the corrections shall be given without penalty in case of delay in providing the feedback on quality acceptance of data

8. RESPONSIBILITIES

Service Provider Responsibilities

- a) The Service Provider will have the responsibility for obtaining clearance from GoI agencies for flying over the survey area, acquiring and processing aerial data acquisition from Drone / Aircraft fitted with Lrgee format Camera data including QA/QC, and delivery of raw and processed products to Survey of India.
- b) The Service Provider shall set up a local office in Bengaluru for coordinating flying and data acquisition, and processing, and interaction with the SSLR / SoI / KRSAC. Necessary infrastructure for office and technical work will be created in the local office.
- c) The Service Provider will have the responsibility to ensure compliance of DGCA issued guidelines for Requirements for Operation of Civil Remotely Piloted Aircraft System (RPAS)
- d) Register with CORS system of SOI for carrying out the GPS processing on behalf of the government
- e) Carrying out the Drone / aerial survey and carryout the GPS surveys, data processing as per the terms of RFP and deliver the products meeting the quality conditions mentioned in the RFP.

SSLR Responsibilities

- Provide necessary documentation for obtaining clearance from GoI agencies if needed.
- Facilitation of interactions with GoI agencies and with state agencies if needed.
- The SSLR shall provide Static observation data of CORS network for Ground Control.
- Release of funds and review of reports according to the agreed schedule.

- Constitution of a Technical Committee to support for interaction with the Service Provider on technical issues through the contract period, and in reviewing reports and recommending follow-on actions, QA/QC and for evaluating digital products prior to acceptance.
- The Survey of India shall nominate suitable officer to coordinate the activities, and provide necessary interaction at appropriate times to avoid any disturbance and loss of time for carrying out the assignment.
- Notification for entry to the land for surveying & authorization letter to civil authorities shall be given to the Service Provider.
- Any other facilities mutually agreed upon by employer and the Service Provider.

Survey of India Responsibilities

- a. Provide document on the technical methodology to be adopted for aerial survey using Large Format Digital Camera OR Drone based image acquisition
- b. Defining the process of GNSS survey for GCP and Check points
 - i. Static Survey
 - ii. Using CORS network
 - iii. Sharing the GCP's of SOI, for control extension if static differential processing is to be adopted
- c. Defining the accuracy parameters of method of quality acceptance for GCP, Block setup/adjustment, DEM and Ortho images
- d. Providing Training and support to SSLR and Service providers on GCP, Drone Survey, DEM / ORI generation and creating parcel data on the supplied ORI

KSRSAC Responsibilities

- a. To provide the Grid / Village boundaries and defining the project areas and prioritization in discussion with SSLR
- b. Approval of flight plans and GCP layout
- c. Verification of submitted data (Images, GCP, Check points, DSM, DEM, ORI), as per the defined parameters and giving approval
- d. Training to the service providers/ SSLR along with SOI
- e. Development of IT portal / application for project management and status tracking
- f. Generating the statistics of data delivered
- g. Performing QA/QC validation and providing acceptance report, areawise, as prioritized
- h. Publishing / making the ORI image available to SSLR surveyors for creating Land parcel maps.
- i. Such other technical and other help and support as assigned from time to time as per requirement.

4. DRAWINGS

(To be inserted if required)

5. INSPECTIONS AND TESTS

(Refer to Section VI Clause 6)

6. TENTATIVE AREA OF PROJECT SURVEY

Drone/Aerial Survey – Package/LOT 1		
S.No	District Name	Area in Sq km
1	Bengaluru Urban (except BBMP)	1390
2	Bengaluru (Bangalore) Rural	2259
3	Mandya	4961
TOTAL =		8610

Drone/Aerial Survey – Package/LOT 2		
S.No	District Name	Area in Sq km
1	Kolar	3969
2	Chikballapur	4524
TOTAL =		8493

Drone/Aerial Survey – Package/LOT 3		
S.No	District Name	Area in Sq km
1	Ballari (Bellary)	4252
2	Vijayanagar	5644
TOTAL =		9896

Drone/Aerial Survey – Package/LOT 4		
S.No	District Name	Area in Sq km
1	Davangere	4460
2	Chitradurga	8440
TOTAL =		12900

Drone/Aerial Survey – Package/LOT 5		
S.No	District Name	Area in Sq km
1	Gadag	4656
2	Koppal	7189
TOTAL =		11845

Drone/Aerial Survey – Package/LOT 6		
S.No	District Name	Area in Sq km
1	Kodagu	4102
2	Chamarajanagar	5101
3	Chikkamagaluru (Chikmagalur)	7201
4	Vijayapura (Bijapur)	10498
TOTAL =		26902

Drone/Aerial Survey – Package/LOT 7		
S.No	District Name	Area in Sq km
1	Yadgir	5234
2	Bidar	5448
3	Raichur	8440
4	Kalaburagi (Gulbarga)	10951
TOTAL =		30073

7. CHECKLIST / FORMS TO BE SUBMITTED BY THE BIDDERS

Instruments proposed for the project (to be submitted for each Package, separately)

Package/LOT No and Name of Districts to be mentioned.

Description of Checklist to be submitted by Bidder	Section / Page No in the Bid document - to refer during evaluation	Submitted as per the requirement / form given in the RFP (Yes / No)
Details of Company Registration		
GST Registration		
Authorisation letter for the Signatory / bid submission		
Current Address / Email and Contact details of authorised Person		
Self-declaration that bidder is not blacklisted / barred from providing services		
Financial Year Audit Statement - 2020-21		
Financial Year Audit Statement - 2019-20		
Financial Year Audit Statement - 2018-19		
Financial Year Audit Statement - 2017-18		
Financial Year Audit Statement - 2016-17		
CA certificate on revenue from related services for last 5 years		
Cash flow Certificate from Bank		
Bank Details		
Details of Packages being applied		
Details of Sub Contractors, if any		
Details of GPS Instruments		
Details of Drone Instruments, if applicable		
Details of Aircraft proposed, if applicable		
Details of Camera to be used in Drone		
Details of Large Format Digital Camera		
Details of the Software license		
Details of Server / Storage		
Details of Manpower - Details of CV		
Details of Qualifying Projects		
Technical Compliance of each make / model of instruments GPS / Drone / Camera / Aircraft / Large Format Aerial Camera		
Proof of ownership of all the instruments to be considered for evaluation.		

Methodology- Aerial Survey, GPS Survey, Data Processing, Deliverables		
Implementation Plan - Resource Estimates, Time lines		
QA / QC Plan - Flight Plan, GCP Plan, Block Adjustment, OrthoImage Creation		
Resource Plan		
Price Bid		

PART 3 – CONTRACT

SECTION VI – GENERAL CONDITIONS OF CONTRACT

Section VI. General Conditions of Contract

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Section VI. General Conditions of Contract

1. General Provisions

1. Definitions	<p>Unless the context otherwise requires, the following terms whenever used in this Contract have the following meanings:</p> <ul style="list-style-type: none">(a) The Adjudicator is the person appointed jointly by the Employer and the Service Provider to resolve disputes in the first instance, as provided for in Sub-Clause 8.2 hereunder.(b) “Activity Schedule” is the priced and completed list of items of Services to be performed by the Service Provider forming part of his Bid;(c) “Completion Date” means the date of completion of the Services by the Service Provider as certified by the Employer(d) “Contract” means the Contract signed by the Parties, to which these General Conditions of Contract (GCC) are attached, together with all the documents listed in Clause 1 of such signed Contract;(e) “Contract Price” means the price to be paid for the performance of the Services, in accordance with Clause 6;(f) “Dayworks” means varied work inputs subject to payment on a time basis for the Service Provider’s employees and equipment, in addition to payments for associated materials and administration.(g) “Employer” means the party who employs the Service Provider(h) “Foreign Currency” means any currency other than the currency of the country of the Employer;(i) “GCC” means these General Conditions of Contract;(j) “Government” means the Government of the India;(k) “Local Currency” means the currency of India;(l) “Member,” in case the Service Provider consist of a joint venture of more than one entity, means any of these entities; “Members” means all these entities, and “Member in Charge” means the entity specified in the SC to act on their
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	<p>behalf in exercising all the Service Provider’ rights and obligations towards the Employer under this Contract;</p> <p>(m) “Party” means the Employer or the Service Provider, as the case may be, and “Parties” means both of them;</p> <p>(n) “Personnel” means persons hired by the Service Provider or by any SubService Provider as employees and assigned to the performance of the Services or any part thereof;</p> <p>(o) “Service Provider” is a person or corporate body whose Bid to provide the Services has been accepted by the Employer;</p> <p>(p) “Service Provider’s Bid” means the completed bidding document submitted by the Service Provider to the Employer</p> <p>(q) “SCC” means the Special Conditions of Contract by which the GCC may be amended or supplemented;</p> <p>(r) “Specifications” means the specifications of the service included in the bidding document submitted by the Service Provider to the Employer</p> <p>(s) “Services” means the work to be performed by the Service Provider pursuant to this Contract, as described in Appendix A; and in the Specifications and Schedule of Activities included in the Service Provider’s Bid.</p> <p>(t) “SubService Provider” means any entity to which the Service Provider subcontracts any part of the Services in accordance with the provisions of Sub-Clauses 3.5 and 4.</p>
1.2 Applicable Law	The Contract shall be interpreted in accordance with the laws of the Employer’s country, unless otherwise specified in the Special Conditions of Contract (SCC).
1.3 Language	This Contract has been executed in the language specified in the SCC , which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Contract.
1.4 Notices	Any notice, request, or consent made pursuant to this Contract shall be in writing and shall be deemed to have been made when delivered in person to an authorized representative of the Party to whom the communication is addressed, or when sent by registered mail, telex, telegram, or facsimile or e-mail to such Party at the address specified in the SCC.

1.5 Location	The Services shall be performed at such locations as are specified in Section V in the specifications and, where the location of a particular task is not so specified, at such locations, whether in the Government of India or elsewhere, as the Employer may approve.
1.6 Authorized Representatives	Any action required or permitted to be taken, and any document required or permitted to be executed, under this Contract by the Employer or the Service Provider may be taken or executed by the officials specified in the SCC .
1.7 Inspection and Audit	Inspection and Audit shall be carried out as per provisions of GFR 2017
1.8 Taxes and Duties	The Service Provider, SubService Providers, and their Personnel shall pay such taxes, duties, fees, and other impositions as may be levied under the Applicable Law, the amount of which is deemed to have been included in the Contract Price.
2. Commencement, completion, modification and termination of contract	
2.1 Effectiveness of Contract	This Contract shall come into effect on the date the Contract is signed by both parties and such other later date as may be stated in the SCC .
2.2 Commencement of Services	
2.2.1 Program	Before commencement of the Services, the Service Provider shall submit to the Employer for approval a Program showing the general methods, arrangements, order and timing for all activities. The Services shall be carried out in accordance with the approved Program as updated.
2.2.2 Starting Date	The Service Provider shall start carrying out the services thirty (30) days after the date the Contract becomes effective, or at such other date as may be specified in the SCC .
2.3 Intended Completion Date	Unless terminated earlier pursuant to Sub-Clause 2.6, the Service Provider shall complete the activities by the Intended Completion Date, as is specified in the SCC . If the Service Provider does not complete the activities by the Intended Completion Date, it shall be liable to pay liquidated damage as per Sub-Clause 3.8. In this case, the Completion Date will be the date of completion of all activities
2.4 Modification	Modification of the terms and conditions of this Contract, including any modification of the scope of the Services or of the Contract Price, may only be made by written agreement between the Parties and shall not be effective until the consent of competent authority in Government of India, has been obtained.

<p>2.5 Force Majeure</p> <p>2.5.1 Definition</p> <p>2.5.2 No Breach of Contract</p> <p>2.5.3 Extension of Time</p> <p>2.5.4 Payments</p>	<p>For the purposes of this Contract, “Force Majeure” (FM) means extraordinary events or circumstance beyond human control such as an event described as an Act of God (like a natural calamity) or events such as war, strike, riots, crimes (but not including negligence or wrong-doing, predictable/seasonal rain and any other events specifically excluded in the clause). An FM clause in the contract frees both parties from contractual liability or obligation when prevented by such events from fulfilling their obligations under the contract. An FM clause does not excuse a party’s nonperformance entirely, but only suspends it for the duration of the FM. The firm has to give notice of FM as soon as it occurs and it cannot be claimed ex-post facto. There may be a FM situation affecting the purchase organization only. In such a situation, the purchase organization is to communicate with the supplier along similar lines as above for further necessary action. If the performance in whole or in part or any obligation under this contract is prevented or delayed by any reason of FM for a period exceeding 90 (Ninety) days, either party may at its option terminate the contract without any financial repercussion on either side.</p> <p>The failure of a Party to fulfill any of its obligations under the contract shall not be considered to be a breach of, or default under, this Contract insofar as such inability arises from an event of Force Majeure, provided that the Party affected by such an event (a) hastaken all reasonable precautions, due care and reasonable alternative measures in order to carry out the terms and conditions of this Contract, and (b) has informed the other Party as soon as possible about the occurrence of such an event.</p> <p>Any period within which a party shall, pursuant to this Contract, complete any action or task, shall be extended for a period equal to the time during which such Party was unable to perform such action as a result of Force Majeure.</p> <p>During the period of their inability to perform the Services as a result of an event of Force Majeure, the Service Provider shall be entitled to continue to be paid under the terms of this Contract, as well as to be reimbursed for additional costs reasonably and necessarily incurred by them during such period for the purposes of the Services and in reactivating the Service after the end of such period.</p>
<p>2.6 Termination</p> <p>2.6.1 By the Employer</p>	<p>The Employer may terminate this Contract, by not less than thirty (30) days’ written notice of termination to the Service Provider, to be given after the occurrence of any of the events specified in paragraphs (a) through (d) of this Sub-Clause 2.6.1:</p>

<p>2.6.2 By the Service Provider</p> <p>2.6.3 Shortage of Budget</p> <p>2.6.4 Payment upon Termination</p>	<p>(a) if the Service Provider does not remedy a failure in the performance of its obligations under the Contract, within thirty (30) days after being notified or within any further period as the Employer may have subsequently approved in writing;</p> <p>(b) if the Service Provider become insolvent or bankrupt;</p> <p>(c) if, as the result of Force Majeure, the Service Provider is unable to perform a material portion of the Services for a period of not less than ninety (90) days; or</p> <p>(d) if the Service Provider, in the judgment of the Employer has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.</p> <p>The Service Provider may terminate this Contract, by not less than thirty (30) days' written notice to the Employer, such notice to be given after the occurrence of any of the events specified in paragraphs (a) of this Sub-Clause 2.6.2:</p> <p>(a) if, as the result of Force Majeure, the Service Provider is unable to perform a material portion of the Services for a period of not less than ninety (90) days.</p> <p>In the event the budget is curtailed by GoI and it would not be possible to make future payments to Service provider due to shortage of budget, the Contract may be terminated with approval of competent authority of GoI.</p> <p>Upon termination of this Contract pursuant to Sub-Clauses 2.6.1 or 2.6.2, the Employer shall make the following payments to the Service Provider:</p> <p>(a) remuneration pursuant to Clause 6 for Services satisfactorily performed prior to the effective date of termination;</p> <p>(b) except in the case of termination pursuant to paragraphs (a), (b), (d) of Sub-Clause 2.6.1, reimbursement of any reasonable cost incident to the prompt and orderly termination of the Contract, including the cost of the return travel of the Personnel</p>
<p>3. Obligations of the Service Provider</p>	
<p>3.1 General</p>	<p>The Service Provider shall perform the Services in accordance with the Specifications and the Activity Schedule, and carry out its obligations with all due diligence, efficiency, and economy, in accordance with generally accepted professional techniques and practices, and shall observe sound management practices, and employ appropriate advanced technology and safe methods. The Service Provider shall always act, in respect of any matter relating to this Contract or to the Services, as faithful adviser to the Employer, and shall at all times support and safeguard the Employer's legitimate interests in any dealings with SubService Providers or third parties.</p>

<p>3.2 Conflict of Interests</p> <p>3.2.1 Service Provider Not to Benefit from Commissions and Discounts</p> <p>3.2.2 Service Provider and Affiliates Not to be otherwise Interested in Project</p> <p>3.2.3 Prohibition of Conflicting Activities</p>	<p>The remuneration of the Service Provider pursuant to Clause 6 shall constitute the Service Provider’s sole remuneration in connection with this Contract or the Services, and the Service Provider shall not accept for their own benefit any trade commission, discount, or similar payment in connection with activities pursuant to this Contract or to the Services or in the discharge of their obligations under the Contract, and the Service Provider shall use their best efforts to ensure that the Personnel, any SubService Providers, and agents of either of them similarly shall not receive any such additional remuneration.</p> <p>The Service Provider agree that, during the term of this Contract and after its termination, the Service Provider and its affiliates, as well as any SubService Provider and any of its affiliates, shall be disqualified from providing goods, works, or Services (other than the Services and any continuation thereof) for any project resulting from or closely related to the Services.</p> <p>Neither the Service Provider nor its SubService Providers nor the Personnel shall engage, either directly or indirectly, in any of the following activities:</p> <ul style="list-style-type: none"> (a) during the term of this Contract, any business or professional activities in the Government’s country which would conflict with the activities assigned to them under this Contract; (b) during the term of this Contract, neither the Service Provider nor their SubService Providers shall hire public employees in active duty or on any type of leave, to perform any activity under this Contract; (c) after the termination of this Contract, such other activities as may be specified in the SCC.
<p>3.3 Confidentiality</p>	<p>The Service Provider, its SubService Providers, and the Personnel of either of them shall not, either during the term or within two (2) years after the expiration of this Contract, disclose any proprietary or confidential information relating to the Project, the Services, this Contract, or the Employer’s business or operations without the prior written consent of the Employer.</p>
<p>3.4 Insurance to be Taken Out by the Service Provider</p>	<p>The Service Provider (a) shall take out and maintain, and shall cause any SubService Providers to take out and maintain, at its (or the SubService Providers’, as the case may be) own cost but on terms and conditions approved by the Employer, insurance against the risks, and</p>

	for the coverage, as shall be specified in the SCC; and (b) at the Employer's request, shall provide evidence to the Employer showing that such insurance has been taken out and maintained and that the current premiums have been paid.
3.5 Service Provider's Actions Requiring Employer's Prior Approval	The Service Provider shall obtain the Employer's prior approval in writing before taking any of the following actions: (a) entering into a subcontract for the performance of any part of the Services, (b) appointing such members of the Personnel not listed by name in Appendix C ("Key Personnel and SubService Providers"), (c) changing the Program of activities; and (d) any other action that may be specified in the SCC
3.6 Reporting Obligations	The Service Provider shall submit to the Employer the reports and documents specified in Appendix B in the form, in the numbers, and within the periods set forth in the said Appendix.
3.7 Documents Prepared by the Service Provider to Be the Property of the Employer	All plans, drawings, specifications, designs, reports, and other documents and software submitted by the Service Provider in accordance with Sub-Clause 3.6 shall become and remain the property of the Employer, and the Service Provider shall, not later than upon termination or expiration of this Contract, deliver all such documents and software to the Employer, together with a detailed inventory thereof. The Service Provider may retain a copy of such documents and software. Restrictions about the future use of these documents, if any, shall be specified in the SCC .
3.8 Liquidated Damages	
3.8.1 Payments of Liquidated Damages	The Service Provider shall pay liquidated damages to the Employer at the rate per day stated in the SCC for each day that the Completion Date is later than the Intended Completion Date. The total amount of liquidated damages shall not exceed the amount defined in the SCC . The Employer may deduct liquidated damages from payments due to the Service Provider. Payment of liquidated damages shall not affect the Service Provider's liabilities.
3.8.2 Correction for Overpayment	If the Intended Completion Date is extended after liquidated damages have been paid, the Employer shall correct any overpayment of liquidated damages by the Service Provider by adjusting the next payment certificate. The Service Provider shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rates specified in SubClause 6.5.
3.8.3 Lack of performance pen-	If the Service Provider has not corrected a Defect within the time specified in the Employer's notice, a penalty for Lack of performance

<p style="text-align: center;">alty</p>	<p>will be paid by the Service Provider. The amount to be paid will be calculated as a percentage of the cost of having the Defect corrected, assessed as described in Sub-Clause 7.2 and specified in the SCC.</p>
<p>3.9 Performance Security</p>	<p>The Service Provider shall provide the Performance Security of amount as specified in the SCC to the Employer no later than the date specified in the Letter of acceptance. The Performance Security shall be issued in an amount and form and by a bank or surety acceptable to the Employer, and denominated in the types and proportions of the currencies in which the Contract Price is payable. The performance Security shall be valid until a date 28 days from the Completion Date of the Contract in case of a bank guarantee, and until one year from the Completion Date of the Contract in the case of a Performance Bond.</p>
<p style="text-align: center;">4. Service Provider Personnel</p>	
<p>4.1 Description of Personnel</p>	<p>The titles, agreed job descriptions, minimum qualifications, and estimated periods of engagement in the carrying out of the Services of the Service Provider’s Key Personnel are described in Appendix C. The Key Personnel and SubService Providers listed by title as well as by name in Appendix C are hereby approved by the Employer.</p>
<p>4.2 Removal and/or Replacement of Personnel</p>	<p>a. Except as the Employer may otherwise agree, no changes shall be made in the Key Personnel. If, for any reason beyond the reasonable control of the Service Provider, it becomes necessary to replace any of the Key Personnel, the Service Provider shall provide as a replacement a person of equivalent or better qualifications.</p> <p>b. If the Employer finds that any of the Personnel have (i) committed serious misconduct or have been charged with having committed a criminal action, or (ii) have reasonable cause to be dissatisfied with the performance of any of the Personnel, then the Service Provider shall, at the Employer’s written request specifying the grounds thereof, provide as a replacement a person with qualifications and experience acceptable to the Employer.</p> <p>c. The Service Provider shall have no claim for additional costs arising out of or incidental to any removal and/or replacement of Personnel.</p>
<p style="text-align: center;">5. Obligation of the Employer</p>	
<p>5.1 Assistance and Exemptions</p>	<p>The Employer shall use its best efforts to ensure that the Government shall provide the Service Provider such assistance and exemptions as specified in the SCC.</p>
<p>5.2 Change in the Applicable Law</p>	<p>If, after the date of this Contract, there is any change in the Applicable Law with respect to taxes and duties which increases or decreases the cost of the Services rendered by the Service Provider, then the remuneration and reimbursable expenses otherwise payable to the Service Provider under this Contract shall be increased or decreased accord-</p>

	ingly by agreement between the Parties, and corresponding adjustments shall be made to the amounts referred to in Sub-Clauses 6.2 (a) or (b), as the case may be.
5.3 Services and Facilities	The Employer shall make available to the Service Provider the Services and Facilities listed as stated in SCC.
6. Payment to the Service Provider	
6.1 Lump-Sum Remuneration	The Service Provider's remuneration shall not exceed the Contract Price and shall be a fixed lump-sum including all SubService Providers' costs, and all other costs incurred by the Service Provider in carrying out the Services described in Appendix A. Except as provided in SubClause 5.2, the Contract Price may only be increased above the amounts stated in Sub-Clause 6.2 if the Parties have agreed to additional payments in accordance with Sub-Clauses 2.4 and 6.3.
6.2 Contract Price	(a) The price payable in local currency is set forth in the SCC . (b) The price payable in foreign currency is set forth in the SCC .
6.3 Payment for Additional Services, and Performance Incentive Compensation	1.3.1 For the purpose of determining the remuneration due for additional Services as may be agreed under Sub-Clause 2.4, a breakdown of the lump-sum price is provided in Appendices D and E. 1.3.2 If the SCC so specify , the service provider shall be paid performance incentive compensation as set out in the Performance Incentive Compensation appendix.
6.4 Terms and Conditions of Payment	Payments will be made to the Service Provider according to the payment schedule stated in the SCC. Unless otherwise stated in the SCC , the advance payment (Advance for Mobilization, Materials and Supplies) shall be made against the provision by the Service Provider of a bank guarantee for the same amount, and shall be valid for the period stated in the SCC . Any other payment shall be made after the conditions listed in the SCC for such payment have been met, and the Service Provider have submitted an invoice to the Employer specifying the amount due.
6.5 Interest on Delayed Payments	If the Employer has delayed payments beyond fifteen (15) days after the due date stated in the SCC , interest shall be paid to the Service Provider for each day of delay at the rate stated in the SCC .
6.6 Price Adjustment	6.6.1 Prices shall be adjusted for fluctuations in the cost of inputs only if provided for in the SCC . If so provided, the amounts certified in each payment certificate, after deducting for Advance Payment, shall be adjusted by applying the respective price adjustment factor to the payment amounts due in each currency. A separate formula of the type indicated below ap-

	<p>plies to each Contract currency:</p> <p>$P_c = A_c + B_c L_{mc}/L_{oc} + C_c I_{mc}/I_{oc}$</p> <p>Where: P_c is the adjustment factor for the portion of the Contract Price payable in a specific currency “c”.</p> <p>A_c , B_c and C_c are coefficients specified in the SCC, representing: A_c the nonadjustable portion; B_c the adjustable portion relative to labor costs and C_c the adjustable portion for other inputs, of the Contract Price payable in that specific currency “c”; and</p> <p>L_{mc} is the index prevailing at the first day of the month of the corresponding invoice date and L_{oc} is the index prevailing 28 days before Bid opening for labor; both in the specific currency “c”.</p> <p>I_{mc} is the index prevailing at the first day of the month of the corresponding invoice date and I_{oc} is the index prevailing 28 days before Bid opening for other inputs payable; both in the specific currency “c”.</p> <p>If a price adjustment factor is applied to payments made in a currency other than the currency of the source of the index for a particular indexed input, a correction factor Z_o/Z_n will be applied to the respective component factor of p_n for the formula of the relevant currency. Z_o is the number of units of currency of the country of the index, equivalent to one unit of the currency payment on the date of the base index, and Z_n is the corresponding number of such currency units on the date of the current index.</p> <p>6.6.2 If the value of the index is changed after it has been used in a calculation, the calculation shall be corrected and an adjustment made in the next payment certificate. The index value shall be deemed to take account of all changes in cost due to fluctuations in costs.</p>
<p>6.7 Day works</p>	<p>6.7.1 If applicable, the Daywork rates in the Service Provider’s Bid shall be used for small additional amounts of Services only when the Employer has given written instructions in advance for additional services to be paid in that way.</p> <p>6.7.2 All work to be paid for as Dayworks shall be recorded by the Service Provider on forms approved by the Employer. Each completed form shall be verified and signed by the Employer representative as indicated in Sub-Clause 1.6 within two days of the Services being performed.</p> <p>6.7.3 The Service Provider shall be paid for Dayworks subject to</p>

	obtaining signed Dayworks forms as indicated in Sub-Clause
7. Quality Control	
7.1 Identifying Defects	The principle and modalities of Inspection of the Services by the Employer shall be as indicated in the SCC . The Employer shall check the Service Provider's performance and notify him of any Defects that are found. Such checking shall not affect the Service Provider's responsibilities. The Employer may instruct the Service Provider to search for a Defect and to uncover and test any service that the Employer considers may have a Defect. Defect Liability Period is as defined in the SCC .
7.2 Correction of Defects, and Lack of Performance Penalty	<p>(a) The Employer shall give notice to the Service Provider of any Defects before the end of the Contract. The Defects liability period shall be extended for as long as Defects remain to be corrected.</p> <p>(b) Every time notice a Defect is given, the Service Provider shall correct the notified Defect within the length of time specified by the Employer's notice.</p> <p>(c) If the Service Provider has not corrected a Defect within the time specified in the Employer's notice, the Employer will assess the cost of having the Defect corrected, the Service Provider will pay this amount, and a Penalty for Lack of Performance calculated as described in Sub-Clause 3.8.</p>
8. Settlement of Disputes	
8.1 Amicable Settlement	The Parties shall use their best efforts to settle amicably all disputes arising out of or in connection with this Contract or its interpretation
8.2 Dispute Settlement	<p>8.2.1 If any dispute arises between the Employer and the Service Provider in connection with, or arising out of, the Contract or the provision of the Services, whether during carrying out the Services or after their completion, the matter shall be referred to the Adjudicator within 14 days of the notification of disagreement of one party to the other.</p> <p>8.2.2 The Adjudicator shall give a decision in writing within 28 days of receipt of a notification of a dispute.</p> <p>8.2.3 The Adjudicator shall be paid by the hour at the rate specified in the BDS and SCC, together with reimbursable expenses of the types specified in the SCC, and the cost shall be divided equally between the Employer and the Service Provider, whatever decision is reached by the Adjudicator. Either party may refer a decision of the Adjudicator to an Arbitrator within 28 days of the Adjudicator's written decision. If neither party refers the dispute to arbitration within the above 28 days, the Adjudicator's decision will be final and binding.</p>

	<p>8.2.4 The arbitration shall be conducted in accordance with the arbitration procedure published by the institution named and in the place shown in the SCC.</p> <p>8.2.5 Should the Adjudicator resign or die, or should the Employer and the Service Provider agree that the Adjudicator is not functioning in accordance with the provisions of the Contract, a new Adjudicator will be jointly appointed by the Employer and the Service Provider. In case of disagreement between the Employer and the Service Provider, within 30 days, the Adjudicator shall be designated by the Appointing Authority designated in the SCC at the request of either party, within 14 days of receipt of such request.</p>
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SECTION VII. SPECIAL CONDITIONS OF CONTRACT

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

GCC 1.1 (a)	The Adjudicator is Principal Secretary to Government of Karnataka, Revenue Department,
GCC 1.1 (d)	The contract name is HIRING OF DRONEOR AERIAL SURVEYAS A SERVICE FOR ORI GENERATION FOR LARGE SCALE MAPPING LOT 1 & LOT 2 (as the case may be)
GCC 1.1 (h)	The Employer is Survey Settlement and Land Records Department
GCC 1.1 (p)	The Service Provider is _____
GCC 1.2	The Applicable Law is: Laws of Union of India and rules / acts of Govt of Karnataka
GCC 1.3	The language is English
GCC 1.4	The addresses are: Employer: Commissioner, Survey Settlement and Land Records Department K.R.Circle, Bangalore Service Provider: Attention: e-Mail: Facsimile:
GCC 1.5	Location of Service will be in Karnataka State.
GCC 1.6	The Authorized Representatives are: For the Employer: Commissioner, SSLR For the Service Provider:
GCC 2.1	The date on which this Contract shall come into effect is date of signing of Contract by both the parties.
GCC 2.2.1	The work awarded will be divided in revenue villages/cluster of villages / geographical grids as defined by employer. These revenue vil-lages/cluster of villages/grids shall be units of processing and delivery. Program submitted should contain Implementation plan, Details show-ing timelines, resource deployment for each revenue vil-lages/cluster of villages and delivery dates for each revenue vil-lages/cluster of villages. The updated Program should be consistent with the Method Statement, Work Plan, & Time Schedule submitted in Section IV as part of this RFB. However, the bidder may be permitted to re-deploy his resources and re-schedule the delivery plans during program update as per SCC 2.2.1, to prioritize submission of revenue vil-lages/cluster of vil-lages as specified by employer but without changing the final completion
GCC 2.2.2	The Starting Date for the 'Commencement of Services' shall be the ear-

	<p>lier of following dates:</p> <p>i. 15 days from date of signing of contract</p> <p>ii. Date of issue of necessary security & flight clearances,</p> <p>However the service provider will be allowed to start the activities which are not related to above clearances immediately after signing of the contract.</p>														
GCC 2.3	<p>Implementation Timelines for Activities for each Revenue Village</p> <table border="1"> <thead> <tr> <th>Sl No.</th> <th>Activity</th> <th>Av. daily out turn (Village)</th> <th>Time of completion (Days)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Drone/Aerial Data Acquisition and base observation</td> <td rowspan="3">derived from the data submitted by bidder as his implementation plan</td> <td>-</td> </tr> <tr> <td>3.</td> <td>Provision of Ground controls including check points</td> <td>T+3</td> </tr> <tr> <td>4.</td> <td>Post Processing & Generation of DSM and ORI</td> <td>T+5</td> </tr> </tbody> </table> <p>T shall be the date of Drone data acquisition</p> <p>The time mentioned above is indicative for completing the works. As the field survey is being done far from the base data processing facility, Weekly deliverable as defined in the RFP shall be considered.</p> <p>However, the Intended Completion Date for entire work including delivery of final deliverables as per Section V is 12 months from date of commencement of services. If the ‘actual area’ increases beyond that specified in Section V, the Project duration shall be extended beyond 2 months on pro rata basis by an explicit communication by the Purchaser.</p>	Sl No.	Activity	Av. daily out turn (Village)	Time of completion (Days)	1	Drone/Aerial Data Acquisition and base observation	derived from the data submitted by bidder as his implementation plan	-	3.	Provision of Ground controls including check points	T+3	4.	Post Processing & Generation of DSM and ORI	T+5
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3.	Provision of Ground controls including check points		T+3												
4.	Post Processing & Generation of DSM and ORI		T+5												
GCC 3.2.3	<p>Activities prohibited after termination of this Contract are: Use or transmit in any form of maps/data supplied by employer or data/services generated by the service provider during the Project. The Service Provider will not use, transfer, propagate any of the deliverables, information etc.</p>														
GCC 3.4	<p>The risks and coverage by insurance shall be:</p> <p>(i) Aviation insurance to protect against Third Party property and bodily damage claims during Drone survey Work (In accordance with the statutory requirements applicable to India)</p> <p>(ii) Personal injury or death insurance for Service Provider’s Employees (In accordance with the statutory requirements applicable to India)</p> <p>(iii) Loss or damage to equipment and data till project completion (Minimum Cover Contract Price)</p>														

GCC 3.5(a)	<p>Sub-Contracting is permitted which are part of the Technical Bid and approved and accepted therein.</p> <p>A change of the sub-contractor is NOT allowed without intimation to the purchaser. Any changes to the sub-contractor can be accepted only if the proposed sub-contractor meet all the qualification criteria mentioned in the RFP and such a change is aprior accepted and approved by the Purchaser. Every change (inclusion / exclusion) of the sub-contractor will lead to deduction of 2% of overall contract fee to the bidder</p>
GCC 3.5(d)	The other actions are: None
GCC 3.7	Restrictions on the use of documents prepared by the Service Provider are: All data, documents, reports generated during the Contract shall be exclusive property of Employer and the Service Provider shall have no claims over it. The Service Provider shall be bound by restrictions imposed by Security Classification of such data, documents and reports.
GCC 3.8.1	Delay in completion of the full work due to reasons attributable to the Service Provider shall attract Liquidated Damages @2% of Contract Price per month of delay to be computed on per day basis. The liquidated damage is over and above the penalties for delay in delivery of monthly deliverables as mentioned in the implementation plan. The maximum amount of liquidated damages for the whole contract is Ten percent of the final Contract Price. Pursuant to SCC 2.3, if the project duration is extended, LD clause shall not apply in the extended period. However, LD clause shall resume for delay beyond the extended period
GCC 3.8.3	<p>The delivery in which defects have been detected and/or which have failed the Acceptance Test as perSection V, shall be returned to the Service Provider for further QA. In effect, Employer will pass responsibility to the service provider to provide adequate and clear internal Quality Audits to identify the extent and cause of the problems so established. The service provider will be expected to rectify these problems, and (where necessary to comply with the specification) make new products at his own cost. Redelivery of products will be followed by a further independent check on a new sample of the products. This procedure will continue until the products become finally acceptable under the terms above. The acceptance report (Pass/Fail) shall be given by the Employer within 4 weeks of each delivery/re-delivery of the data made by the Service Provider.</p> <p>If delivery fails the acceptance test of the Employer, it shall be construed as ‘Lack of Performance’ and the 100% of cost towards Acceptance Test by the Employer @ INR 1,00,000 for each subsequent delivery shall be imposed on Service Provider towards penalty for ‘Lack of performance’.</p>
GCC 3.9	The amount of the Performance Security shall be of 10% of contract value.
GCC 5.1	The Employer shall use its best efforts to ensure that the Government shall provide the Service Provider
GCC 5.3	Following data, Service and facilities will be provided to the Service Provider after award of Contract:

	<p>(i) Area of Interest (AOI) in shp and kmz format (ii) Static Observation Data of CORS stations for post processing OR Description and co-ordinates of GCP library ground control points in and around the Project area on WGS 84 datum (as available) (iii) Facility of NRTK (Network RTK) if RTK rovers are used.</p> <p>Production Site: The Service Provider will be responsible for setting up secure and high performance Production Centre at _____. The production center should be adequate to handle and store raw Data, key intermediate data, data under process and Processed Data/deliverable. Survey of India will not be responsible for providing space or any other facility for production centers.</p>
GCC 6.2	All payments shall be made in Indian Rupees
GCC 6.1	<p>The incidence, extent and area provided in IFB & Section V of this RFB are limited by scale and accuracy (spatial & temporal) of existing maps on 1:50K scale. Considering this aspect, the payments made to the Service Provider shall be on the basis of ‘actual area’ and ‘area surveyed’.</p> <p>All submissions of deliverables shall be accompanied by ‘area polygons’ in .shp format. Shape file generated by KRSRAC shall be used to measure and ascertain the actual area completed by the Service Provider.</p> <p>However, if the ‘actual area’ comes out to be more than that mentioned in IFB & Section V of this RFB, approval of competent authority shall be taken before making payment beyond the ‘Contract Price’.</p>
GCC 6.3.2	The performance incentive paid to the Service Provider shall be: Not Applicable.
GCC 6.4	<p>6.4.1. The Contract Price as specified in the Contract Agreement shall be paid as under.</p> <p>6.4.2. The payment made to the Service Provider shall be on the basis of ‘Actual area’ of revenue village. ‘Actual area’ of the revenue will be calculated on the basis of Shape file villages provided by the purchaser.</p> <p>6.4.3. Payment to the Service provider will be made on monthly basis (Calendar month) by the office after deduction of applicable taxes and recoveries if any at the quoted rates as per the contract. Monthly payment shall be calculated as per following formula</p> $= A * 0.9 * (\text{Total contract value} / \text{Total tendered Area})$ <p>Whereas A is ‘Actual area’ of revenue village delivered in particular month on successful completion and acceptance of activities (1), (2) & (3) as per Section V sub section 3:</p>

	<ul style="list-style-type: none"> • Provision of Ground controls including check points & Drone Data Acquisition • Post Processing for generation of DSM and ORI <p>Details of revenue village / grids that are successfully completed & accepted and its actual area will be maintained by service provider and will be provided to the purchaser for verification. The service provider shall become entitled for payment after completion and acceptance of ORI. No payment will separately be made for activities such as GNSS control, and Drone flying.</p> <p>6.4.4 Remaining 10% retained will be released after submission and acceptance of final deliverables.</p> <p>6.4.5 The payment shall be released subject to certification by the Employer that services have been rendered satisfactorily. Acceptance test shall be carried out by Employer according to principle, modalities laid down in SCC Clause 7.1 & Section V of this RFB which shall form the basis of certification mentioned above. Should the certification (satisfactory or unsatisfactory) not be provided, by the employer within ‘one’ months of the date of receipt of the corresponding invoice, the certification will be deemed to have been provided, and the progress payment will be released at such date. “Payment of Local Taxes such as GST will be against valid Invoice as per GST ACT & Rules and submission of GST Registration Certificate along with declaration that GST Registration is valid and all liabilities towards GST have been discharged by the vendor. GST amount will be paid after submission of valid Invoice and all required documents and declaration by vendor”.</p> <p>6.4.6 Every month delay in delivery and submission of Deliverables (color balanced ortho mosaic) will lead to penalty of 2% per week based on the quantities (in Sqkm) that was not delivered but due as per plan. For the penalty, the amount will be computed based on per sqkm area cost quoted by the bidder</p>
GCC 6.5	Payment shall be made within 45 days of receipt of the invoice and the relevant documents specified in Sub-Clause 6.4, and within 60 days in the case of the final payment. No Interest shall be payable
GCC 6.6.1	Price adjustment is not to be applied in accordance with Sub-Clause 6.6.
GCC 7.1	<p>The principle and modalities of inspection of the Services by the Employer are as follows:</p> <p>The responsibility of Quality assurance that would include adoption of best practices, processes and sets of approaches leading to outcomes of quality specified in this Contract shall rest with the Service Provider.</p> <p>As part of Quality Assurance, the Service Provider shall submit quality control (or check) measures detailing clearly specified tasks that scrutinizes all, or a sample, of the items issuing during and/or at the end of various stages of processing in order to ensure that the final product is of satisfactory quality. The scrutiny involves review, inspection or quantitative measurement, against well-defined pass/fail criteria.</p>

	<p>The Service Provider shall systematically lodge Quality Control Records (QCRs) which may take various forms like Computer Generated Reports, Inspection notes, Stage Approvals etc. Service Provider shall ensure that every such QCR :</p> <ul style="list-style-type: none"> • marked with a date • uniquely identifies the item, operation or product to which it relates • identifies the operator who generated the QCR • Is countersigned by a supervisor or other independent inspector (for important records) • is stored in a well-defined and predictable location so that it can be found easily by others. <p>The responsibility for maintaining necessary versions of data during the QA/QC cycle till its final acceptance by Employer shall also rest with Service Provider.</p> <p>Employer will carry out Quality Audit as per Section V to ensure that that plan/methodology/ QA/QC measures etc. detailed are being properly followed. Employer shall also audit to ensure that the QCRs are being properly maintained.</p> <p>In addition following ‘Final Acceptance’ tests shall be carried out by the Employer on the delivery made by Service Provider.</p>												
<p>GCC 8.2.3</p>	<p>The Adjudicator proposed by the Employer is Principal Secretary to Government of Karnataka, Revenue Department or a person decided by him; whose fees, if applicable, shall be governed by the Article 11 of ‘Arbitration and Conciliation (Amendment) Act 2015’ as given below:</p> <table border="1"> <thead> <tr> <th><i>Sum in Dispute</i></th> <th><i>Model Fee</i></th> </tr> </thead> <tbody> <tr> <td>Up to Rs.5,00,000</td> <td>Rs. 45,000</td> </tr> <tr> <td>Above Rs.5,00,000 and Up to Rs. 20,00,000</td> <td>Rs. 45,000 plus 3.5 per cent of the claim amount over and above Rs. 5,00,000</td> </tr> <tr> <td>Above Rs. 20,00,000 and up to Rs. 1,00,00,000</td> <td>Rs.97,500 plus 3 per cent of the claim amount over and above Rs. 20,00,000</td> </tr> <tr> <td>Above Rs. 1,00,00,000 and up to 10,00,00,000</td> <td>Rs. 3,37,500 plus 1 per cent of the claim amount over and above Rs. 1,00,00,000</td> </tr> <tr> <td>Above Rs. 10,00,00,000 and up to Rs. 20,00,00,000</td> <td>Rs.12,37,500 plus 0.75 per cent of the claim amount over and above Rs. 10,00,00,000</td> </tr> </tbody> </table>	<i>Sum in Dispute</i>	<i>Model Fee</i>	Up to Rs.5,00,000	Rs. 45,000	Above Rs.5,00,000 and Up to Rs. 20,00,000	Rs. 45,000 plus 3.5 per cent of the claim amount over and above Rs. 5,00,000	Above Rs. 20,00,000 and up to Rs. 1,00,00,000	Rs.97,500 plus 3 per cent of the claim amount over and above Rs. 20,00,000	Above Rs. 1,00,00,000 and up to 10,00,00,000	Rs. 3,37,500 plus 1 per cent of the claim amount over and above Rs. 1,00,00,000	Above Rs. 10,00,00,000 and up to Rs. 20,00,00,000	Rs.12,37,500 plus 0.75 per cent of the claim amount over and above Rs. 10,00,00,000
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	Above Rs. 20,00,00,000	Rs. 19,87,500 plus 0.5 per cent of the claim amount over and above Rs.20,00,00,000 with a ceiling of Rs. 30,00,000
GCC 8.2.4	Provisions of Arbitration and Conciliation Act 2015 will apply.	
GCC 8.2.5	The designated Appointing Authority for a new Adjudicator is President, Institution of Engineers, New Delhi.	
ADDITIONAL CLAUSE 9.0	<p>Add the following as GCC clause 9.0 :</p> <p>9. Security to be reviewed as per new guidelines Security instructions for raw data acquisition and pre-processing shall be as follows:</p> <p>(a) Aerial data- acquisition/photography/survey is to be strictly confined to the exact area for which permission obtained. Moreover, the undertakings given in the application shall be strictly adhered to.</p> <p>(b) No sensor, other than those mentioned in the application should be used.</p> <p>(c) The date of survey is to be intimated to ATC if applicable in advance indicating specific date and time to enable them to issue necessary clearance</p> <p>(d) The Service Provider should be ready to offer his UAS/Drone for inspection by the service agencies of MoD, MHA, DGCA to check survey equipment /sensor before undertaking Drone surveys.</p> <p>(e) The data should not be taken out of the UAS/Drone to any place other than directed by Employer.</p> <p>(f) After completion of survey, no data should be left in storage in the equipment fitted in the UAS/Drone.</p> <p>(g) At the end of each day operation, the data should be copied and stored as directed by the Employer.</p> <p>(h) ‘Restricted’ security classification will be given to the data products. The data is to be handled by the Service Provider accordingly.</p> <p>(i) The data should be processed by Indian experts in India at the designated places within SoI complex. In case a foreign expert is required for processing the data, the Service Provider shall be responsible for obtaining necessary clearances/permissions as per the latest government of india guidelines on geospatial products and services, to handle data ensuring the storage of data within India.</p> <p>(j) Whenever Inspecting Officer is placed with drone flying team, it will be mandatory on the part of Operator to provide the following documents for his perusal:-</p> <p>(i) Copy of valid DGCA permit and ATC clearance.</p> <p>(ii) Copy of valid MOD clearance (if required).</p> <p>(iii) Proof of Insurance cover.</p>	

(iv) valid UAS pilot Licence / certification

(l) Any change/addition and equipment/sensors at any stage of work, can be made only after obtaining prior Employer clearance.

(m) Fortnightly progress report is to be submitted to the Employer.

(n) All UAS/Drone permits and clearances (DGCA permit, ATC clearance, valid MoD clearance) will be the responsibility of the Service Provider and all operations will be undertaken in accordance with Indian Air Safety Regulations.

(o) The data acquired/intermediately or final products will not be permitted to be taken elsewhere. Proper account of daily production and distribution should be maintained.

(p) Post Processing of data acquired by Drone survey will be carried out inside the secure premises of purchaser or the service provider under the supervision of SSLR appointed officers. Necessary equipment/infrastructure should be installed at the premises by the successful bidder. The data acquired/intermediately or final will not be permitted to be taken elsewhere. Proper account of daily production and distribution should be maintained.

The Security instructions to be followed by the Service Provider during the Post Processing of Data at the Production Centre shall be as follows:

(a) No Data storage devices or electronic devices including mobile phones, laptops , CD , pen drives etc should be allowed inside the Production Centre except for specific clearances to be taken from Security Officer of Survey of India in exceptional circumstances arising out of any requirements.

(b) No data should be allowed to be taken outside the Production Centre by the Service Provider

(c) Systems and storage in Production Centre should not be connected to unsecured internet lines.

(d) All the personnel working inside the Production Centre should have valid Identity card of the company. Any foreign national working inside the Production center should have valid visa and other documents verified by Ministry of External Affairs and permission from Ministry of Defense. Identity card of the company will be checked by the Security staff every day before the employee enters the Production Centre. Surprise checks for the same will also be carried out by the Security Officer of Survey of India during the working hours.

(e) Work should only be executed inside Production Centre only in the Presence of SSLR officials.

(f) All the hardcopy plots and printouts, other Project related materials are to be kept in Almirahs whose key will be with SOI officials.

(g) The Survey of India Security Officer reserves the right to frisk the working personnel every day / during surprise check.

(h) There should be two separate segments in the Production centre, one for administrative and other for the production / processing.

	<p>(i) The Production centre should strictly adhere to the security measures in terms of entry and exit to Production centre (preferably Biometric methods etc), accessing data (Administrator /user passwords , Networking etc) , disabling USB ports for theft of data , authorising persons to handle the data , log books , CCTV cameras , fire and smoke protection , lock and key system etc.</p> <p>(j)Storage disks of network storage, servers, workstations etc used at production center shall not be allowed to be taken outside of production center.</p>
<p>Additional Clause 10.0</p>	<p>Add the following as GCC clause 10.0 :</p> <p>Salient Features of Major Labour Laws in India applicable to Establishments is given below. The law as current on the date of bid opening will apply</p> <p>a) Workmen Compensation Act 1923: The Act provides for compensation in case of injury by accident arising out of and during the course of employment.</p> <p>b) Payment of Gratuity Act 1972: Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed 5 years' service or more or on death the rate of 15 days wages for every completed year of service. The Act is applicable to all establishments employing 10 or more employees.</p> <p>c) Employees P.F. and Miscellaneous Provision Act 1952 (since amended): The Act Provides for monthly contributions by the employer plus workers @ 10% or 8.33%. The benefits payable under the Act are :</p> <p>(i) Pension or family pension on retirement or death, as the case may be.</p> <p>(ii) Deposit linked insurance on the death in harness of the worker.</p> <p>(iii) Payment of P.F. accumulation on retirement/death etc.</p> <p>d) Maternity Benefit Act 1951: The Act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.</p> <p>e) Contract Labour (Regulation & Abolition) Act 1970: The Act provides for certain welfare measures to be provided by the Service Provider to contract labour and in case the Service Provider fails to provide, the same are required to be provided, by the Principal Employer by Law. The Principal Employer is required to take Certificate of Registration and the Service Provider is required to take license from the designated Officer. The Act is applicable to the establishments or Service Provider of Principal Employer if they employ 20 or more contract labour.</p> <p>f) Minimum Wages Act 1948: The Employer is supposed to pay not less than the Minimum Wages fixed by appropriate Government as per provisions of the Act if the employment is a scheduled employment. Constructions of Buildings, Roads, Runways are scheduled employments.</p> <p>Wage Code: to be included</p> <p>g) Payment of Wages Act 1936: It lays down as to by what date the wages are to be paid, when it will be paid and what deductions can be</p>

	<p>made from the wages of the workers.</p> <p>h) Equal Remuneration Act 1979: The Act provides for payment of equal wages for work of equal nature to Male and Female workers and for not making discrimination against Female employees in the matters of transfers, training and promotions etc.</p> <p>i) Payment of Bonus Act 1965: The Act is applicable to all establishments employing 20 or more employees. The Act provides for payments of annual bonus subject to a minimum of 8.33% of wages and maximum of 20% of wages to employees drawing Rs.3500/-per month or less. The bonus to be paid to employees getting Rs.2500/- per month or above upto Rs.3500/- per month shall be worked out by taking wages as Rs.2500/-per month only. The Act does not apply to certain establishments. The newly set-up establishments are exempted for five years in certain circumstances. Some of the State Governments have reduced the employment size from 20 to 10 for the purpose of applicability of this Act.</p> <p>j) Industrial Disputes Act 1947: The Act lays down the machinery and procedure for resolution of Industrial disputes, in what situations a strike or lock-out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.</p> <p>k) Industrial Employment (Standing Orders) Act 1946: It is applicable to all establishments employing 100 or more workmen (employment size reduced by some of the States and Central Government to 50). The Act provides for laying down rules governing the conditions of employment by the Employer on matters provided in the Act and get the same certified by the designated Authority.</p> <p>l) Trade Unions Act 1926: The Act lays down the procedure for registration of trade unions of workmen and employers. The Trade Unions registered under the Act have been given certain immunities from civil and criminal liabilities.</p> <p>m) Child Labour (Prohibition & Regulation) Act 1986: The Act prohibits employment of children below 14 years of age in certain occupations and processes and provides for regulation of employment of children in all other occupations and processes. Employment of Child Labour is prohibited in Building and Construction Industry.</p> <p>n) Inter-State Migrant workmen's (Regulation of Employment & Conditions of Service) Act 1979: The Act is applicable to an establishment which employs 5 or more inter-state migrant workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in another state). The Inter-State migrant workmen, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as housing, medical aid, travelling expenses from home upto the establishment and bank etc.</p> <p>o) The Building and Other Construction workers (Regulation of Employment and Conditions of Service) Act 1996 and the Cess Act of 1996: All the establishments who carry on any building or other construction work and employs 10 or more workers are covered under this Act. All such establishments are required to pay cess at the rate not ex-</p>
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	<p>ceeding 2% of the cost of construction as may be modified by the Government. The Employer of the establishment is required to provide safety measures at the Building or construction work and other welfare measures, such as Canteens, First-Aid facilities, Ambulance, Housing accommodations for workers near the work place etc. The Employer to whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the Government.</p> <p>p) Factories Act 1948: The Act lays down the procedure for approval at plans before setting up a factory, health and safety provisions, welfare provisions, working hours, annual earned leave and rendering information regarding accidents or dangerous occurrences to designated authorities. It is applicable to premises employing 10 persons or more with aid of power or 20 or more persons without the aid of power engaged in manufacturing process.</p> <p>q) Code of Wages 2019 (implemented from 1st April, 2021)</p>
<p>Additional Clause 11.Non-Disclosure Obligations</p>	<p>The Service Provider will ensure that complete data (Raw, Geo-tagged, GPS observed, logs etc) is handed over to the purchaser representative and do not copy in any form & in any media for any other purpose without explicit approval/consent of the Service consumer will be kept by Service provider after completion of data capturing & pre-QC and final acceptance of the data by Service consumer.</p>

SECTION VIII – CONTRACT FORMS

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1. LETTER OF ACCEPTANCE

[Letterhead paper of the Purchaser]

[date]

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

Subject: **Notification of Award Contract No.** for LOT 1/2

This is to notify you that your Bid dated . . . *[insert date]* . . . for execution of the *[insert name of the contract and identification number, as given in the SCC]* for the Accepted Contract Amount of *[insert amount in numbers and words in Rupees]*, as corrected and modified in accordance with the Instructions to Bidders is hereby accepted by our Agency.

You are requested to furnish the Performance Security within 28 days in accordance with the Conditions of Contract, using for that purpose the of the Performance Security Form included in Section VIII, Contract Forms, of the Bidding Document.

Authorized Signature: _____
Name and Title of Signatory: _____
Name of Agency: _____

Attachment: Contract Agreement

2. CONTRACT AGREEMENT

LUMP-SUM REMUNERATION

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

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

WHEREAS

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

NOW THEREFORE the parties hereto hereby agree as follows:

- 1. The following documents shall be deemed to form and be read and construed as part of this Agreement, and the priority of the documents shall be as follows:
 - (a) The letter of Acceptance
 - (b) The Service Provider’s Bid
 - (c) The Special Conditions of Contract
 - (d) The General Conditions of Contract
 - (e) Technical Requirements (including Schedule of Requirements and Technical Specifications and deliverables as per Section V)
 - (f) The Price Activity Schedule; and
 - (g) [Add here any other document(s) as part of contract]

3. The mutual rights and obligations of the Employer and the Service Provider shall be as set forth in the Contract, in particular:
 - a. the Service Provider shall carry out the Services in accordance with the provisions of the Contract; and
 - b. the Employer shall make payments to the Service Provider in accordance with the provisions of the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of *[insert the name of the Contract governing law country]* on the day, month and year indicated above.

For and on behalf of the Purchaser

Signed: *[insert signature]*
in the capacity of *[insert title or other appropriate designation]*
in the presence of *[insert identification of official witness]*

For and on behalf of the Supplier

Signed: *[insert signature of authorized representative(s) of the Supplier]*
in the capacity of *[insert title or other appropriate designation]*
in the presence of *[insert identification of official witness]*

3.PERFORMANCE SECURITY - BANK GUARANTEE

[Guarantor letterhead or SWIFT identifier code]

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

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

To: _____ *[name of Purchaser]*

_____ *[address of Purchaser]*

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

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

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

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Applicant, up to a total of _____ *[amount of guarantee³]* _____ *[in words]*, such sum being payable in the types and proportions of currencies in which the Contract Price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of _____ *[amount of guarantee]* as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

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

We further agree that no change or addition to or other modification of the terms of the Contract or of the Goods and related Services to be supplied thereunder or of any of the Contract documents which

³ *An amount shall be inserted by the Guarantor, representing the percentage of the Contract Price specified in the Contract and denominated in Indian Rupees.*

may be made between you and the Applicant shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid until (i.e.) 60 days following the Completion date of the Contract including any warranty obligations⁴, and any demand for payment under it must be received by us at this office on or before that date.

Signature and seal of the guarantor _____

Name of Bank _____

Address _____

Date _____

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

⁴ Completion date as described in GC Clause 18.4

NOTICE INVITING TENDER (NIT)

No SSLR/DAAS/ORI/LOT2A/13/2022-23

Date 02.01.2023

TENDER **HIRING OF DRONE OR AERIAL SURVEY AS A SERVICE FOR ORI GENERATION FOR LARGE SCALE MAPPING**

UNDER RESURVEY/SURVEY, UPOR AND SVAMITVA PROJECT **(Two-Cover Bidding Process via e-Procurement Portal)**

1. The Government of Karnataka has taken up Drone/Aerial Based Resurvey of Agricultural Lands as well as the Residential Properties in both rural and urban areas in Karnataka as part of its Resurvey / Large Scale Mapping (LSM) Program.
2. Additionally, the Government of India has taken up the project of SVAMITVA which is drone/aerial based survey of the residential properties or the aabadi area in the rural area.
3. The Government of Karnataka, as part of its Large Scale Mapping and Resurvey Project through department of Survey Settlement and Land Records (SSLR) in partnership with Survey of India (SoI) has initiated the works in 5 full districts (Tumkur, Ramnagar, Hassan, Uttara Kannada and Belgavi) as well as the Bengaluru City. Large scale maps and the revised RTC's (Record of Right, Tenancy and Crop data) are to be generated for these areas using drone/aerial based image acquisition.
4. The Government of Karnataka decided and approved to expand the Resurvey, UPOR and SWAMITVA activities to the remaining 26 districts in phases using high resolution images of 5cm or better Ground Sampling Distance (GSD) under Large Scale Mapping (LSM) Project. Accordingly, the Drone/Aerial Based Survey is being taken up in rest of the 26 districts in multiple phases as 5cm GSD and other technical details mentioned in this tender.
5. In this tender is one Package/LOT – namely LOT 2A bid for 3 districts of (i) Bangalore Urban (excluding BBMP) (ii) Bengaluru Rural (iii) Mandya, covering about 8610 SqKM is being called.
6. The Resurvey, UPOR and SVAMITVA are time bound and mission critical projects and with pre-defined deadlines. Hence, the time is of essence for this work. The drone based 5cm GSD survey-grade survey is a new technological methodology for doing survey for lands and properties. The private sector drone flying and its policies and guidelines have been issued by Government of India in the last 2-3 years only. The sector is poised for huge growth and technological transformation. Being technology centric the traditional players by mere virtue of financial and traditional survey experience are not the only capable agencies. It is seen in previous tenders that the main bidders who meet financial turnover requirements do not have drones nor have experience in survey-grade drone flying. They are choosing sub-contractors who have drones and relevant experience. Hence, the traditional method of qualifying agencies with financial turnover as main qualifying criteria alone is not adequate, hence, in this tender such

Drone/Aerial based agencies who have successfully delivered the ORIs for thousands of Square Kilo Meters in government programmes are also given an opportunity to be qualified provided they meet the technical and other qualifying criteria.

7. This tender is for **HIRING OF DRONE OR AERIAL SURVEYAS A SERVICE FOR ORI GENERATION FOR LARGE SCALE MAPPING (LSM)** for 3 districts covering total area of about 8610 Sq KM in one Packages/LOTS – LOT 2A.
8. Survey, Settlement & Land Records, Revenue Department, Govt of Karnataka [herein-after referred to as the Purchaser] has Survey of India and Karnataka State Remote Sensing Applications Centre (KSRSAC), as the technical partners of the Survey Settlement and Land Records Department of Government of Karnataka. Our technical partners shall also be technical advisor and technical coordinator for this tender.
9. Purchaser along with SoI / KSRSAC shall define the methodology/process to be adopted including the QA/QC process and standard or accuracy parameters for data acceptance for this project. SoI/KSRSAC shall act as the technical and Implementation partner in the project.
10. Purchaser along with support of SoI/KSRSAC shall supervise and provide the quality acceptance of the datasets generated by the service provider, as per the defined standard.
11. Purchaser, with the support of KSRSAC/SoI, shall establish the process of data submission and provide its approval for compliance submitted by the service provider as per the defined standards of each product(s) – for each stage..
12. The methodology mentioned in the RFP shall be followed. Detailed guidelines on the data submission process and file naming conventions to be adopted will be shared with the successful bidder during the contract award.
13. In the context explained above, Additional Director, Office of Commissioner, Survey, Settlement and Land Records, Revenue Department, Bengaluru invites bids in e-Procurement Portal of the Government of Karnataka from the eligible bidders for supply of following goods and services listed below:

Drone/Aerial Survey - Package/LOT 2A		
S. No	District name	Area in Sq KM
1	Bengaluru Urban (excluding BBMP)	1390
2	Bengaluru Rural	2259
3	Mandya	4961
	TOTAL =	8610

NOTE: Area figures provided above is indicative. Final area & shape file will be provided to the Service Provider at the time of award and payment shall be actual Square Kilometers of ORIs delivered successfully as per terms & conditions of this RFP

Calendar of Events

The details of the Calendar of Events are as below:

Sl. No.	Description	Date	Time
1	Commencement of issue of Bid document through E-Procurement Portal of Government of Karnataka	03-01-2023	10:00 AM
2	Last date for downloading of Bid document	18-01-2023	-
3	Last date and time for receipt of Bid	18-01-2023	05:00 PM
4	Pre-Bid meeting (at Office of Commissioner SSLR, Bengaluru)	07-01-2023	11:00 AM
5	Opening of Bids (Technical)	19-01-2023	05: 01 PM onwards
6	Opening of Bids (Commercial – only of technically qualified bidders)	As per intimation given after technical evaluation.	-
7	Award of Contract	As per intimation given after financial evaluation.	-
8	Furnishing of Performance Security by the Successful Bidder	07-days from issue of LoI	
9	Signing of contract	Within 5-days of successful submission of PG	

*Time and date of opening of Financial part of bid will be intimated after Technical acceptance of bid

1. Bidders may view and download the Bid document free of cost from the e-procurement portal of Government of Karnataka at <https://eproc.karnataka.gov.in>.
2. For participation in the bidding, it is mandatory for the bidder to obtain Class-III Digital Signature Certificate (DSC) from one of the authorized Certifying Authorities (CA) and then register with the Government of Karnataka e-procurement platform and submit bids by using their user ID and Digital Signature. Foreign bidders may obtain DSC from any Licensed Certifying Authority which has been recognized by the Controller of Certifying Authorities, Govt. of India as per details available at www.cca.gov.in. Bidders already possessing the Digital Signature issued from authorized CAs can use the same in this bid.

Bidders should note that they are required to obtain separate DSCs for signing and encryption, issued by the same CA, for participating in the electronic bid submission.

3. A **pre-bid meeting** will be held at the Office of Commissioner Survey Settlement & Land Records, K R Circle, Opposite BESCOM Head Office, Bengaluru, as per schedule given above, to clarify the issues and to answer questions on any matter that may be raised at that stage as stated in the bidding document.
4. Bid Processing Fee: Interested Tenderer who wish to participate shall pay tender processing fee through any of the 5 e-Payment options only:
 - a. Credit Card
 - b. Direct Debit
 - c. National Electronic Funds Transfer (NEFT)
 - d. Net banking
 - e. Over the Counter (OTC) – designated ICICI bank branches located across the country. Please note that payments submitted through cheque or demand draft shall not be accepted. Further details regarding e-Payment; please refer to e-Procurement website –<https://eproc.karnataka.gov.in>
5. Only online submission of tenders is permitted. Therefore, tenders must be submitted online on website <https://eproc.karnataka.gov.in> as per deadline fixed in the Calendar of Tender above and the applicable date and time shall be as per server date and time. The bids will be opened online by the authorized officers as per schedule given in the Calendar above.
6. Other details can be seen in the bidding documents.
7. The address for communication is as under:

Additional Director
Office of Commissioner,
Survey, Settlement & Land Records,
K R Circle, Opposite BESCOM Head
Office,
E-mail: Karnatakadaas2022@gmail.com

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Section I. Instructions to Bidders

A. General

1. Scope of Bid

1.1 The Purchaser – Commissioner Survey, Settlement & Land Records, Revenue Department, Government of Karnataka, issues these Bidding Documents for the supply of Goods and Related Services incidental thereto as specified in Section V, Schedule of Requirements. The name, identification and number of lots (contracts) of this OPEN TENDER ENQUIRY (OTE) procurement are as follows

HIRING OF DRONE OR AERIALSURVEY AS A SERVICE FOR ORI GENERATION FOR LARGE SCALE MAPPING MAPPING for about 8610 Sq KM area in 3 districts in Karnataka in one LOT and the details specified in Section V Schedule of Requirement and as per Sub-section 3 Technical Specification.

Area figures provided above is indicative. Final area shape file will be provided to the Service Provider at the time of award.

The 3 districts in this tender are divided into one Packages/LOTs as follows –

Drone/Aerial Survey - Package/LOT 2A		
S. No	District name	Area in Sq KM
1	Bengaluru Urban (excluding BBMP)	1390
2	Bengaluru Rural	2259
3	Mandya	4961
TOTAL =		8610

NOTE Area figures provided above is indicative. Final area & shape file will be provided to the Service Provider at the time of award.

The whole geographical of these 3 districts, in 1package/ LOT shall be covered as part of drone/aerial flying under this tender

The scope of work includes:

- Flight Planning
- Provision of ground control points by Dual frequency GNSS receivers either in relative static positioning mode OR by using existing NRTK CORS with Dual frequency RTK rovers required for Drone / Aerial survey.
- Planning and execution of Drone / Aerial Survey with Professional survey grade PPK enabled drones or with aircraft

	<p>fitted with Large or Medium Format Digital Cameras.</p> <ul style="list-style-type: none"> • Mission planning • Data acquisition, • Data pre-Processing / geo-tagging, • Data Post processing with suitable software, • DSM and Ortho Rectified Image (ORI) <ul style="list-style-type: none"> ➤ QA/QC at each stage of work and for the whole work ➤ Data management including daily incremental backup, monthly full backup of data as per the back-up plan submitted by the Service Provider and approved by the Purchaser. ➤ Delivery of products (softcopy) as per list of deliverables and delivery instructions. ➤ Timely delivery as per Monthly Implementation Plan approved by the Purchaser is also a critical deliverable by itself and the time is the essence of this project. <p>The Intended Completion Date is Twelve (12) months from the date of ‘Commencement of Service’; provided that the flying should be completed in 9-months time from date of signing of the contract.</p> <p>1.2 Throughout these Bidding Documents: The term “in writing” means communicated in written form (e.g. by mail, e-mail, fax, telex, distributed or received through the electronic-procurement system used by the Purchaser) with proof of delivery – including electronic delivery; The Purchaser shall use the electronic-procurement system specified in 7.1 to manage this Bidding process.</p> <p>If the context so requires, “singular” means “plural” and vice versa; and “day” means calendar day.</p>
<p>2. Source of Funds</p>	<p>2.1 The Employer/Purchaser, as defined in the BDS, intends to apply part of the funds approved for drone / Aerial based Survey/Resurvey & SVAMITVA, towards the cost of the Project, as defined in the BDS, to cover eligible payments under the Contract for the Services to be performed as per bid document</p>
<p>3. Corrupt & Fraudulent Practices</p>	<p>3.1 It is the Government of India’s (GoI) & Government of Karnataka’s (GoK) policy to require that the highest standards of ethics are observed during the procurement and execution of contracts. In pursuance of this policy, the officials of Procuring Entities and the bidders / suppliers/ contractors/ sub-contractors/consultants/ service-providers involved in procurement process must abide by the Code of Integrity for Public Procurement (CIPP).</p> <p>3.2 Code of Integrity for Public Procurement: Procuring authorities as well as bidders, suppliers, contractors and consultants/contractor</p>

should observe the highest standard of ethics and should not indulge in the following prohibited practices, either directly or indirectly, at any stage during the procurement process or during execution of resultant contracts:

- i) “Corrupt practice”: making offers, solicitation or acceptance of bribe, rewards or gifts or any material benefit, in exchange for an unfair advantage in the procurement process or to otherwise influence the procurement process or contract execution;
- ii) “Fraudulent practice”: any omission or misrepresentation that may mislead or attempt to mislead so that financial or other benefits may be obtained or an obligation avoided. This includes making false declaration or providing false information for participation in a tender process or to secure a contract or in execution of the contract;
- iii) “Anti-competitive practice”: any collusion, bid rigging or anti-competitive arrangement, or any other practice coming under the purview of The Competition Act,2002, between two or more bidders, with or without the knowledge of the Procuring Entity, that may impair the transparency, fairness and the progress of the procurement process or to establish bid prices at artificial, non-competitive levels;
- iv) “Coercive practice”: harming or threatening to harm, persons or their property to influence their participation in the procurement process or affect the execution of a contract;
- v) “Conflict of interest”: participation by a bidding firm or any of its affiliates that are either involved in the consultancy contract to which this procurement is linked; or if they are part of more than one bid in the procurement; or if the bidding firm or their personnel have relationships or financial or business transactions with any official of Procuring Entity who are directly or indirectly related to tender or execution process of contract; or improper use of information obtained by the (prospective) bidder from the Procuring Entity with an intent to gain unfair advantage in the procurement process or for personal gain; and
- vi) “Obstructive practice”: materially impede the Procuring Entity’s investigation into allegations of one or more of the above mentioned prohibited practices either by deliberately destroying, falsifying, altering; or by concealing of evidence material to the investigation; or by making false statements to investigators and/or by threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or by impeding the Procuring Entity’s rights of audit or access to information;

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

	<p>3.4 Without prejudice to and in addition to the rights of the Purchaser to other penal provisions as per the bid documents or contract, if the Purchaser comes to a conclusion that a (prospective) bidder (including members of Joint Venture/ Sub-Contractor)/contractor/supplier/consultant/service-provider, directly or through an agent, has violated this Code of Integrity in competing for the contract or in executing a contract, the Purchaser may take appropriate measures including one or more of the following:</p> <p>i) <u>If his bids are under consideration in any procurement,</u></p> <p>a) forfeiture or encashment of bid security;</p> <p>b) calling off of any pre-contract negotiations; and</p> <p>c) rejection and exclusion of the bidder from the procurement process.</p> <p>ii) <u>If a contract has already been awarded,</u></p> <p>a) cancellation of the relevant contract and recovery of compensation for loss incurred by the Purchaser;</p> <p>b) forfeiture or encashment of any other security or bond relating to the procurement;</p> <p>c) recovery of payments made by the Procuring Entity along with interest thereon at the prevailing rate;</p> <p>iii) <u>Provisions in addition to above,</u></p> <p>a) removal from the list of registered suppliers and banning/debarment of the bidder from participation in future procurements of the Procuring Entity for a period not less than one year;</p> <p>b) in case of anti-competitive practices, information for further processing may be filed by the Purchaser, with the Competition Commission of India;</p> <p>c) initiation of suitable disciplinary or criminal proceedings against any individual or staff found responsible.</p>
	<p>3.5 Furthermore, Bidders shall be aware of the provision stated in Clause 3 of the General Conditions of Contract.</p>
<p>4. Eligible Bidders</p>	<p>4.1 All bidders shall provide in Section IV, Bidding Forms, a statement that the Bidder (including all subcontractors) is not associated, nor has been associated in the past, directly or indirectly, with the consultant or any other entity that has prepared the design, specifications, and other documents for the Project or being proposed as Project Manager for the Contract. A firm that has been engaged by the Employer to provide Consultant Services for the preparation or supervision of the procurement, and any of its affiliates, shall not be eligible to bid.</p> <p>4.2 Bidders shall not be under Ban/Blacklisting/Debarment for corrupt and fraudulent practices or for lack in performance by any</p>

	<p>Government/Semi-Government entity.</p> <p>4.3 A Bidder shall be a company registered under the Company Act of India. A Joint Venture is not accepted.</p> <p>4.4 NOT Applicable</p> <p>4.5 Any false declaration and non-compliance of the above would be a ground for immediate termination of the contract and further legal action in accordance with the laws.</p> <p>4.6 Sub-contractors can be included as part of the bid to complete the project in time. There is no limit in having any number of sub-contractors. However, each subcontractor should fulfill the pre-qualification criteria mentioned in the RFP for the specific activity.</p>
5. One Bid Per Bidder for Each LOT	<p>5.1 Each Bidder shall submit only one Bid for a LOT. A Bidder who submits or participates in more than one Bid in a single LOT will cause all the bids of the Bidder to be disqualified.</p> <p>5.2 A Sub Contractor is allowed for this tender.</p> <p>5.3 A subcontractor participating with one bidder can't be participating in another bidder in the same LOT. Such multiple participation of same sub-contractor with multiple bidders in the same LOT shall lead to disqualification of all bids participated by such a sub-contractor in that LOT.</p>
	B. Contents of Bidding Document
6. Sections of Bidding Documents	<p>6.1 The Bidding Documents consist of Parts 1, 2, and 3, which include all the Sections indicated below, and should be read in conjunction with any Addendum issued in accordance with ITB Clause 8.</p> <p>PART 1 Bidding Procedures Section I. Instructions to Bidders (ITB) Section II. Omitted Section III. Evaluation and Qualification Criteria Section IV. Bidding Forms</p> <p>PART 2 Supply Requirements Section V. Schedule of Requirements</p> <p>PART 3 Contract Section VI. General Conditions of Contract (GCC) Section VII. Special Conditions of Contract (SCC) Section VIII. Contract Forms</p>

	<p>6.2 The NOTICE INVITING BIDS issued by the Purchaser is not part of the Bidding Document.</p> <p>6.3 Unless obtained directly from the Purchaser, the Purchaser is not responsible for the completeness of the document, responses to requests for clarification, minutes of pre-bid meeting (if any), or Addenda to the Bidding Document in accordance with ITB 8. In case of any contradiction, documents obtained directly from the Purchaser shall prevail. The tender or bidding document is uploaded and available in e-Procurement Portal of the Government of Karnataka viz https://eproc.karnataka.gov.in</p> <p>6.4 The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Documents and to furnish with its Bid all information or documentation as is required by the Bidding Documents.</p>
<p>7. Clarification of Bidding Documents</p>	<p>7.1 The clarifications/update/addendum/corrigendum before opening up of the tender shall be solely through the eProcurement Portal of Government of Karnataka viz https://eproc.karnataka.gov.in and the bid therein for this tender. A prospective Bidder requiring any clarification on the Bidding Documents may raise the same in the Pre-Bid Conference provided in the Calendar of Events. Clarifications requested through any other mode shall not be considered by the Purchaser. The Purchaser will respond to any request for clarification, provided that such request is received at least one day prior to the date of Pre-Bid Conference. Description of clarification sought and the response of the Purchaser shall be uploaded for information of all Bidders without identifying the source of request for clarification. Should the Purchaser deem it necessary to amend the Bidding Documents as a result of a clarification, it shall do so following the procedure under ITB Clause 8 and ITB Sub-Clause 22.2. It is the bidder's responsibility to check on the e-procurement system, for any addendum/ amendment/ corrigendum to the bidding document. The clarifications/corrigendum/addendum or any communication shall be through the said eProcurement portal of Government of Karnataka viz https://eproc.karnataka.gov.in</p>
<p>8. Amendment of Bidding Documents</p>	<p>8.1 At any time prior to the deadline for submission of bids, the Purchaser may amend the Bidding Documents by issuing addendum. The addendum will appear on the e-procurement system.</p> <p>8.2 Any addendum thus issued shall be part of the Bidding Documents and shall be deemed to have been communicated to all the bidders.</p> <p>8.3 To give prospective Bidders reasonable time in which to take an addendum into account in preparing their bids, the Purchaser may, at its discretion, extend the deadline for the submission of bids, pursuant to ITB Sub-Clause 22.2</p>

	8.4 The clarifications/corrigendum/addendum or any communication shall be through the said eProcurement portal of Government of Karnataka viz https://eproc.karnataka.gov.in
	C. Preparation of Bids
9. Cost of Bidding	9.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, and the Purchaser shall not be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process. The Bidder, at the Bidder's own responsibility and risk, is encouraged to visit and examine the Site of required Services and its surroundings and obtain all information that may be necessary for preparing the Bid and entering into a contract for the Services. The costs of visiting the Site shall be at the Bidder's own expense.
10. Language of Bid	10.1 The Bid, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Purchaser, shall be written in Kannada or English language. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages into English language, in which case, for purposes of interpretation of the Bid, such translation shall govern.
11. Documents Comprising the Bid	11.1 The Bid shall comprise two Parts, namely the Technical Part and the Financial Part. These two Parts shall be submitted simultaneously. 11.2 The Technical Part shall contain the following: <ul style="list-style-type: none"> (a) Letter of Bid – Technical Part, in accordance with ITB Clause 12; (b) Bid Security, in accordance with ITB Clause 19.1, if required; (c) Alternative bids– Technical Part, if permissible, in accordance with ITB 13, the Technical Part of any Alternative Bid; (d) Written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB Clause 20.2; (e) Documentary evidence in accordance with ITB Clause 17 establishing the Bidder's qualifications to perform the contract if its bid is accepted; (f) Documentary evidence in accordance with ITB 17 establishing the Bidder's eligibility to bid; (g) Documentary evidence in accordance with ITB Clauses 16,

that the Services conform to the Bidding Documents; and
(h) The following documents as part of the technical bid:

1. Certification of incorporation of the bidder.
2. As e- procurement system is being used, there is no hard copy submission of bid. The relevant hard copies shall be brought at the time of technical evaluation and will be scrutinized as per need – including but not limited to the power of attorney, Bid Security Declaration Form, original affidavit regarding correctness of information furnished with bid document.
3. The bidder shall clearly confirm that all facilities (owned or leased or by procurement) including key and critical equipment as specified in section III exist with him for inspection and testing and these can be accessed by the Purchaser or his representative for inspection.
4. Technical schedules of services as required by technical specifications.
5. Qualification information including key personnel, Method Statement, Work Plan & Schedule as per section IV to meet employer technical specifications as per Section V to demonstrate substantial responsiveness of the Services.
6. The following details shall also be provided by Indian Bidders:
 - a. Name, address, PAN and ward/circle where they are being assessed of the Directors of the Bidding Company.
 - b. Company's PAN and Income Tax clearance certificate and ward/circle where it is being assessed,
 - c. Registration details of the company under GST, local and Central Sales Tax, and other laws as may be applicable.
7. The bidders from outside India shall provide the corresponding details of Income Tax registration, Social Security Number, details regarding Registration under goods & services tax (as may be applicable) etc.
8. The bidder shall disclose instance of previous past performance that may have resulted into adverse actions taken against the bidder during the last five years.
9. All documents required in Section III: Evaluation & Qualification Criteria

All Forms as required in Section IV

11.3 The **Financial Part** shall contain the following:

	<p>(a) Letter of Bid – Financial Part: prepared in accordance with ITB 12 and ITB 14;</p> <p>(b) Price Schedules: completed prepared in accordance with ITB 12 and ITB 14;</p> <p>(c) Alternative Bid - Financial Part; if permissible in accordance with ITB 13, the Financial Part of any Alternative Bid; and</p> <p>(d) Any other document required in the AITB.</p> <p>11.4 The Technical Part shall not include any financial information related to the Bid price. Where material financial information related to the Bid price is contained in the Technical Part, the Bid shall be declared non-responsive and disqualified.</p> <p>11.5 The Bidder shall furnish in the Letter of Bid, information on commissions and gratuities, if any, paid or to be paid to agents or any other party relating to this Bid.</p>
<p>12. Process of Bid Submission</p>	<p>12.1 The Letter of Bid – technical Part, Letter of Bid – Financial Part and Price Schedules shall be prepared using the relevant forms furnished in Section IV, Bidding Forms. The forms must be completed without any alterations to the text, and no substitutes shall be accepted except as provided under ITB 20.2. All blank spaces shall be filled in with the information requested. The submission shall be in the eProcurement Portal https://eproc.karnataka.gov.in.</p> <p>12.2 Entire Bid including the Letter of Bid and filled-up Price Schedules shall be submitted online on e-procurement system specified in ITB 7.1. Details and process of online submission of the tender and relevant documents are given in the website mentioned above. Scanned copies of documents listed in clauses 11 and 12.3 should also be uploaded on this website.</p> <p>12.3 Submission of Original Documents: The bidders are required to separately bring during the technical scrutiny/evaluation (i) written confirmation authorizing the signatory of the Bid to commit the Bidder as per ITB Clause 11.2(d); (ii) original bid security declaration form in approved form; and (iii) original affidavit regarding correctness of information furnished with bid document.</p>
<p>13. Alternative Bids</p>	<p>13.1 The alternative bids shall not be considered.</p>
<p>14. Bid Prices and Dis-</p>	<p>14.1 The prices and discounts quoted by the Bidder in the Letter</p>

<p>counts</p>	<p>of Bid – Financial Part and in the Price Schedules shall conform to the requirements specified below:</p> <p>14.2 All lots (contracts) and items must be listed and priced separately in the Price Schedules.</p> <p>14.3 The price to be quoted in the Letter of Bid – Financial Part, in accordance with ITB 12.1, shall be the total price of the bid, excluding any discounts offered.</p> <p>14.4 The Bidder shall quote any discounts and indicate the methodology for their application in the Letter of Bid – Financial Part in accordance with ITB 12.1.</p> <p>14.5 Prices quoted by the Bidder shall be fixed during the Bidder’s performance of the Contract and not subject to variation on any account. A bid submitted with an adjustable price quotation shall be treated as nonresponsive and shall be rejected, pursuant to ITB 31.</p>
	<p>14.6 Not applicable</p>
	<p>14.7 The Bidder, at the Bidder’s own responsibility and risk, is encouraged to visit and examine the locations of required Services and its surroundings and obtain all information that may be necessary for preparing the Bid and entering into a contract for the Services. The costs of visiting the locations of required Services and its surroundings shall be at the Bidder’s own expense.</p> <p>14.8 Prices shall be quoted in the eProcurement Portal viz https://eproc.karnataka.gov.in as specified in the Price Schedule included in Section IV, Bidding Forms. Prices shall be entered in the following manner:</p> <p>(i) Bidder shall fill in rates and prices for all items of the Services described in the Specifications, and listed in the Activity Schedule in Section V, Schedule of Requirements. Items for which no rate or price is entered by the Bidder will not be paid for by the Employer when executed and shall be deemed covered by the other rates and prices in the Activity Schedule</p> <p>(ii) All duties, taxes, and other levies payable by the Service Provider under the Contract, or for any other cause, as of the date 28 days prior to the deadline for submission of Bids, shall be deemed to have been included in the total Bid price submitted by the Bidder.</p> <p>14.9 Deemed Exemption Benefits Bidders may like to ascertain availability of tax/duty exemption benefits, if any. They are solely responsible for obtaining such benefits, which they have considered in their bid and in case of failure to receive such benefits for rea-</p>

	<p>sons whatsoever, the Purchaser will not compensate the bidder.</p> <p>Where the bidder has quoted taking into account such benefits, it must give all information required for issue of necessary Certificates in terms of the Government of India's relevant Notification along with its bid as proforma stipulated in Section IV Bidding Forms.</p> <p>If the Bidder has considered the Deemed Export Benefits in its bid, the Bidder shall confirm and certify that the Purchaser will not be required to undertake any responsibilities of the deemed export scheme or the benefits available during contract execution except issuing the required certificates. Bids which do not conform to this provision or any condition by the Bidder which makes the bid subject to availability of deemed export benefits or compensation on withdrawal of or any variations in the deemed export benefits scheme will make the bid non responsive and hence liable to rejection.</p>
15. Currencies of Bid & Payment	15.1 The Bidder shall quote the Price in Indian Rupees only.
16. Documents Establishing the Eligibility and conformity of the Services	16.1 To establish the conformity of the Non-Consulting Services to the bidding document, the Bidder shall furnish as part of its Bid the documentary evidence that Services provided conform to the technical specifications and standards specified in Section V, Schedule of Requirements.
	16.2 Standards for provision of the Non-Consulting Services are intended to be descriptive only and not restrictive. The Bidder may offer other standards of quality provided that it demonstrates, to the Employer's satisfaction, that the substitutions ensure substantial equivalence or are superior to those specified in the Section V, Schedule of Requirements.
17. Documents Establishing the Eligibility & Qualifications of the Bidder	17.1 To establish Bidder's eligibility in accordance with ITB 4, Bidders shall complete the Letter of Bid – Technical Part, included in Section IV, Bidding Forms.
	17.2 The documentary evidence of the Bidder's qualifications to perform the contract if its bid is accepted shall establish to the Purchaser's satisfaction: that the Bidder meets each of the qualification criteria specified in Section III, Evaluation and Qualification;
	17.3 All Bidder shall provide in Section IV, Bidding Forms, a preliminary description of the proposed methodology work plan and schedule
18. Period of Validity	18.1 Bids shall remain valid for the period of 90-days after the

<p>of Bids</p>	<p>bid submission deadline date prescribed by the Purchaser in accordance with ITB 22.1. A bid valid for a shorter period shall be rejected by the Purchaser as non-responsive.</p> <p>18.2 In exceptional circumstances, prior to the expiration of the bid validity period, the Purchaser may request bidders to extend the period of validity of their bids. The request and the responses shall be made in writing. If a Bid Security is requested in accordance with ITB Clause 19, it shall also be extended for a corresponding period. A Bidder may refuse the request without forfeiting its Bid Security. A Bidder granting the request shall not be required or permitted to modify its bid, except as provided in ITB Sub-Clause</p>
<p>19. Bid Security</p>	<p>19.1 The Bidder shall furnish as part of the Technical Part of its bid, a Bid Security/EMD (Earnest Money Deposit) Declaration Form included in Section IV Bidding Forms..</p> <p>19.2 Not used.</p> <p>19.3 The Bid Security/EMD shall be in the amount shall be as per the table given in the RFP, mentioned separately for each package/lot and denominated in Indian Rupees or a freely convertible currency, and shall:</p> <p>(a) The bidder shall calculate the cumulative EMD amount, as per the packages / LOT proposed for submission.</p> <p>(b) Out of total EMD, Rs 5 Lakhs shall be paid through the eProcurement Portal of Government of Karnataka as permitted therein.</p> <p>(c) The rest of EMD shall be paid as Bank Guarantee from a Scheduled Commercial Bank having turnover not less than Rs 5000 Crores in the previous financial year. The Bank Guarantee shall be substantially in the format prescribed in this regard and uploaded in e-Procurement Portal as part of the Technical Bid.</p> <p>(d) The Bank Guarantee in original form shall be submitted, for all packages cumulatively or independently – packagewise – at the time of technical evaluation. Also the Bank Guarantee should be scanned and uploaded in the eProcurement Portal as part of technical evaluation.</p> <p>(e) be substantially in accordance with one of the forms of Bid Security/EMD included in Section IV,</p> <p>(f) Bidding Forms, or other form approved by the Purchaser prior to bid submission;</p> <p>(g) be payable promptly upon written demand by the Purchaser in case the conditions listed in ITB Clause 19.7 are invoked;</p> <p>(h) be submitted within 3 working days from the last date</p>

	<p>of submission of bids to the tender inviting authority for technical evaluation in its original form; copies will not be accepted;</p> <ul style="list-style-type: none"> (i) Remain valid for a period of 45 days beyond the original validity period of the 3-months bids that shall remain valid for 135 days or beyond that as per any period of extension of bid validity, if so requested under ITB Clause 18.2. (j) Absence of submission of BG for EMD in original shall lead to disqualification of bids and shall not entitle to any refund of amount paid in e-procurement portal towards EMD. (k) EMD shall be paid for each LOT separately. In case of EMD is not paid in full and cumulative for packages/LOTs applied for, the purchaser shall decide on the package/LOT to be considered for evaluation at its own discretion. (l) BG Shall be in favour of The Commissioner Survey, Settlement & Land Records Department, K R Circle, Opposite BESCO Head Office, Bengaluru (m) Beneficiary bank details shall be shared with the bankers at the time of claim in discussion with the finance department of Government of Karnataka. <p>19.4 If a Bid Security/EMD is required in accordance with ITB Sub-Clause 19.1, any bid not accompanied by a substantially responsive Bid Security shall be rejected by the Purchaser as non-responsive.</p> <p>19.5 MSME companies can't claim for waiver of EMD / performance security as this is a mission critical and high value tender.</p> <p>19.6 The Bid Security/EMD of the unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder's signing the contract and furnishing the Performance Security pursuant to ITB Clause 44.</p> <p>19.7 The Bid Security/EMD of the successful Bidder shall be returned as promptly as possible once the successful Bidder has signed the contract and furnished the required performance security.</p> <p>19.8 The originals of BG towards Bid Security/EMD and all associated letters from the bank shall be submitted to the purchaser as per the date mentioned in the RFP which will be used for evaluation of bids.</p> <p>19.9 The originals shall be returned to the bidders on the completion of evaluation process and initiating the return of EMD for un-</p>
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	<p>successful bidders.</p> <p>19.10 But the scanned copies should be submitted in eProcurement portal as part of the technical bid.</p> <p>19.11 The Bid Security/EMD may be forfeited:</p> <ul style="list-style-type: none"> (a) if a Bidder <ul style="list-style-type: none"> (iii) withdraws its bid during the period of bid validity specified by the Bidder in the Letter of Bid (Technical Part and/or Financial Part), except as provided in ITB Sub-Clause 18.2; OR (iv) does not accept the correction of errors in pursuant to ITB 35, OR (b) if the successful Bidder fails to: <ul style="list-style-type: none"> (i) sign the Contract in accordance with ITB Clause 43; or (ii) Furnish a Performance Security in accordance with ITB Clause 44. <p>19.12 The Employer may declare the Bidder ineligible to be awarded a contract in case of forfeiture of Bid Security/EMD and will be suspended for the period of 5 years from being eligible to submit Bids/Proposals for contract with the Procuring Entity.</p>
<p>20. Format and Signing of Bid</p>	<p>20.1 The Bidder shall prepare the Bid as per details given in ITB</p> <p>20.2 The bid shall be signed by a person duly authorized to sign on behalf of the Bidder. The authorization shall consist of a written confirmation as per this tender document and shall be uploaded along with the bid in eProcurement portal viz https://eproc.karnataka.gov.in.</p> <p>20.3 Not Applicable</p> <p>20.4 Corrections if any in the bid can be carried out by editing the information before electronic submission on e-procurement portal.</p>
	<p>D. Online Submission of Bids</p>
<p>21. Preparation of Bids</p>	<p>21.1 Bids, both Technical and Financial Parts, shall be submitted online on the e-procurement system viz https://eproc.karnataka.gov.in. Detailed guidelines for viewing bids and submission of online bids are given on the website. The NOTICE INVITING BIDS under this Project is published on this website. Any citizen or prospective bidder can logon to this website and view the NOTICE INVITING BIDS and can view the details of goods for which bids are invited. A prospective bidder can submit its bid online; however, the bidder is required to have enrol-</p>

	<p>ment/registration in the website, and should have valid Digital Signature Certificate (DSC) obtained from any authorised certifying agency of Government of India (for class of DSC Class III). The bidder should register in the website using the relevant option available. Then the Digital Signature registration has to be done with the e-token, after logging into the website. The bidder can then login the website through the secured login by entering the password of the e-token & the user id/ password chosen during registration. After getting the bid schedules, the Bidder should go through them carefully and submit the specified documents, along with the bid; otherwise the bid will be rejected.</p> <p>21.2 The completed bid comprising of documents indicated in ITB 11, should be uploaded on the e-procurement portal along with scanned copies of requisite certificates as are mentioned in different sections in the bidding document and scanned copy of the bid security.</p> <p>21.3 All the documents are required to be signed digitally by the bidder. After electronic on line bid submission, the system generates a unique bid identification number which is time stamped as per server time. This shall be treated as acknowledgement of bid submission.</p> <p>21.4 Physical, Email, Telex, Cable or Facsimile bids will be rejected as non-responsive.</p>
<p>22. Deadline for Submission of Bids</p>	<p>22.1 Bids must be uploaded online no later than the date and time specified in this tender.</p> <p>22.2 The Purchaser may, at its discretion, extend the deadline for the submission of bids by amending the Bidding Documents in accordance with ITB Clause 8, in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended. All such extensions shall be communicated only through eProcurement Portal viz https://eproc.karnataka.gov.in</p>
<p>23. Late Bids</p>	<p>23.1 The electronic bidding system would not allow any late submission of bids after due date & time as per server time.</p>
<p>24. Withdrawal, Substitution, and Modification of Bids</p>	<p>24.1 Bidders may modify their bids by using appropriate option for bid modification on the e-procurement portal, before the deadline for submission of bids. For this the bidder need not make any additional payment towards the cost of bid document. For bid modification and consequential re-submission, the bidder is not required to withdraw his bid submitted earlier. The last modified bid submitted by the bidder within the bid submission time shall be considered as the bid. For this purpose, modification/withdrawal by other means will</p>

	<p>not be accepted. In online system of bid submission, the modification and consequential re-submission of bids is allowed any number of times. A bidder may withdraw his bid by using appropriate option for bid withdrawal, before the deadline for submission of bids, however, if the bid is withdrawn, re-submission of the bid is allowed as per eProcurement portal policy and system in this regard.</p> <p>24.2 Bids requested to be withdrawn in accordance with ITB Sub-Clause 24.1 shall not be opened and dealt with as per eProcurement portal system.</p> <p>24.3 No bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Letter of Bid (Technical Part and/or Financial Part) or any extension thereof.</p>
<p>25. Public Opening of Technical Parts of Bids</p>	<p>25.1 The Purchaser shall publicly open Technical Parts of all bids received by the deadline, at the date, time and place specified in this tender, in the presence of Bidder's designated representatives and anyone who chooses to attend, and this could also be viewed by the bidders online. The Financial Parts of the bids shall remain unopened in the e-procurement system, until the subsequent public opening, following the evaluation of the Technical Parts of the Bids. In all cases, original documents submitted as specified in ITB 12.3 shall be first scrutinized, and Bids that do not comply with the provisions of ITB 12.3 will be declared non-responsive and will not be opened. Thereafter, bidder's names, and such other details as the Purchaser may consider appropriate will be notified online as Technical Part bid opening summary.</p> <p style="padding-left: 40px;">In the event of the specified date of bid opening being declared a holiday for the Purchaser, the bids will be opened at the appointed time and location on the next working day.</p> <p>25.2 The electronic summary of the bid opening will be generated and uploaded online. The Purchaser will prepare and upload the Technical Evaluation of the bids in the eProcurement Portal. Only Technical Parts of Bids, alternative bids - Technical Parts if permitted in ITB 13 that are opened at Bid opening shall be considered further for evaluation.</p>
	<p>E. Evaluation of Bids – General Provisions</p>
<p>26. Confidentiality</p>	<p>26.1 Information relating to the examination, evaluation, comparison, and post-qualification of bids, and recommendation of contract award, shall not be disclosed to bidders or any other persons not officially concerned with such process until information on Contract Award is communicated to all Bidders in accordance with ITB 42.</p>

	<p>26.2 Any effort by a Bidder to influence the Purchaser in the examination, evaluation, comparison, and post-qualification of the bids or contract award decisions may result in the rejection of its Bid.</p> <p>26.3 Notwithstanding ITB Sub-Clause 26.2, from the time of bid opening to the time of Contract Award, if any Bidder wishes to contact the Purchaser on any matter related to the bidding process, it should do so in writing.</p>
<p>27. Clarification of Bids</p>	<p>27.1 To assist in the examination, evaluation, comparison of the bids and post-qualification of the Bidders, the Purchaser may, at its discretion, ask any Bidder for a clarification of its Bid including breakdown of prices in the Activity Schedule, and other information that the Employer may require. Any clarification submitted by a Bidder in respect to its Bid, that is not in response to a request by the Purchaser shall not be considered. The Purchaser’s request for clarification and the response shall be in writing. No change, including any voluntary increase or decrease, in the prices or substance of the Bid shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Purchaser in the Evaluation of the bids, in accordance with ITB Clause 35.</p> <p>27.2 If a Bidder does not provide clarifications of its bid by the date and time set in the Purchaser’s request for clarification, its bid may be rejected.</p>
<p>28. Deviations, Reservations, Omissions</p>	<p>28.1 During the evaluation of bids, the following definitions apply:</p> <ul style="list-style-type: none"> (a) “Deviation” is a departure from the requirements specified in the Bidding Documents; (b) “Reservation” is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Documents; and (c) “Omission” is the failure to submit part or all of the information or documentation required in the Bidding Documents.
<p>29. Nonconformities, Errors and Omissions</p>	<p>29.4 Provided that a Bid is substantially responsive, the Purchaser may waive any nonconformities or omissions in the Bid which do not constitute a material deviation, reservation or omission.</p> <p>29.5 Provided that a Bid is substantially responsive, the Purchaser may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities or omissions in the Bid related to documentation requirements. Such omission shall not be related to any aspect of the price or substance of the Bid. Failure of the Bidder to comply with the</p>

	<p>request may result in the rejection of its Bid.</p> <p>29.6 Provided that a Bid is substantially responsive, the Purchaser shall rectify quantifiable nonmaterial nonconformities related to the Bid Price. To this effect, the Bid Price shall be adjusted, for comparison purposes only, to reflect the price of a missing or non-conforming item or component in the manner specified below –</p> <p>The adjustment shall be based on the Average Price of the item or component as quoted in other substantially responsive Bids, subject to a maximum of the estimated price of the item. If the price of the item or component cannot be derived from the price of other substantially responsive Bids, the Purchaser shall use its best estimate.</p>
<p>30. Evaluation of Technical Parts</p>	<p>30.4 In evaluating the Technical Parts of each Bid, the Purchaser shall use the criteria and methodologies listed in ITB 31, ITB 32, and Section III, Evaluation and Qualification Criteria. No other evaluation criteria or methodologies shall be permitted.</p>
<p>31. Determination of Responsiveness</p>	<p>31.4 The Purchaser’s determination of a bid’s responsiveness is to be based on the contents of the bid itself as defined in ITB 11.</p> <p>31.5 A substantially responsive Bid is one that meets the requirements of the Bidding Documents without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that:</p> <ul style="list-style-type: none"> (a) If accepted, would <ul style="list-style-type: none"> (i) affect in any substantial way the scope, quality, or performance of the Non- Consulting Services specified in the Contract; or (ii) limit in any substantial way, inconsistent with the Bidding Documents, the Purchaser’s rights or the Bidder’s obligations under the Contract; or (b) If rectified would unfairly affect the competitive position of other bidders presenting substantially responsive bids. <p>31.2.1 Bids from Agents, without proper authorization from the manufacturer as per Section IV, shall be treated as non-responsive.</p> <p>31.3.1 The Purchaser shall examine the bids to confirm that all documents and technical documentation requested in ITB Clause 11 have been provided, and to determine the completeness of each document submitted.</p> <p>31.3.2 The Purchaser shall examine the bid to confirm that the Bid-</p>

	<p>der has accepted all terms and conditions specified in GCC and the SCC without material deviations or reservations. Deviations from or objections or reservations to critical provisions such as those concerning Performance Security (GCC Clause 3.9). Correction of Defects and Lack of Performance Penalty(GCC Clause 7.1), Force Majeure (Clause 2.5),Applicable law (GCC Clause 1.2) and Taxes & Duties (GCC Clause 1.8) will be deemed to be a material deviation. The Purchaser’s determination of a bid’s responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence.</p> <p>31.4 If a bid is not substantially responsive to the Bidding Documents, it shall be rejected by the Purchaser and may not subsequently be made responsive by the Bidder by correction of the material deviation, reservation, or omission.</p>
<p>32. Qualification of the Bidders</p>	<p>32.1 The Purchaser shall determine, to its satisfaction, whether all eligible Bidders, whose Bids have been determined to be substantially responsive to the bidding document, meet the Qualification Criteria specified in Section III, Evaluation and Qualification Criteria.</p> <p>32.2 The determination shall be based upon an examination of the documentary evidence of the Bidder’s qualifications submitted by the Bidder, pursuant to ITB 17. The determination shall not take into consideration the qualifications of other firms such as the Bidder’s subsidiaries, parent entities, affiliates, subcontractors (other than specialized subcontractors if permitted in the bidding document), or any other firm(s) different from the Bidder).</p> <p>32.3 If a Bidder does not meet the qualifying criteria specified in Section III, Evaluation and Qualification Criteria, its Bid shall be rejected by the Purchaser and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.</p> <p>32.4 Only Bids that are both substantially responsive to the bidding document, and meet all Qualification Criteria shall have the Financial Parts of their Bids opened at the second public opening</p>
<p>33. Public Opening of Financial Parts</p>	<p>33.1 Following the completion of the evaluation of the Technical Parts of the Bids, and approval of Competent authority, the Purchaser shall notify in writing those Bidders who have failed to meet the Qualification Criteria and/or whose Bids</p>

	<p>were considered non-responsive in the Technical Evaluation giving them the following information in the form of a Proceedings:</p> <ul style="list-style-type: none"> (a) their Technical Part of Bid failed to meet the requirements of the bidding document; (b) their Financial Part of the Bid shall not be opened; and (c) notify them of the date and time for public opening of the Financial Parts of the Bids. Financial Parts of the bids shall not be opened earlier than three (3) days from the communication of technical evaluation results to the bidders. <p>33.2 The Purchaser shall, simultaneously, notify in writing those Bidders whose Technical Parts have been evaluated as substantially responsive to the bidding document and met the Qualification Criteria, advising them of the following information:</p> <ul style="list-style-type: none"> (a) their Bid has been evaluated as substantially responsive to the bidding document and met the Qualification Criteria; (b) their Financial Part of Bid will be opened at the public opening of Financial Parts; (c) Notify them of the date and time of the second public opening of the Financial Parts of the Bids, as specified in this tender. <p>The opening date should allow Bidders sufficient time to make arrangements for attending the opening. The Financial Part of the Bid shall be opened publicly in the presence of Bidders' designated representatives and anyone who chooses to attend, and this could also be viewed by the bidders online on eProcurement portal viz https://eproc.karnataka.gov.in. The bidder's names, the Bid prices, the total amount of each bid, including any discounts and Alternative Bid – Financial Part, and such other details as the Purchaser may consider appropriate will be notified online via eProcurement portal viz https://eproc.karnataka.gov.in.by the Purchaser at the time of bid opening.</p> <p>In the event of the specified date of bid opening being declared a holiday for the Purchaser, the bids will be opened at the appointed time and location on the next working day.</p> <p>33.4 The electronic summary of the bid opening will be generated</p>
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	<p>and uploaded online. The Purchaser will also prepare minutes of the Bid opening, including the information disclosed and upload the same for viewing online. Only Financial Part of Bids, Financial Parts of Alternative Bids and discounts that are opened and read out at Bid opening shall be considered further for evaluation.</p>
34. Evaluation of Financial Parts	<p>34.1 To evaluate the Financial Part of each Bid/LOT, the Purchaser shall consider the following:</p> <ul style="list-style-type: none"> (a) evaluation will be done as per the Financial Bid document; and the Bid Price as quoted in accordance with ITB 14; (b) Not used; (c) Not Used (d) Not used; (e) Nt Used <p>34.2 Not used</p> <p>34.3 Not Applicable</p> <p>34.4 Not used</p> <p>34.5 Omitted</p> <p>34.6 Employer reserves the right to accept or reject any variation, deviation, or alternative offer. Variations, deviations, and alternative offers and other factors, which are in excess of the requirements of the bidding documents or otherwise result in unsolicited benefits for the Employer will not be taken into account in Bid evaluation.</p>
35. Correction of Arithmetical Errors	<p>35.1 The e-procurement system automatically calculates the total amount from unit rates and quantities and the system also automatically populates the amount in words from the amount in figures and therefore there is no scope of discrepancy and need for arithmetic correction.</p>
36. Conversion to Single Currency	<p>36.1 Not applicable.</p>
37. Preference	<p>Omitted</p>
38. Comparison of Financial Parts	<p>38.1 The Purchaser shall compare the evaluated prices of all substantially responsive bids to determine the lowest-evaluated bid for each LOT in accordance with ITB Clause 34.</p>

<p>39. Purchaser’s Right to Accept Any Bid, and to Reject Any or All Bids</p>	<p>39.1 The Purchaser reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to Bidders. In case of annulment, all documents submitted and specifically, bid securities, shall be promptly returned to the Bidders.</p>
	<p>F. Award of Contract</p>
<p>40. Award Criteria</p>	<p>40.1 Subject to ITB 39.1, the Purchaser shall award the Contract to the Bidder whose bid has been determined to be the lowest evaluated bid and is substantially responsive to the Bidding Documents, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily.</p>
<p>41. Purchaser’s Right to Vary Quantities at Time of Award</p>	<p>41.1 At the time the Contract is awarded, the Purchaser reserves the right to increase or decrease the quantity originally specified in Section V, Schedule of Requirements, provided this does not exceed the 25%, and without any change in the unit prices or other terms and conditions of the bid and the Bidding Documents.</p> <p>41.2 If the quantity has not been increased at the time of the awarding the contract, still the purchaser reserves the right to increase or decrease, the quantity originally specified in Section V. Schedule of Requirements, provided this does not exceed 25%, and without any change in the unit prices or other terms and conditions of the bid and the Bidding Documents, during the currency of the contract.</p> <p>41.3 Further, during the execution of the contract in case any bid winner of a LOT fails to execute the project as per this tender document and agreement signed pursuant thereto and the same leads to cancellation of the contract, then the Purchaser reserves the right, pending finalization of such a cancelled contract in a new tender, to assign the cancelled LOT to the BID winner of the other LOT in any tender of the Purchaser (called Substitute Service Provider); who shall duly execute the such an assigned work of the cancelled LOT until/if the cancelled LOT is awarded to a bid winner in a new tender. Such an assignment shall be on same terms and conditions (including the payments) as per the said Substitute Service Provider’s awarded agreement and the contract.</p>

<p>42. Notification of Award, Publication of Award & Recourse to Unsuccessful Bidders</p>	<p>42.4 Prior to the expiration of the period of bid validity, the Purchaser shall notify the successful Bidder, in writing, that its Bid has been accepted. The notification letter (hereinafter called “Letter of Acceptance”) shall specify the sum that the purchaser will pay in consideration of the supply of Goods (hereinafter called “the Contract Price”).</p> <p>42.5 At the same time the Purchaser shall publish in eProcurement Portal of Government of Karnataka – viz https://eproc.karnataka.gov.in or on the Purchaser’s website with free access, or in the official gazette, the results identifying the bid and lot numbers and the following information: (i) name of each Bidder who submitted a Bid; (ii) bid prices as read out at bid opening; (iii) name and evaluated prices of each Bid that was evaluated; (iv) name of bidders whose bids were rejected and the reasons for their rejection; and (v) name of the successful Bidder, and the price it offered, as well as the duration and summary scope of the contract awarded. Provided the same may be informed through a suitable Proceedings of the Purchaser.</p> <p>42.6 The Purchaser shall promptly respond in writing to any unsuccessful Bidder who, after Publication of contract award, requests in writing the grounds on which its bid was not selected.</p> <p>42.7 Until a formal Contract is prepared and executed, the notification of award shall constitute a binding Contract.</p> <p>42.8 Upon the successful Bidder’s furnishing of the performance security and signing the Contract Form pursuant to ITB Clause 43, the Purchaser will promptly notify each unsuccessful Bidder and will discharge its bid security, pursuant to ITB Clause 19.5</p> <p>42.9 If after notification of award, a bidder wishes to ascertain the grounds on which its bid was not selected, it should address its request to the Tender Accepting Authority as per KTPP Act. The Employer will respond suitably in writing to the unsuccessful Bidder.</p>
<p>43. Signing of Contract</p>	<p>43.1 Promptly after notification, the Purchaser shall send the successful Bidder the Contract Agreement.</p> <p>43.2 Within fifteen (15) days of receipt of the Contract Agreement, the successful Bidder shall sign, date, and return it to the Purchaser.</p>
<p>44. Performance Security</p>	<p>44.1 Within fifteen (15) days of the receipt of notification of award from the Purchaser, the successful Bidder, if required, shall furnish the Performance Security in accordance with the GCC, using for that purpose the Performance Security Form included in Section VIII Contract forms, or another Form ac-</p>

	<p>ceptable to the Purchaser. Failure of the successful Bidder to submit the above-mentioned Performance Security or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security. The Performance Bank Guarantee is liable to be forfeited in favour of the Purchaser in case of termination of the contract of the bid winner by the Purchaser where the termination is for the default in performance or other reasons prescribed in this RFP.</p>
<p>45. Adjudicator</p>	<p>45.4 The Adjudicator shall be Principal Secretary Revenue Department, Government of Karnataka under the Contract.</p>

SECTION II

OMITTED

SECTION III. EVALUATION AND QUALIFICATION CRITERIA

This Section complements the Instructions to Bidders. It contains the criteria that the Purchaser shall use to evaluate a bid and determine whether a Bidder qualifies in accordance with criteria specified in this bidding document. No other criteria shall be used.

Contents

1. Evaluation Criteria (ITB 34)
2. Multiple Contracts (ITB 30.4)
3. Qualification Requirements (ITB 32.1)

1. Evaluation Criteria (ITB 34)

The Employer shall determine the Most Advantageous Bid, which is the Bid of the Bidder whose Technical Parts have been evaluated as substantially responsive to the bidding document and met the Qualification Criteria and whose Bid has been determined to be the lowest evaluated cost after considering total prices of all items of the Services described in the in Specifications, and listed in the Activity Schedule in Section V, Schedule of Requirements and all duties, taxes, and other levies payable by the Service Provider under the Contract.

Evaluation of the Bidder's Technical Proposal will include an assessment of the Bidder's technical capacity to mobilize key equipment and personnel for the contract consistent with its proposal regarding work methods, scheduling, and material sourcing in sufficient detail and fully in accordance with the requirements stipulated in Section V, Schedule of Requirements.

2. Multiple Contracts (ITB 30.4)

Not applicable

3. Qualification Criteria (ITB 32.1)

The Purchaser shall assess each Bid against the following Qualification Criteria Requirements for selection of agency for hiring of drone / Aerial Survey as a service for ORI generation for large scale mapping:

- A. The Bidder's Assets (equipment and technically qualified manpower)
- B. Bidder's Credentials (Turn Over & Work Experience)
- C. Methodology, Work Plan and Organization Staff Plan in response to the Terms of Reference:

A. The Bidder's Assets

The quantification of instruments/resources required for evaluation of bid capacity are given **per package/LOT**.

Any bidder

- (i) Whose contract has been terminated by any department or agency of Government of Karnataka in the last six years for reasons of performance or default or fraud or misrepresentation, or
- (ii) who stands black listed by any Government Department or Agency and the black listing period is subsisting as on date of technical evaluation,

shall not be qualified to bid in this tender.

The qualification criteria of the Instruments related GPS / Drone / Aircraft with sensors can be met by the bidder along with the authorized sub-contractor. The numbers mentioned are the preliminary requirements that should be available with the bidder or its authorized sub-contractor at the time of bidding and will be used for technical evaluation of bid. The ownership of the instruments should be with the bidder or its authorized sub-contractor only.

The bidder shall however give the detailed implementation plan separately for each LOT that they bid as part of the technical bid describing the actual number of instruments that they will deploy for project execution. The proposed additional number of instruments / equipment's / manpower resources, if any shall be explained in details with per sqkm / per day outputs that are estimated. The detailed implementation plan that is mandatory to be submitted as part of the Technical Bid must include month wise square kilometer of the ORI generation. The same shall be correlated with the deployment of the resources mentioned in the implementation plan. This shall be mandatory criteria in technical evaluation. An unsatisfactory or unscientific implementation plan shall lead to rejection of the bid at the technical evaluation stage itself. The Monthly Implementation Plan and its adherence is part of the non-negotiable deliverables for the bid winner.

The bidder shall also explain the process and plan of engaging such requisite quantities as per the implementation plan. The declaration stating the additional quantity of resources (instrument / manpower, computing resources etc) that are required to complete the project within the scheduled time shall be submitted by the bidder with the schedule plan detailing the source of supply of such resources and their technical details. The schedule plan of such increase in resources should be linked and substantiated in the implementation plan which shall be used as a key factor in evaluating the bidders capability of understanding the project scope and its capacity in ensuring the deliverables, on time. The failure to give a proper implementation plan showing completion of the work within 12-months period shall lead disqualification of the bidder in the technical evaluation. Further, failure to deliver output every month as per the said implementation plan shall be treated as a critical breach of the contract and shall result in cancellation of the award apart from delay penalties in payments.

a) Instrument and Software-

a. Aerial data Acquisition Platform

- **Professional survey grade PPK enabled UAS/Drone –**
Bidder must have such minimum nos. of Professional survey grade PPK enabled UAS/Drone which are eligible for drone flying as per DGCA Drone Guidelines, with associated camera for achieving at least 5 cm GSD at the time of submission of bid as prescribed for each Lot separately in the RFP. Note: If bidder bids for more than one Lot then the requirement in this regard will be arrived at by summing up requirement for each Lot.
 - Supporting documents should consist of copy of the valid proof of ownership of each drone to be engaged for providing services along with its Unique Identification Number (UIN) of each drone.
- **Aircraft with Large / Medium Format Digital Camera–** 1 or 2 nos of aircraft, as per the LOT the bidder bids for, with large format digital camera and associated accessories required for carrying out aerial survey to achieve at least 5 cm GSD. details of aircraft with sensors and its ownership need to be submitted. Provided that for Aerial Survey Bid based on aircraft, availability of 2 number of aircrafts, at the time of bid, shall technically qualify, subject to fulfilment of other technical criteria, the bidder for more than one LOT and number of aircraft requirement need not be summed up for each LOT that the bidder bids for.

Bidders are expected to complete 350 sqkm area of flying per week (per package). The details of number of drones / aircraft and sensors which shall be used for completing the project and the desired output should be planned and detailed in the implementation plan as part of the technical bid. It is reiterated that the drones proposed by the bidder should be type certified and no model drones should be proposed / used by the bidder. The UIN's quoted by the bidder shall be verified for its ownership, type certificate and the category of drone.

Proof of Ownership of aircraft/drone by the bidder or its subcontractor can be proved with the ownership / lease documents already in place.

b. GNSS receiver

- Minimum units of Dual frequency GPS instruments Capable of tracking and logging Multi frequency & multi constellation signals OR RTK rovers as per LOT wise number prescribed in the RFP.

c. Aerial Data Processing

- The bidder must achieve on average of not less than 350 Sq KM per week (per package) of ORI generation and prove his capacity to do so during the technical evaluation of the bid by way of per day drone or aerial data acquisition and the number of drones/ aircrafts that would be deployed. Details of source of deployment – equipment and funds availability for the same shall be mentioned.
- The per week 350 Sq KM is deliverable on average per week basis. Therefore, fluctuations in one week to another is permitted. The core point in this regard is that the bid winner must execute the project as per the Monthly Implementation Schedule that the bidder submits as part of technical bid and as finally approved by the Purchaser at the time of signing of the Contract Agreement with the Bid Winner.
- The bidder shall detail the plan on the following, **package or LOT wise**
 - Completion of acquisition in terms of number of instruments and per day coverage
 - Number of days planned along with number of instruments. The monsoon days / high wind days, cloud cover, etc shall be considered and mentioned in the proposal – for each geographical area / package.
 - The implementation plan shall give full clarity on the number of instruments proposed with the estimated targets per day / activity with respect to the methodology proposed and the reasons.
 - The number of days of pre-processing of the acquired data for making them ready for generation of DSM and ORI data. Pre-processing includes GPS data processing, project / block set-up, Block adjustment, stereo – model generation etc

d. Workstations for Data Processing: minimum nos, per package as mentioned in the Table

- Bidder must have minimum 5 Middle level Workstations and for the rest, as per the implementation plan, the undertaking can be submitted by the bidder OR an agreement with the MEITY empanelment cloud provider in case service provider chooses to process and store data in cloud. Such agreement should clearly describe the storage, processing resources, timelines etc
- The workstation proposed shall have the following minimum configuration
 - RAM – 16 GB
 - Processor Speed –As necessary
 - Internal storage – 1 TB
 - Graphics card – Nvidia Quadro 4 1 GB or equivalent
 - Monitor Size – 19 inches or better

- e. **Network Storage System:** 01(One) no. of Minimum 50 TB (in RAID 5 configuration)OR An agreement with the MEITY empanelment cloud provider in case service provider chooses to process and store data in cloud.

In case of processing and storing the data on cloud, the lead bidder or its proposed cloud service provider should produce a certificate from MeitY that the cloud server and processing environment proposed is located in India only

- f. **Servers:** minimum 01 no and during the actual implementation as per the Implementation Plan submitted during the technical evaluation. The proposed server configuration shall have the following minimum configuration.

- RAM – 64 GB
- Processor Speed - As necessary
- Internal storage – 1 TB

g. Software Suite for generation of DSM / ORI

- Should have minimum 05 no Software for data processing like Px4D / UAS master / AGI etc.per package for drones / medium / large format aerial data processing and any of the industry standard photogrammetry software suite (LPS, DAT/EM, Inpho etc). During the actual implementation this shall be as per the Implementation Plan submitted during the technical evaluation. The proposed estimates on number of system, output that can be achieved per system and the plan of completion of project should be explained in the implementation plan, in detail – as part of technical bid.

b) Manpower:

The minimum Qualification and number of key- personnel proposed to be deployed in the Project should be as follows. The numbers stated are the minimum required for qualification. Bidder/Service provider shall deploy sufficient additional resources as per Detailed Implementation Plan submitted as part of the technical bid for each LOT as are required to meet the delivery timelines during actual execution.

For the purpose of this Bid Document for each package/LOT, Key Personnel shall include:

- a. Project Manager: At least 01 (one), Project Manager with minimum 3 years in working projects of similar nature & complexity.
- b. Pilot:with Remote Pilot License / Certificateas per Drone Rules 2021 and updated from time to time and minimum number for each LOT as prescribed in the RFP
- c. Aircraft operations – Pilot and data acquisition Engineer / navigator as per the requirements of DGCA / MoD
- d. Operator: Post-processing for generation DSM and ORI : technical persons having minimum three years' experience in post-processing in projects of similar nature & complexity on its payroll at the time of submission of technical bid and minimum number for each LOT as prescribed in the RFP
- e. Ground Controller: The technical persons having minimum two years' experience in GNSS observations and computation/processing, on its payroll at the time of submission of technical bid and minimum number for each LOT as prescribed in the RFP.
- f. System Manager cum Data Manager: At least 01 (one),technical person having minimum 3 years of experience in system management & Data Management in Data Production Centre, on its payroll at the time of submission of technical bid

- g. QA/QC Expert: Person having at least five years' experience in post-processing of data in projects of similar nature & complexity, on its payroll at the time of submission of technical bid and minimum number for each LOT as prescribed in the RFP
- h. Overseas experts can be included. However, the same experts should be available in Karnataka, India during the execution of project. The necessary security clearance from MEA/MHA should be obtained for engaging the resources for the said work. In case of non-receipt of approvals from the respective authorities, better qualified and experienced personnel should be involved for the processing. However, any delays due to this should be the responsibility of the successful bidder. Delay in plans / schedule shall not be acceptable for the purchaser.

B. Bidder's Credentials:

(a) Financial Capability

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

- a. The Minimum required AVERAGE annual turnover for the last five (5) Financial Year-
s.i.e.2016-17 to 2020-21 should be as mentioned for the LOT in the RFP or an equivalent amount in other currency. The bidder should also submit the concerned documents in support of the above to the satisfaction of the purchaser.

Or, in lieu of financial turnover, the Bidders with proven capacity of successful delivery & acceptance of Drone/Aerial Based Survey of Survey Grade work (equal or better than 5 cm GSD) for any Government Department or Government Agency to an extent not less than 2500 (Two thousand Five Hundred) Sq KM Ortho-Rectified Image during the last 3-years is also eligible.

In this regard the certificate/letter of successful delivery and acceptance of relevant quantities of ORIs by the Government Department or Government Agency shall be furnished/uploaded.

The requirement under this clause shall be met by the Bidder himself and not by or including his sub-contractor (if any).

- b. Capacity to have a cash flow: The bidder must provide a letter from a reputed Nationalized / Scheduled Bank stating the availability of liquid assets and/or credit facilities exclusively for the contract of value less than Rs 3 (three) Crores.

Notes:

- (i) Even the bidders seeking qualification based on at least 2500 Sq KM 5 cm GSD Survey Grade work shall furnish the annual turnover for each of the last 5 Financial Years if the business entity was in existence during the said period.
- (ii) The financial turnover will be taken as given under the head "Income" in audited Profit and Loss Account and excluding non-recurring income, income from other sources and stock. It is clarified that the Financial Turnover means relevant revenue as recorded in the Income side of Profit and Loss Account. It does not mean Profit.

- (iii) Closing stocks in whatsoever manner should not form part of turnover.
- (iv) The Bidder should furnish Annual Financial Turnover for each of the last 5 Financial Years in tabular form and give reference of the document (with page no.) relied upon in support of meeting the Qualification Criterion.
- (v) The Bidder should submit self-attested copy of Auditor's Report along with Balance Sheet and Profit and Loss Statement along with Schedules for the relevant Financial Year in which the minimum criterion is met. Provisional audit reports or certified statements will not be accepted.
- (vi) If the Audited Balance Sheet for the immediately preceding year is not available in case of tender opened before 30th Sept., audited Balance Sheets, Profit and Loss Statements and other financial statements of the five Financial Years may be adopted for evaluating the credentials of the Bidder.

(b) Work Experience:

- (i) The experience required to be demonstrated by the Bidder should include as a minimum that they have executed during the last 5 years the following:

Bidder must have experience as service provider in the provision of at least one service contract in drone / Aerial Survey and its data processing of similar nature and complexity and the said single contract having a minimum value of Rs 1 Crore in the last 5 years. The Service Contract cited must necessarily include all activities viz. acquisition of raw data, post-processing of data for creation of DSM/ORI.

OR

Bidder may meet requirement of experience as service provider in the provision of Drone / Aerial Survey and its data processing of similar nature and complexity and by citing not more than 5 (five) projects he has executed in the last 5 years whose cumulative value together should not be less than Rs. 1 Crore in the last 5 years. These Service Contracts taken together must necessarily include all activities viz. acquisition of raw data by drone / aircraft, post-processing of data for creation of DSM / ORI.

- (ii) Proof of work experience should include generation and processing of at least 1000 Sqkm area of Ortho rectified image from drone / aerial or high resolution satellite data with DEM/DTM.

The above work experience can be met by the bidder or its sub-contractor qualified for data processing. Experience of mere mapping or digitization from ortho rectified images or any other image classification / change analysis is not adequate for meeting this above criteria

Notes:

- a. Only such works shall be considered where physical completion of entire work is over or commissioning of work has been done, whichever is earlier.
- b. The Bidder should submit the details of such similar completed works as per the format enclosed.
 - Name and address of client with contact details as email address/ Phone No.
 - Contract No. and Date.
 - Scheduled completion date and actual completion date.

- Details of Complaint, if any, received from the purchaser about the performance of the Equipment/items.
 - c. Works carried out by another Service Provider on behalf of the Bidder on a back to back basis will not be considered for satisfaction of the Qualification Criterion by the Bidder.
 - d. Credential certificates issued by Government Organizations / Semi Government Organizations of Central or State Government; or by Public Sector Undertakings/ Autonomous Bodies of Central/State Government or their subsidiaries / by Public Ltd. Companies listed in Stock exchange in India or Abroad or subsidiaries of such companies shall only be accepted for assessing the eligibility of a Tenderer. Certificates issued by one of the aforesaid organizations as a lead member (having equity stake of 51% or more) of a Joint Venture (JV) for a work executed for the JV, will also be acceptable. In case of PPP projects, if the bidder has executed a work for a concessionaire who is one of the aforesaid organizations, then the certificate issued by such concessionaire or by the public authority concerned, will also be acceptable.
 - e. The cutoff date in respect to work experience shall be 31/12/2022.
- (iii) As part of project experience, experience of previous work using 50 cm or better high resolution stereo satellite data processing with proper editing of DTM for generating the Ortho images can be considered, provided while considering the value of work done in this, the cost of procurement of satellite images will be excluded. (This is done as the focus of the RFP is to evaluate capacity to process aerial / drone photography data in addition to ability to generate such a data from drone / aerial survey. A bidder with experience only with satellite images needs to demonstrate their experience in data and image processing and hence the exclusion of the cost of purchase of satellite images).
 - (iv) The bidder should provide profile of their company including its Infrastructure, technical manpower and their expertise.
 - (v) The eligibility conditions mentioned in the RFP is neutral. Drone or Aircraft is for acquisition. Data processing for ortho image and DSM generation need to be done in both categories. The number of software / hardware is based on the area covered for each package. It shall be noted that the pre-qualification number of licenses / equipment's is for the purpose of pre-qualification. Each bidder must give detailed Implementation Plan which is mandatory part of the technical evaluation. The deployment of resources including the software shall match the implementation plan. In case of inadequacy in resources or implementation plan, the bid will be rejected at the technical evaluation stage itself.
 - (iii) The bidder shall have to prove the adequacy of their Implementation Plan as well as the resources that they will deploy.
 - (iv) The bidder or OEM must have office and firm arrangement in Karnataka to provide support as well as comprehensive management of work.
 - (v) The bidder should submit the details of agreements entered into with various manufacturers/partners for the equipment and providing services and their experience to meet the qualification & experience criterion for the turn-key solution.
 - (vi) Changes in the make / model of the instruments, if any shall be acceptable, only if the proposed changes are better than the current make / model mentioned and approved as Detailed Implementation Plan as the part of the Technical Bid. This shall be substantiated by the bidder and accepted by the technical evaluation committee appointed by the purchaser.
 - (vii) It is the bidder's responsibility of completing all activities of the project within the scheduled time as per the RFP.

- (viii) A change in the sub-contractor is NOT allowed without intimation to the purchaser. Any changes to the sub-contractor can be accepted only if the proposed sub-contractor meet all the qualification criteria mentioned in the RFP. Every change (inclusion / exclusion) of the sub-contractor will lead to deduction of 2% of overall contract fee to the bidder.
- (ix) The lead bidder should ensure that the sub-contractor identified by them is capable of delivering the project, as defined and scheduled. As part of the evaluation, the sub-contractor assets and credentials of the lead bidder will also be evaluated.
- (x) It is to be noted that the aircraft and sensor can be owned by different agencies. However, Proof of earlier projects wherein the lead bidder had availed the services from such agencies with the same combination of aircraft and the sensor should be produced. The same shall be submitted as proof of documentary evidence, endorsed by the client for whom the services are provided should be submitted as part of bid – for evaluation.
- (xi) The purchaser is not in favour or against for any specific technology. The requirement is of 5 cm GSD ortho rectified image suitable for land parcel mapping. Since the required output can be generated from Drone / Aerial technologies, bidder can have their own choice of preferred technology and submit the bids.

Pre-Qualification Criteria – Consolidated form (the number mentioned in this table shall be considered for evaluation, in case of any discrepancies noted in the similar references in the RFP)

Description of Items / LOT or Package	Remarks / Explanation	Lot 2A
Total Area in Sq Km		8,610
A. Bid Security / EMD		
EMD - 5 Lakhs	Amount to be paid in e-Procurement Portal of Karnataka	5 lakhs for this tender (Common for all packages in this tender& to paid in e-Procurement Portal)
Additional Bid Security in BG, Value in Lakhs	Amount in Rupees, in Lakhs	5
B. Bidder's Credentials (Financial & Work Experience)		
Average Annual Turnover of Lead bidder	Amount in Rupees, in Crore	8
Work Experience		
1 Crore worth of related Service in the last 5 yrs from any one or upto 5 projects (to be satisfied by the lead bidder)		Condition is applicable to the LOT
Generation and processing of at least 1000 Sqkm area of Ortho rectified image from drone / aerial images or high resolution satellite data with DEM/DTM	<u>This condition can be satisfied through sub-contractor for data processing.</u> NOTE: if multiple sub contractors are shown then the condition shall be satisfied by each sub-contractor. Else a Sub Contractor not meeting this condition is not permitted to be a sub contractor.	1000 Sq KM
C. The Bidder's Assets (Equipment and technically qualified Manpower)		
Drone with Sensor Details (Camera / LIDAR) - nos per Package is mentioned here		4
Aircraft with Sensor Details (Camera / LIDAR) - nos per package is mentioned here.		1

(one aircraft shall be quoted for every 10,000 sqkm shall be considered)		
GNSS receiver - nos per Package is mentioned here		3
Middle level Work-stations - nos per Package, mentioned here		5
50 TB Network Storage System- nos per Package mentioned here		1
Servers – nos per Package, mentioned, here		1
Software – nos per Package		5
Whether Processing in the Cloud is mentioned	Mention Yes / No.	If yes, details of provider, terms and conditions of contract engagement detailing storage, servers, time of engagement need to be mentioned
Technically Qualified Manpower, no per package is mentioned here		
Project Manager - 3 years Experience	Mention whether the quantity of resources and the experience/expertise mentioned are meeting the requirements. For certification, proof of the certificate should be submitted and verified. Names of experts shall also be listed	1
Certified Remote License Pilot for Drones		4
Pilot for Air Craft - 3 years experience		1
Surveyors for GCP survey and processing		3

Data Processing Operator - 3 years experience		10
System cum Data Man- ager - 3 years experience		1
QA/QC Expert - 5 years experience		2

- a. There is no limit on number of sub-contractors which can be included. However, each sub-contractor shall satisfy the criteria mentioned in the RFP.
- b. One bidder / sub-contractor cannot bid more than one bid for each LOT. In such event, all the associated bids by that bidder for that LOT will be disqualified.

C. Technical Methodology Evaluation

- As part of technical evaluation, the bidders who propose to use image acquisition and data processing using drone or aircraft shall be given one village each. The bidders shall generate all the deliverables for the specific village – as per the methodology proposed.
- The results / deliverables shall be evaluated as per the requirements mentioned in the RFP. The solutions / deliverables that meet and comply with the requirements mentioned in the tender shall only be qualified for further evaluation and opening of commercial bids.
- The said field testing of the bidders otherwise eligible in the technical evaluation shall form the part of the technical evaluation. Those who fail to successfully demonstrate their solution shall be declared disqualified in technical evaluation.
- In case of bid received propose to use aircrafts for data acquisition the bidder should demonstrate capturing data of GSD and accuracies prescribed in the RFP in any area of their choice anywhere within India or abroad acquired with the same Sensor as are being offered for deployment in this tender along with the latest calibration certificates. The GSD to be demonstrated shall be better than 10 cm for the pilot project.
 - The bidder should submit the latest calibration certificate of the offered sensor and other instruments for the given GSD requirements mentioned in the RFP.
 - In case such an Aerial Survey bidder emerges winner in the bid, the Purchaser has the right to seek actual demonstration in the field of the requisite GSD and other accuracies as per the RFP before the work is permitted to be carried out for the full scope of award.
 - In case of failure of bid winner in such a demonstration, the Purchaser reserves absolute right to cancel the tender and not issue the workorder or cancel the workorder in case it has already been issued.
- In absence of complying with above requirements by the bidders, the bid shall be rejected as technically non-responsive.

Note: Purchaser may have the option of not to evaluate the methodology of data acquisition and processing of a bidder, if the bidder had earlier participated in the earlier tender of SSLR and had successfully qualified in the technical evaluation process – provided the same methodology, in-

strumentation and process are adopted. However, the decision of the purchaser is final in this regard. Every bidder shall be ready for the methodology evaluation.

Section IV BIDDING Forms

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1A. LETTER OF BID– TECHNICAL PART

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

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

No alterations to the text except as provided in ITB20.2, shall be permitted and no substitutions shall be accepted except as provided in ITB 12.]

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

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

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

To:

Commissioner,
Survey, Settlement & Land Records,
Revenue Department,
Government of Karnataka,
K R Circle,
Bengaluru – 560 001

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Documents as per the RFP No (mention the RFP No and Date)and Proceedings/Clarifications/Addendum as per Pre-Bid Meeting.
- (b) We meet the eligibility requirements and have no conflict of interest in accordance with the RFP;
- (c) We are submitting our bids for HIRING OF DRONE OR AERIAL SURVEY AS A SERVICE FOR ORI GENERATION FOR LARGE SCALE MAPPING for the following packages **(list out the packages which are being applied for)**
- (d) We have not been suspended nor declared ineligible by the Purchaser/any Government/Semi-Government entity in the Purchaser's country in accordance with the provisions of the RFP (ITB 4.2);
- (e) We offer to supply in conformity with the Bidding Documents and in accordance with the Delivery Schedules specified in the Schedule of Requirements the following Services and deliverables as per the tender document;
- (f) Our bid shall be valid for the period of time specified in ITB Sub-Clause 18.1, from the date fixed for the bid submission deadline in accordance with ITB Sub-Clause 22, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (g) If our bid is accepted, we commit to obtain a performance security in accordance with the Bidding Documents;

- (h) We are not participating, as a Bidder or as a subcontractor, in more than one bid in a single LOT in this bidding process.
- (i) We, along with any of our subcontractors, suppliers, consultants, manufacturers, or service providers for any part of the contract, are not subject to, and not controlled by any entity or individual that is subject to a suspension or a debarment imposed by the Government of Karnataka or Govt of India as per the RFP in this regard. Further, we are not ineligible under the Purchaser's Country laws or official regulations.
- (j) We confirm that Principal Secretary to Government, Revenue Department be appointed as the Adjudicator in case of dispute as per this tender document.
- (k) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed;
- (l) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive;
- (m) We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in any type of fraud and corruption; and we will strictly observe the laws against fraud and corruption in force in India namely, "Prevention of Corruption Act 1988."
- (n) We, along with all our sub-contractors, undertake to abide by the Code of Integrity in public Procurement of Government of India,

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

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

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

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

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

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

1B. LETTER OF BID- FINANCIAL PART

The Bidder must submit the FINANCIAL BID only in the eProcurement Portal of the Government of Karnataka and in the forms and space made available therein.

Note: ANY DISCLOSURE OF FINANCIAL BID IN ANY FORM OTHER THAN THROUGH eProcurement's Financial Bid Form or AT ANY OTHER STAGE SHALL LEAD TO DISQUALIFICATION OF THE BIDDER

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

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

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

To:

Commissioner,
Survey, Settlement & Land Records,
Revenue Department, Government of Karnataka,
K R Circle, Bengaluru – 560 001

We, the undersigned Bidder have submitted the Financial Bid in eProcurement Portal of Government of Karnataka. In this regard we make the following additional declarations:

- (a) We understand that this is a tender through eProcurement portal of Government of Karnataka viz <https://eproc.karnataka.gov.in> and the financial bid shall be filled up therein and will be evaluated accordingly. **Other than in eProcurement Portal at no other place or form the financial bid shall be disclosed or given.**
- (b) Our bid shall be valid for the period of time specified in ITB Sub-Clause 18.1, from the date fixed for the bid submission deadline in accordance with ITB Sub-Clause 22, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (c) No commissions, gratuities, or fees have been paid or are to be paid with respect to the bidding process or execution of the Contract:
- (d) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed.

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

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

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

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

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

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

2. BIDDER INFORMATION FORM

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

Date: *[insert date (as day, month and year) of Bid Submission]*
NIT No.: *[insert number of bidding process]*

Page _____ of _____ pages

1. Bidder's Legal Name <i>[insert Bidder's legal name]</i>
2. Bidder's Registration Number: <i>[insert Registration number]</i>
3. Bidder's Year of Registration: <i>[insert Bidder's year of registration]</i>
4. Bidder's Legal Address in Country of Registration: <i>[insert Bidder's legal address in country of registration] (All communication by post shall be sent to this address)</i>
5. Bidder's Authorized Representative Information Name: <i>[insert Authorized Representative's name]</i> Address: <i>[insert Authorized Representative's Address]</i> Telephone/Fax numbers: <i>[insert Authorized Representative's telephone/fax numbers]</i>
Email Address: <i>[insert Authorized Representative's email address]</i>
6. Attached are copies of original documents of: <i>[check the box(es) of the attached original documents]</i> <input type="checkbox"/> Articles of Incorporation or Registration of firm named in 1. <input type="checkbox"/> GST Registration. <input type="checkbox"/> Included are the organizational chart, a list of Board of Directors, and the beneficial ownership

2A. BIDDER SUB-CONTRACTOR'S INFORMATION FORM

[The Bidder shall fill in this Form for each Sub-Contractor Partner separately in accordance with the instructions indicated below. No alterations to its format shall be permitted and no substitutions shall be accepted.]

Date: *[insert date (as day, month and year) of Bid Submission]*
 NIT No.: *[insert number of bidding process]*

Page _____ of _____ pages

1. Bidder's Legal Name <i>[insert Bidder's legal name]</i>
2. Bidder's Sub-Contractor Member's Name <i>[insert Subcontractor Member legal name]</i>
3. Bidder's Sub-Contractor Registration: <i>[insert Sub-Contractor Member's Registration]</i>
4. Bidder's Sub-Contractor Member's Year of Registration: <i>[insert Bidder's Sub-Contractor Member's year of registration]</i>
5. Bidder's Sub-Contractor Member's Address in Country of Registration: <i>[insert Bidder's Sub-Contractor Member's address in country of registration]</i>
6. Bidder's Sub-Contractor Member's Authorized Representative Information Name: <i>[insert Sub-Contractor Member's Authorized Representative's name]</i> Address: <i>[insert Sub-Contractor Member's Authorized Representative's Address]</i> Telephone/Fax numbers: <i>[insert Sub-Contractor Member's Authorized Representative's telephone/fax numbers]</i> Email Address: <i>[insert Sub-Contractor Member's Authorized Representative's email address]</i>
7. Attached are copies of original documents of: <i>[check the box(es) of the attached original documents]</i> <input type="checkbox"/> Articles of Incorporation (or equivalent documents of constitution or association), and/or registration documents of the legal entity named above. <input type="checkbox"/> GST Registration. <input type="checkbox"/> Included are the organizational chart, a list of Board of Directors, and the beneficial ownership
8. Activity to be performed by the sub-contractor in this project (<i>[Encircle the items from the below list for which the sub-contractor will perform the role]</i>) a. Drone Data Acquisition with GPS Control b. Aerial Image Acquisition with GPS Control c. DGPS Control Survey d. Aerial Data processing

3. QUALIFICATION INFORMATION

1. Individual Bidders

- 1.1 Constitution or legal status of Bidder: *[attach copy]*
 Place of registration: *[insert]*
 Principal place of business: *[insert]*
 Power of attorney of signatory of Bid: *[attach]*
- 1.2 Total annual volume of Services performed in five years, in INR, Convert to INR if internationally traded currency is specified in the work order submitted as proof: *[insert]*
- 1.3 Services performed as prime Service Provider on the provision of Services of a similar nature and volume over the last five years. The values should be indicated in the same currency used for Item 1.2 above. Also list details of work under way or committed, including expected completion date.

Project name	Country in which the project is executed	Name of employer and contact person	Type of Services provided	year of completion	Value of contract (in INR)	% completed (in terms of payment received)

- 1.4 Major items of Service Provider's Equipment proposed for carrying out the Services. List all information requested below. Refer also to Section III 3(a). *(include separate row for each make / model of the instrument)*. **The below information need to be submitted for all packages, cumulatively.** Total no of packages applied for shall be mentioned, **explicitly**.

Mention all the LOTs or Packages Numbers for which Bids given = _____
 (The table below should be filled up by summing up for all the LOTs bid by you)

Item of equipment	Availability Proposal				Proposed total Quantity to be used for the project
	Make & Model & ID Number	Owned by bidder / Sub contractor	Nos.	Age/ Condition	
(a) Professional Survey grade PPK enabled UAS / Drone OR Medium / Large format digital Aerial Camera and Aircraft detail					
(b) Dual Frequency GNSS receivers/RTK rover					

(c) Middle level Work-stations					
(d) Network Storage system					
(g) Backup Device (Minimum 50 TB)					
(h) Servers					
(i) Software of Mission planning & data acquisition					
(j) Post processing software for DSM & ORI					

Note: - Pl refer Section III for minimum requirement of equipment's. Proof of ownership of the equipment's should be submitted

1.5 Qualifications and experience of key personnel proposed for administration and execution of the Contract. Attach biographical data. Refer also to Section III 3(b) and GCC Clause 4.1. **The below information need to be submitted for all packages, cumulatively.** Total no of packages applied for shall be mentioned, **explicitly.**

T
able
1.5(a)

Mention all the LOTs or Package Numbers for which Bids given = _____
(The table below should be filled up by summing up for all the LOTs bid by you)

Sl. No.	Title of Position	Minimum required as per RFP	No of Persons proposed	Average years of experience in proposed position
1	Project Manager			
2	Pilot and Co Pilot			
	Operator – Pre-Processing and Block Setup			
3	Operator – Post-processing of DSM & ORI			
4	GNSS Surveyor			
5	System Manager cum Data Manager			
6	Expert QA/QC			

b) Details of Proposed Positions (Names):

Table 1.5(b)

Include separate row for each staff to be considered as part of qualification criteria. (*Detailed CV of each staff to be enclosed*)

The below information need to be submitted for all packages, cumulatively. Total no of packages applied for shall be mentioned, ***explicitly***.

Mention all the LOTs or Package Numbers for which Bids given = _____
(The table below should be filled up by summing up for all the LOTs bid by you)

Sl. No.	Title of Position	Name of the Person	Qualification	Experience	Bidder / Sub contractor name
1	Project Manager				
2	Pilot and Co Pilot				
	Operator – Pre-Processing and Block Setup				
3	Operator – Post-processing of DSM & ORI				
4	GNSS Surveyor				
5	System Manager cum Data Manager				
6	Expert QA/QC				

c) **Resume of every Proposed Personnel should be enclosed as per format given below:**

Table 1.5(c)

Title Position as per Table 1.5(b): _____

[e.g. for Project Manager, Pilot, Supervisor, Operator, System Manager & QA/QC Expert etc]

Name of Bidder:	
Position:	
Personnel Information	Name: _____ Date of Birth: _____
	Professional Qualification: _____
	General of Experience: _____
	Experience in Proposed Position: _____
Present	Name of Employer: _____ Address of Employer: _____
	Telephone: _____ Contact (Manager/Personnel officer)
	Fax: _____ E-mail: _____
	Job Title: _____ Years with present employer

Summarize professional experience over the last 10 years, in reverse chronological order. Indicate particular technical and managerial experience relevant to the project.		
S.No.	Period (From-To)	Details of experience in drone / aerial Survey work

1		Company :
		Project Name :
		Brief description of project :
		Position (in which worked) :
		Details of work handled :
2		Company :
		Project Name :
		Brief description of project :
		Position (in which worked) :
		Details of work handled :
3		Company :
		Project Name :
		Brief description of project :
		Position (in which worked) :
		Details of work handled :

- 1.6 Proposed subcontracts and firms involved. Refer to GCC Clause 3.5 and 4.1. **The below information need to be submitted for each packages, separately.** Total no of packages applied for shall be mentioned, **explicitly.**

Mention all the LOTs or Package Numbers for which Bids given = _____
 (The table below should be filled up by summing up for all the LOTs bid by you)

Sections of the Services	Subcontractor (name and address)	Experience in providing similar Services
(a)		
(b)		
(c)		

- 1.7 Financial reports for the last five years: balance sheets, profit and loss statements, auditors' reports, etc. List below and attach copies.
- 1.8 Evidence of access to financial resources to meet the qualification requirements: cash in hand, lines of credit, etc. List below and attach copies

of support documents. We certify/confirm that we comply with eligibility requirements as per Section III

- 1.9 Name, address, and telephone, email, and facsimile numbers of banks that may provide references if contacted by the Employer.
- 1.10 Information regarding any litigation, current or within the last five years, in which the Bidder is or has been involved.

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

- 1.11 Statement of compliance with the requirements of ITB Sub-Clause 4.2.
- 1.12 Proposed Program (service work method and schedule). Descriptions, drawings, and charts, as necessary, to comply with the requirements of the bidding documents. Refer also to ITB 17.3.

2. Joint Ventures

NOT PERMITTED

3. Additional Requirements

- 3.1 Bidders should provide any additional information required in the Bid.

4. METHOD STATEMENT

[Bidder shall provide information and write-up as per points listed below. The bidder shall furnish the sufficient details in respect of all headings/sub-headings and documentary evidences as per format given below.]

1. DRONE / AERIAL DATA ACQUISITION & POST-PROCESSING

A) Technology: Details of Technology for data Acquisition using Drone / Aerial Survey using Medium / Large Format Digital Camera:

- i. Workflow showing various stages of work and their inter-dependencies.
- ii. Details of Processes at every stage viz. planning, mission/flight planning, actual execution
- iii. Details of approvals / clearance that need to be obtained for data acquisition and processing. The bidders understanding on the security clearance process need to be established.
- iv. Best Practices that will be adopted at each stage
- v. Details of manual/semi-automatic/automatic QA/QC measures to be taken during/at end of each stage.
- vi. Brief write up based on information provided on above points justifying the adequacy of processes and practices to meet the technical specifications stipulated in bid document. (fundamental & supplementary accuracy)

B) Equipment: Make, model and specifications of key equipment's viz. aerial survey platform OR UAS / DRONE, On-board and base GNSS receivers, On-board IMU, Camera/Sensors for raw data acquisition, hardware & software to be used for flight planning, flight monitoring, and justification of equipment to meet the technical specifications stipulated in bid document

C) Details of Previous Work:

- i. Key Specifications of similar work executed by the bidder listed in section III in which drone / aerial survey Technology has been used. References to be cited of Indian & International Projects (from bidder's own experience)
- ii. Brief write-up based on information provided above clearly bringing out how by suitable modifications(if any) to the Flying/Acquisition parameters the specifications stipulated in this bid document shall be met requirements of this Project

2. PROVISION OF GROUND CONTROL POINTS

Full use of the established CORS station by Survey of India for Karnataka should be done to get the best out the said infrastructure. Further and in conjunction with that –

- i. Density & distribution of Ground Stations to be established for correction to onboard GNSS
- ii. Equipment to be used for Observations
- iii. Hardware & Software to be used for computation
- iv. Description of observation methods
- v. Description of computation method
- vi. Density and distribution of check-points for Internal QA/QC in order to meet the Fundamental & Supplemental accuracy stipulated in Section V

3. POST PROCESSING

- (i) Details of Hardware & IT Infrastructure to be set up in Production Centre justifying its adequacy to handle and store raw Data, key intermediate data, data under process and Processed Data/deliverables.
- (ii) Software to be used for Post-Processing for generating DSM & ORI
- (iii) Workflow showing various stages of Post-Processing and their interdependencies
- (iv) Best Practices that will be adopted at each stage
- (v) Details of manual/semi-automatic/automatic QA/QC measures to be taken
- (vi) Brief write-up based on information provided above justifying the adequacy of hardware, software, methods & processes proposed to meet the specifications stipulated in the bid-document

5. WORK PLAN & SCHEDULE

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

1. Resource Deployment

- i. Activity wise Effort Estimate viz. Raw Data Acquisition, Provision of Ground Control, Pre-processing and Block setup, Generation of ORI and DEM.
- ii. Activity wise expected out-turns
- iii. Manpower resources proposed based on effort estimate calculation & expected out-turns for all the activities
- iv. Details of resource deployment for Internal QA/QC by the bidder shall also be provided.
- v. Number of shifts proposed
- vi. Quantity of equipment (Drone / aircraft fitted with on-board GNSS, Camera), instruments, hardware and software for every activity.

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

3. Bidder shall provide details of resource deployment in similar services performed by them in previous projects to justify that the proposed work plan from their previous experience

4. The work-plan, schedule and resource deployment has to be submitted separately for different lots/phase/districts clearly bringing out the details of resources/works that are clubbed (if any).

5. The implementation plan need to be explained in detail. The table below need to be filled and submitted by the bidder.

- Mention quantity (in numbers) and the estimated area (in Sq Km) that would be completed in a month, explicitly. This Monthly Implementation Plan is binding and non-negotiable deliverable for each month and default therein makes the bid winner liable for termination with forfeiture of PBG and also black-listing.
- On the timelines, please colour the cells. The numbers and colours mentioned are indicative. The bidder needs to calculate and update them, appropriately.
- The descriptive explanation of Implementation Plan should clearly reflect the estimates per day / week and month - for each activity. The Plan of scaling of resources and equipment's should be clear so that it reflects the proper understanding of the project, practical timelines and understanding of field realities.

- In case of procurement of new equipment's or instruments like drone/ aircraft, GPS devices etc, the timelines for such procurements and its delivery for project implementation should be considered. The same should be properly reflected and mentioned in the plan
- Clarity in the implementation plan - in terms of resources, estimates, field conditions and deliverables shall be reviewed critically. The understanding of the bidder on the complexities will be reviewed based on it. If clarity is not provided in the implementation plan, the bids will not be considered as technically qualified.
- The human resources / equipment's that would be deployed should meet the qualification / experience and the specification mentioned in the RFP.
- Penalties will be levied for delay in submission of proposed deliverables, every month.
- Every month delay in submission of Deliverables (colour balanced ortho mosaic) will lead to penalty of 2% per week based on the quantities (in Sqkm) that was not delivered for the month as per plan. For the penalty, the amount will be computed based on per Sqkm area cost quoted by the bidder.
- Every Delivery (either grids / tiles) shall be having minimum area of 100 Sqkm, exclusive of overlapping region. Overlaps of 50 m on all sides of tiles / villages shall be provided for DSM and ortho mosaic.
- The QA / QC process should be explained in detail and clearly. Methods of achieving the accuracy and the parameters / process that would be adopted for verification and acceptance shall be detailed.

6. Price Schedule Forms

(Inclusive of all taxes, duties and cesses)

*[The Bidder shall fill in these Price Schedule Forms in accordance with the instructions indicated. The list of line items in column 1 of the **Price Schedules** shall coincide with the List of Goods and Related Services specified by the Purchaser in the Schedule of Requirements.]*

HIRING OF DRONE OR AERIAL SURVEY AS A SERVICE FOR ORIENTATION GENERATION FOR LARGE SCALE MAPPING UNDER RESURVEY/SURVEY PROJECT AND SVAMITVA PROJECT

6. PRICE BID FOR LOT _____								
Date: _____			OTE No: _____					
SI No	Description	Unit of Payment	Total Area of the LOT	Unit price per Sq KM	Total Price	GST and other taxes payable per item if Contract is awarded		Total Price
1	2	3	4	5	6 = (col 5*6)	7 (Percentage)	8 (Actual amount of GST & Taxes)	9 = Col. 6+8
1	Drone or Aerial Survey based Generation and delivery of Ortho-Rectified Images (ORI) \, duly meeting the specifications and conditions specified in the tender document - including all costs associated with the same for – Package no <n>	Per Square Kilometer of final output delivered and accepted (excluding buffer area)	<area> Sq KM					

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

NB: The cost of setting up Production Centre and mobilization , deployment and use-rate of equipment, h/w, s/w, other costs associated with Preparation of site wages/salary of manpower deployed and all other expenses incurred shall be deemed to be included in above price bid

The above bid format is indicative and shall not be submitted as part of technical bid. The commercial bid format shall be filled and submitted as per the e-procurement portal of Govt of Karnataka. The cost quoted shall be inclusive of all taxes. The tax components shall be detailed separately, as per the provisions in the e-procurement portal

7. BID SECURITY DECLARATION FORM

To

Commissioner,
Survey, Settlement & Land Records,
Revenue Department,
Government of Karnataka,
K R Circle,
Bengaluru – 560 001

Dear Sir,

Ref: Your OTE document No _____ dated _____

We, the undersigned, declare that:

We, M/s.....(herein referred as bidder)¹ understand that, according to bid document, bids must be supported with a Bid Securing Declaration as part of the EMD, therefore in addition to submission of the EMD (Rs 5 Lakhs through e-Procurement Portal and additional **Rs 5 Lakhs** in the form of a Bank Guarantee from a Scheduled Commercial Bank as per conditions laid in this RFP), bidder gives the declaration that:-

Bidder will automatically be, in addition to forfeiture of the EMD of **Rs 10 Lakhs**, suspended from being eligible for bidding in any contract with any of the Government of Karnataka, for a period of 2 years from the date of debarment, if bidder are in breach of any of the following obligation(s) under the bid conditions:-

(a) If a Bidder withdraws the proposal or increases the quoted prices after opening of the Proposal and during the period of Bid validity period or its extended period, if any.

(b) In case of a successful Bidder, if the Bidder fails to sign the Agreement in accordance with the terms and conditions (including timelines for execution of the Agreement) of this Bid Document or fails to furnish the Performance Bank Guarantee in accordance with the terms and conditions (including time lines for furnishing PBG) of this Bid Document.

(c) During the Bid process, if a Bidder indulges in any act as would jeopardize or unnecessarily delay the process of bid evaluation and finalization.

(d) if the Purchaser comes to a conclusion that bidder (including members of Joint Venture/ Sub-Contractor)/ contractor/ supplier/ consultant/ service-provider), directly or through an agent, has violated Code of Integrity in competing for the contract.

Bidder understand that this declaration shall expire if Bidder is not the successful Bidder and on receipt of purchaser's notification of the award to another Bidder; or thirty days after the validity of the Bid; whichever is earlier.

(Signature)

Authorized Signatory

Name : _____

Designation: _____

Office Seal: _____

Place: _____

Date: _____

BID SECURITY/EARNEST MONEY DEPOSIT (EMD) - BANK GUARANTEE

[Guarantor letterhead or SWIFT identifier code]

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

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

To:

The Commissioner
Survey, Settlement & Land Records Department,
K R Circle, Opposite BESCOM Head Office,
Bengaluru

WHEREAS _____ *[name and address of Bidder]* (hereinafter called "the Applicant") has undertaken, in pursuance of Tender No. SSLR/DAAS/ORI/LOT2A/13/2022-23 dated 02-01-2023 to participate in the bidding process for *HIRING OF DRONE OR AERIALSURVEYAS A SERVICE FOR ORI GENERATION FOR LARGE SCALE MAPPING* (hereinafter called "the tender");

AND WHEREAS it has been stipulated by you in the said tender that the Applicant shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as part of Earnest Money Deposit (EMD) for compliance with his obligations in accordance with the tender;

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

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Applicant, up to a total of _____ *[amount of guarantee¹]* _____ *[in words]*, such sum being payable in the types and proportions of currencies in which the EMD for tender is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of _____ *[amount of guarantee]* as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

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

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

This guarantee shall be valid until (i.e.) remain valid for a period of 45 days beyond the original validity period of the 3-months bids that is shall remain valid for 135 days or beyond that as per any period of extension of bid validity, if so requested including any warranty obligations², and any demand for payment under it must be received by us at this office on or before that date.

¹ *An amount shall be inserted by the Guarantor, representing the amount based on the number of packages being quoted by the bidder as EMD as specified in the tender and denominated in Indian Rupees.*

² Completion date as described in ITB Clause 18.2

Signature and seal of the guarantor _____

Name of Bank _____

Address _____

Date _____

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

8. PROFORMA FOR PERFORMANCE STATEMENT

[Please see ITB Clause 36.2 and Section III-Evaluation and Qualification Criteria]

Proforma for Performance Statement (for a period of last five years)

Bid No. _____ Date of opening _____ Time _____ Hours
 Name of the Firm _____

<u>Order placed by (full address of Client)</u>	<u>Order No. and date</u>	<u>Description of services and quantity of ordered in terms of area</u>	<u>Value of order (in INR)</u>	<u>Date of completion of service</u>		<u>Remarks indicating reasons for late delivery, if any</u>	<u>Attach a certificate from the concerned employer for satisfactory performance of service contract</u>
				As per contract	Actual		
1	2	3	4	5	6	7	8

Signature and seal of the Bidder _____

Note:

1. In support of having completed above works, attach self-attested copies of the completion certificate from the owner/client or Executing Agency / Consultant appointed by owner / Client indicating the name of work, the description of work done by the Bidder, date of start, date of completion (contractual & actual) and contract value as awarded and as executed by the Bidder. "Contract Value" shall mean gross value of the completed work including cost of materials supplied by the owner/client but excluding those supplied free of cost.
2. Credential certificates issued by Government Organizations/ Semi Government Organizations of Central or State Government; or by Public Sector Undertakings/Autonomous Bodies of Central/State Government or their subsidiaries / by Public Ltd. Companies listed in Stock exchange in India or Abroad shall only be accepted for assessing the eligibility of a Tenderer. Certificates issued by one of the aforesaid organizations as a lead member (having equity stake of 51% or more) of a Joint Venture (JV) for a work executed for the JV, will also be acceptable. In case of PPP projects, if the bidder has executed a work for a concessionaire who is one of the aforesaid organizations, then the certificate issued by such concessionaire or by the public authority concerned, will also be acceptable.
- 3 Information must be furnished for works carried out by the Bidder in his own name or proportionate share as member of a Joint Venture. In the latter case details of contract value including extent of financial participation by partners in that work should be furnished.
- 4 If a Bidder has got a work executed through a Subcontractor on a back to back basis, the Bidder cannot include such a work for his satisfying the Qualification Criterion even if the Client has issued a Completion Certificate in favour of that Bidder.
- 5 Use a separate sheet for each partner in case of a Joint Venture.
6. Only similar works completed during the last 5 years prior to the last stipulated date for submission of Bid, which meet the Qualification Criterion need be included in this list.

PART 2 - SUPPLY REQUIREMENTS

SECTION V – SCHEDULE OF REQUIREMENTS

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1.LIST OF GOODS AND DELIVERY SCHEDULE

Deleted

2. ACTIVITY SCHEDULE

1. The flying and ORI generation shall be done district wise and within the district, taluk-wise and within the taluk – village wise/ Gridwise.
2. The district wise, taluk wise and village wise flying and ORI handover plan should be done, as per the implementation plan.
3. The Activity Schedule shall be as per Detailed Implementation Plan included in the technical bid and as finalized as part of the signing of the Contract with the Bid Winner.
4. In 12-months the complete flying and delivery of all deliverables for all the villages in all the districts in the LOT shall be completed. The Activity Schedule shall be accordingly drawn up.
5. Every delivery should be accompanied with its QA/QC report, as detailed in the bid/implementation plan.

3. TECHNICAL SPECIFICATIONS

1. General:

Aerial image acquisition using Drone / Aerial survey shall be carried out for of the defined packages or LOTs with a GSD of 5cm or better. Data will be captured with reference to control network already established by CORS Network/SoI GCP's in State of Karnataka. To achieve the required accuracy, the bidder will have to establish ground control points and check points prior to flying.

The following data will be provided to the Service Provider:

- Area of Interest (AOI) in shp and kmz format
- Static Observation Data of CORS stations/SoI GCP's for post processing OR
- Facility of NRTK (Network RTK) if RTK rovers are used.

Broadly, the Service Provider would need to provide the following services:

- (i) Provision of Ground controls for Base stations as per requirements of project to achieve the required accuracy and also for check points.
- (ii) Procuring necessary clearances from DGCA & Ministry of Defense, other agencies of Government of India for flying over the AOI to acquire data from drone / aircraft, Imagery etc.
- (iii) Compliance of Requirements for Operation of Civil Remotely Piloted Aircraft System (RPAS) issued by Ministry of Civil Aviation, Government of India as per the Drone Act 2021 dated 25th August 2021. In case of Aerial survey using aircraft fitted with Medium / Large Format Digital Camera, the standard conditions defined by Ministry of Defence for conduct of aerial survey / photography using aircraft /UAV's dated 28th Dec 2018 shall be followed.
- (iv) The purchaser shall provide all necessary letters and authorization to the service provider. It is the responsibility of the service provider to obtain the necessary clearance for aerial surveys for all authorities concerned.
- (v) Preparation of Mission planning
- (vi) Post-processing of drone/ aerial survey captured data to produce the following:
 - a. Digital Surface Model (DSM)
 - b. Ortho Rectified Images (ORI) and submitting as seamless color balanced mosaic for the project area.
- (vii) Conducting Quality Control/Quality Assurance (QC/QA) to establish correctness at each stage.
- (viii) Validating horizontal and vertical accuracy through independent means
- (ix) Compliance with other product requirements such as file naming, datum and projection, units, etc
- (x) Delivery of raw data, other products and supporting reports

2. Scope of Work

a. Clearances for flying

The Service Provider is responsible to obtain necessary clearances from Director General of Civil Aviation, Ministry of Defence and other agencies of Government of India or concerned State Government as may be required to complete the job of flying over the AoI, acquire image data using Drone / Aerial Survey etc. The purchaser would provide

necessary documentation; however, getting clearance would be the entirely the responsibility of the Service Provider. Scope of this activity shall include operational requirements for Civil Remotely Piloted Aircraft System (RPAS) as per Drone Rules 2021 notified by Ministry of Civil Aviation, dated 25th August 2021 and also in obtaining Unique Identification Number (UIN), and the type certificate, Insurance etc.

b. Mission Planning

The flight path shall cover the desired area completely including enough cross flight lines to eliminate shadowing and allow for proper quality control. Flight line forward overlap should be 80% & side overlap should be 70% or greater for the urban (towns and cities) areas. For the rest of area, the overlap shall be 80% forward overlap and 40% side overlap as required for drone. For medium / large format aerial cameras. it shall be 60 % and 30%, to ensure that there are no data gaps between the usable portions of the swaths. In the highrise areas, the overlap has to be increased so that the most nadir pictures are used for ortho generation which shall have minimal tilt from high altitude buildings / trees. Data collections in high relief terrain should have greater overlap. Any data with gaps between the geometrically usable portions of the swaths will be rejected. Buffer area of 100m shall be covered for the given boundaries. The data coverage / processing for the buffer areas are not considered as additional area in terms of total area both for physical progress and financial calculations.

c. Ground Control Survey

The Service Provider must use ground control network already established by SOI or CORS Network to establish the ground control for the base stations for drone / aircraft based aerial survey flying activities. The proposed control network should be provided to KRSAC for its approval prior to commencement of work. The control network points shall be surveyed using GNSS of dual frequency (L1 and L2) and multi-channel capability with on-the-fly ambiguity resolution and be able to log GPS data at 1-second epochs or better. Sufficient no. of check points must also be made with reference to existing ground control network or CORS network to check the accuracy of ORI.

Network RTK solution from SOI established CORS network is preferred. In the absence of CORS signals, static surveys and post processing shall be carried out. However, in both the cases, the expected GPS accuracy should be achieved, as mentioned in this RFP.

Check points shall be provided with 5 points per village. In Urban areas, for every 500 m x 500m grid area, one check point should be provided

d. Data Acquisition

The Service Provider will acquire high-resolution 5 cm GSD or better images using drone / medium or Large format digital cameras as per the technical specifications with forward overlap of 80% & side overlap of 40% / 60% forward overlap and 40% side overlap or greater, respectively. The Service Provider must use ground control already established with reference to SOI GCP library or CORS network for the base stations for drone / aerial flying activities.

e. Post-Processing

The Service Provider will provide high-resolution 5 cm GSD or better ORI and DSM of 25 cm or better to achieve the desired ortho image accuracy after post processing of drone /

aerial data. The accuracy the ORI will be checked using the check points. The Service Provider will ensure Proper versioning, file naming. The naming convention shall be defined by KRSAC (as per LGD code, in case of villages OR K-GIS Grid codes) and management of data in various Production Cycles.

f. Quality Control/ Quality Assurance

Quality Control/Quality Assurance (QC/QA) of the drone or aerial data and/or derived data at various stages of Project including validating horizontal and vertical accuracy as per specifications laid down in RFB will be the responsibility of the Service Provider. The purchaser may perform additional QC/QA testing. This shall include (a) Carrying out corrections as per Quality Audit Report and security vetting report provided by KRSAC/SOI (b) Facilitating quality audit, stage approvals , security vetting and final acceptance tests by KRSAC/SOI

3.0 TECHNICAL SPECIFICATION:

1. SPECIFICATIONS OF UAS/DRONE BASED SYSTEM

Technical Specifications			
S.No.	Description	Required Specification without operator	Bidder’s Offered Specifications / Compliance /Deviation Statement (to be filled up by BIDDER)
1.	UAS Type	Up to the service provider	
2.	Mission	Surveying and Mapping /Professional Grade	
3.	(i) Landing &Takeoff	Vertical Take Off and Landing (VTOL)	
4.	MaximumTakeoff weight (MTOW)	Up to the service provider	
5.	Flight Height above Ground Level	Maximum of 120m AGL with Terrain tracing Capability	
6.	Endurance or Max flight time	Minimum 40Minutes	
7.	Sensor or Camera	One high resolution RGB camera with minimum resolution 20 MP or more. Drone camera should capture the image in fix mode.	

8.	GNSS Grade	Both PPK/RTK Enabled onboard GNSS along with Base(Master) GNSS receiver with L1 & L2 frequencies capable to achieve accuracies stipulated in bid-document.	
9.	Nominal Coverage at 120 m (400 ft) Forward Overlap : 80 % Side Overlap :70%	1sq kmwith less than 5cm GSD	
10.	Operational wind Speed	Minimum 8 m/s or higher	
11.	Ground Sampling Distance (GSD)	5 cm or better	
12.	Average X,Y accuracy	<10cm(95% of total checked values(absolute accuracy) should be less than 10 cm)	
13.	Average Z accuracy	< 20 cm(95% of total checked values (absolute accuracy) should be less than 20 cm)	
14.	Battery Type	Li-Po/Li-ion or more efficient, international Standard Compliant	
15.	Emergency Recovery Mode	Ability to return back to launch pad or home position with landing accuracy of 1 meter or better in case of communication failure, low battery/power and high wind (more than operational wind speed) etc.	
16.	Onboard storage	Minimum 64 GB or more (Expandable)	
17.	Security	128 bit encryption	
18.	Flight planning & control software	A navigation software package that enables the user to plan and perform complex flight patterns for different surveying applications (Corridor and Area mapping) and should allow the combination of telemetry data with the recorded images/data. The software should feature the functions that enable to plan, fly and prepare the data for post processing for different applications.Package should include at least following features: <ul style="list-style-type: none"> • Flight Plan editor & monitoring Flight book • Photo count display during flight 	

		<ul style="list-style-type: none"> • Should permit use of 3D data for flight planning in hilly/rolling terrain. Should have the interface to insert SRTM data and K-GIS DEM data other than default • Real time tracking and live data Preview • Link loss time should be flexible/Drone pilot centric so that he/she can fix the same on the basis of flight duration. • Should have the capability of flight/mission planning of adjacent villages/polygon (more than one village/polygon) simultaneously at once before commencement of flight simultaneously and also automatic navigation of Drone after completion of one polygon to another planned polygon without specific command of Pilots. • Should have one software for both flight planning & Geo-tagging and should have optimal input for GNSS coordinates • Should have capability of recording more than one flight data without being downloading the same after each flight. All the flight data can be downloaded at once after closing the everyday work. • Should have capability to store each day data of different flights separately • The geo-tagged images should provide the INS data along with the coordinates for input into the image processing software • On board GNSS observation file should be available separately. Drone camera should 	
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		capture photos of mission polygon only with specified overlap i.e it should not capture unwanted photos while moving from one flight line to another in particular mission polygon.	
19.	Data Link	Communication data link complying with International standard and certification. Frequencies used should not interfere with other users allocated frequency spectrum	
20.	Communication distance between GCS and flying Drone/UAV	Upto VLOS as per CAR guidelines	
21.	Operational Temperature	-5 to +50°C	
22.	The UAV/RPAS provided by bidder shall also be equipped with the following serviceable components/ equipment	i. GNSS for horizontal and vertical position fixing	
		ii. Autonomous Flight Termination System or Return Home (RH) option	
		iii. Flashing anti-collision strobe lights	
		iv. No permission – No Take-off (NPNT) compliant for APP based real time tracking. NPNT Hardware and Firmware shall be tamper proof.	
		v. Fire resistant identification plate inscribed with UIN	
		vi. Flight controller with flight data logging capability	
		viii. Barometric equipment with capability for remote sub-scale setting	
		ix. Geo-fencing capability	
		xi. Manufacture Serial Number	
23.	DGCA Guideline	i. The Professional Survey Grade unmanned Aerial Vehicle /Drone shall have all necessary permits and should be registered with DGCA as per (or conform to) the latest Drone Rules 2021 notified by Ministry of Civil Aviation dated 25 th August 2021. Obtaining type certificate, flying	

		<p>approval in various zones as per the digital sky platform, , DGCS clearance for import, DGFT license for import, security clearance or any other clearance along with obtaining UIN for the drones shall rest with service provider. SSLR shall act only as facilitator. UAV survey operations to be carried out in the field shall also conform to the above mentioned DGCA standards.</p> <p>ii. The operator provided should have undergone proper training, should have proper clearances and permits/licenses to operate UAV as per (or conform to) the latest Drone Rules 2021 and other guidelines as and when issued by DGCA in future.</p>	
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2. SPECIFICATION FOR AIRCRAFT WITH MEDIUM / LARGE FORMAT DIGITAL CAMERA

Technical Specifications			
S.No.	Description	Required Specification without operator	Bidder's Offered Specifications / Compliance / Deviation Statement (to be filled up by BIDDER)
24.	Aircraft Type	Up to the service provider (fixed wing / Rotary (Helicopter))	
25.	Mission	Professional medium / large format aerial photography for large scale mapping	
26.	Flight Height above Ground Level	upto 10,000 ft. GSD of aerial imag acquired shall be 5cm or better	
27.	Endurance or Max flight time	Minimum 4 hrs	
28.	Sensor or Camera	Large format digital camera which can acquire upto 2 cm GSD of image.	

29.	Focal Length	50 cm or above	
30.	Channels	4 band – R, G,B, NIR	
31.	Pan sharpened Ratio	1 : 4 or better (ex 1: 3)	
32.	Flying height	Upto 5000 ft	
33.	Ground Coverage per flight/frame	Coverage of more than 750 m in swath @ 5 cm GSD when flown at 1000 m height	
34.	GNSS Grade	Both PPK/RTK Enabled onboard GNSS along with Base (Master) GNSS receiver with L1 & L2 frequencies capable to achieve accuracies stipulated in bid-document.	
35.	Mount	Gyro stabilized mount with IMU with 20 Hz minimum. In case Gyro stabilized mount is not proposed due to camera's in-built tilting compensation mechanism then the same shall be explained and details there of be given as part of technical bid and Technical Evaluation Committee of Purchaser shall take a final decision in this regard.	
36.	Ground Sampling Distance (GSD)	5 cm or better	
37.	Average X,Y accuracy	<10cm (95% of total checked values (absolute accuracy) should be less than 10 cm)	
38.	Average Z accuracy	< 20 cm (95% of total checked values (absolute accuracy) should be less than 20 cm)	
39.	Onboard storage	Minimum 2 TB or more (Expandable)	
40.	Security	128 bit encryption	
41.	Flight planning & control software	A navigation software package that enables the user to plan and perform complex flight patterns for different surveying applications (Corridor and Area mapping) and should allow the combination of telemetry data with	

		<p>the recorded images/data. The software should feature the functions that enable to plan, fly and prepare the data for post processing for different applications. Package should include at least following features:</p> <ul style="list-style-type: none"> • Flight Plan editor & monitoring Flight book • Photo count display during flight • Should permit use of 3D data for flight planning in hilly/rolling terrain. Should have the interface to insert SRTM data and K-GIS DEM data other than default • Real time tracking and live data Preview • Should have the capability of flight/mission planning of adjacent villages/polygon (more than one village/polygon) simultaneously at once before commencement of flight simultaneously. • Should have software for both flight planning & processing of GPS / IMU to derive the better accurate Photo orientation parameters and co-ordinates. • Processing software (block setup) shall be able to import the data and generate the blocks / tie points as part of triangulation adjustment. • Should have capability of recording more than one flight data without being downloading the same after each flight. All the flight data can be downloaded at once after closing the everyday work. • Should have capability to store each day data of different flights separately • The geo-tagged images should 	
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		<p>provide the INS data along with the coordinates for input into the image processing software</p> <ul style="list-style-type: none"> • On board GNSS observation file should be available separately. 	
42.	Operational Temperature	-5 to +50°C	

2. SPECIFICATION OF DRONE OR AERIAL SURVEY DATA ACQUISITION

Coverage	1. Area finalized & approved by SSLR / KRSRAC with 100 m buffer surrounding the AOI polygon.
Collection condition	2. Sun angle - no less than 30 degree to minimize shadow. 3. The project site has relief changes due to built-up area therefore photograph should be captured at high sun angle to avoid shadows due to these high relief formations. 4. Cloud free with minimal smoke, smog, fog and dust. 5. To avoid breaks within individual flight lines. 6. Open space should be chosen for the flight and landing of drone to avoid endanger to public or property.
Outturn	It is expected that Service provider will carry out drone flying in average 05 villages / grids per day ready Service Provider is expected to complete aerial data acquisition for over 350 Sqkm in a week. Ultimately, the output shall be not less than the Monthly Implementation Schedule as approved by the Purchaser.

3. SPECIFICATION OF PROVISION OF GROUND CONTROL POINT

Sl No.	Description	Specifications
1.	GNSS Control Point	<p>1. Installation of Control Points for Drone / Aerial Survey</p> <p>Using existing ground control network of CORS Network or GCP library, I base Control Points for flying shall be established. Density of these control points will be finalized by Service Provider in consultation with Survey of India to achieve stipulated accuracy of drone / aerial survey.</p> <p>The following points shall be kept in mind while selecting control point locations:</p> <ul style="list-style-type: none"> • Clear of HT/LT lines, radio / mobile towers, high frequency dish antennas, radar etc. • Free from multipath problems associated with tall features in the vicinity. • Free from foliage • Free from major obstructions / obstacles • Easily accessible to the survey team. • Open to sky with a clear view towards sky at 15-degree angle with horizontal plain. • Marker numbering scheme shall be finalized in consultation with Survey of India before start of work.
		<p>1. Scheme and schedule of observation</p> <ul style="list-style-type: none"> • Base control points must be located on pil-

		<p>lars/permanent structures.</p> <ul style="list-style-type: none"> • The Service Provider shall prepare a scheme i.e network of base control stations along with the proposed flight plan, in advance and get it approved from KRSAC/SOI. The network shall be presented on satellite imagery. This should also contain description of proposed base control stations. • When observation scheme containing location of base control stations which is adequately connecting to Existing ground control points forming a network is approved by KRSAC, the Service Provider shall submit schedule of observation indicating tentative date and time of observation at base control stations specifying their locations. • The bidder should submit its flight plan and block layout of processing for approval with the client and the statutory authorities for approval. As part of the block layout, the tentative location of GCP / check points with its distribution should be submitted and approved by the client. • It shall be noted, all GCP's and check points shall be pre-targeted so that the points are available on the image and it is preferred to have such pre-target points be on pillar / semi permanent structured. However, in the absence of such pillar / permanent structures, the pre-targets can be placed on the plain ground which is visible clearly in the aerial image acquired. • It is to be noted that the pre-target established should not obscure any corner point of the property which is intended to be mapped from the images / ground.
		<p>Establishment and Observation of base control points</p> <ul style="list-style-type: none"> • Base control stations shall be engraved neatly for their identification and will be painted by filling of engraving with contrast color paint. Unique ID of Point and date information are to be engraved. Necessary jungle clearance and approach to site for proper execution of work wherever required shall have to done by the Service Provider at no extra cost. • Utilizing existing GCP Ground Control Points or CORS network provided by Survey of India can be considered which shall enable to achieve the adjusted coordinates from the GNSS measurement. Such coordinates shall meet the accuracy requirements, specified in this RFP. • The pre-target points shall be established in each of the proposed locations of GCP which shall be neatly painted with contrasting colours with respect to the terrain. These points shall be uniquely seen on the

		<p>drone / aerial survey photographs.</p> <ul style="list-style-type: none"> • Dual frequency GNSS receivers with the required accessories and software in Static mode are to be used for observations. The GNSS used shall be multi channels. A minimum of 6 healthy satellites should be available during entire duration of observation. The GNSS receivers should not be older than three years from the date of award of contract. Compatible GNSS instrument and accessories of LEICA /Trimble/ASTECH/Spectraprecision/Topcon/Hemisp here or of any other reputed brand having similar specifications only shall be used so as to achieve the required accuracy. Chinese models of any brand shall not be allowed to use. Observations taken with Geometric Dilution of Precision (GDOP) exceeding 4 should not be considered. During observations, satellite mask angle should be above 15 degree. • Using digital camera of at least 10 mega pixels, Service Provider shall take photograph of each Ground Control points after finalizing writing etc. and submit it to Survey of India in digital form with proper indexing and labeling.
		<p>Establishment of Check Points</p> <ol style="list-style-type: none"> 1. Utilizing existing GCP Ground Control Points or CORS network provided by Survey of India whose adjusted coordinates are available, minimum 5 check points in each village polygon shall be provided by GNSS observation either in static or RTK mode. Check points shall be uniformly distributed in village polygon. 2. Check Points shall be made on conspicuous points be easily identifiable in images procured through drone / aerial Survey. 3. Check points shall be engraved neatly for their identification and will be painted by filling of engraving with contrast color paint. Unique ID of Point are to be written. 4. Check points are to be post pointed in image in digital form and submit it to SoI / KRSRSAC along with processed coordinate in .xls sheet. 5. Using digital camera of at least 10 mega pixels, Service Provider shall also take photograph of each Check point after finalizing writing etc. and submit it to Survey of India in digital form with proper indexing and labeling. <p>All the GCP's and the Check points shall be pre-targetted so that the points are clearly visible on the photograph.</p>

		The Pre-targets shall be painted with contrasting colour as that of the terrain so that those points are clearly visible and seen on the drone / aerial surveyed photograph
	Datum	GNSS data (Raw) for all Base station and Check Points will be processed in The World Geodetic Datum 84 (WGS-84). Heights shall be Ellipsoidal height.
		GNSS data (Raw and Processed) for all Base station and Check Points are to be provided in RINEX format (Receiver Independent Exchange Format) and GPS observation log sheets, raw and processed data sheet should be provided in PDF format or Excel spread-sheet if data is captured digitally.

3. SPECIFICATION OF ORTHO RECTIFIED IMAGE

	Description	Specifications
1	Coverage	As per AoI with 100 m buffer all around.
2	GSD	5 cm or better
4	Bands	RGB (Three band natural color imagery)
8	Image format	Uncompressed GeoTIFF and/or lossless Compressed JPEG2000 or ECW format
9	Horizontal accuracy	$\leq \pm 10$ cm 95% confidence interval (1.96 x RMSE) A checklist shall be submitted for each grid / project area on the accuracies achieved against the surveyed check and control points.
10	Imagery Product	Seamless mosaic covering the project area and non-overlapping, edge matched.
11	Radiometric Resolution	Minimum 8 bit per band in accordance with chosen image format. In case of 4 band data, all band data should be part of ortho mosaic.
12	Delivery Dates	As per the project timeframe. Raw photograph to be submitted with Raw acquired data and processed Ortho Rectified Image
13	Horizontal Datum	The World Geodetic Datum 84 (WGS-84)
14	Map Projection	The coordinate system for all deliverables is the Universal Transverse Mercator (UTM).
15	Vertical Datum	All deliverables specified below as ellipsoidal will be in terms of the WGS-84 reference frame.
16	Survey Control	1. Geo-tagging and Ortho-image generation: It is expected that On board GNSS/IMU and base Ground Control GNSS data established for aerial survey be used for Geo-tagging and ortho rectified image production.. 2. Supplemental ground control i.e (5 Check Points per

		<p>village polygon or K-GIS grid) should be submitted that with purchaser for independent check of Ortho rectified image.</p> <ol style="list-style-type: none"> 3. All raw survey control data used or derived from this contract must be supplied to purchaser to ensure independent Quality Assurance (QA) of the survey operations, and for possible use in other surveys requiring these. It is therefore essential that all base ground stations are permanently marked in accordance with the Survey of India standards. 4. The primary ground control and check point surveys must be referenced to the survey of India references. 5. As part of the ortho images, positional Accuracy report needs to be submitted along with every deliverable with respect to all GCP and check points. The overall accuracy shall not be more than the accuracy specified in this document.
17	Orthorectification	<ol style="list-style-type: none"> 1. The digital surface model shall be created after block adjustment through automatic mode. 2. The digital surface model shall be reviewed digitally and visually. Any anomalies and errors in the data should be removed and smoothed which can generate the ortho photo without distortion and meeting the accuracy requirements. 3. The DSM generated across models / project areas shall not have more than 20 cm height variation. 4. Stereomodel created in post processing from aerial image data shall be used for rectification process. 5. DEM / DTM is not the requirement under this RFP. However, the government shall generate the DEM/DTM and the contours at a later stage, as needed. 6. However, for generating the ortho photo and mosaic process, digitization of seamlines / breaklines if any shall be digitised which shall ensure the creation of accurate ortho photos with no distortions on the buildings outlines. 7. The rectification process shall use the suitable technique to ensure high accuracy and image quality. 8. The mosaicking process shall minimize image distortions and smearing and produce a seamless edge-matched product. 9. Processes will be used during ortho-rectification to avoid the presences of warped and misaligned above ground transportation features. 10. Orthorectified Image shall be tonally balanced prior to generation of an image mosaic. Relative join (misalignment) of transportation features between

		<p>adjacent image chips/tiles shall be within the tolerance defined by the horizontal positional accuracy requirement set out above.</p> <p>11. The rectification process shall involve a solution of the appropriate photogrammetric equations for each pixel in the output image. It is not preferable to solve photogrammetric equations at anchor points only and then warp the content of the original image between the anchor points.</p> <p>12. The service provider will describe its approach for ortho-rectification and get it approved from purchaser.</p>
18	Radiometry	<p>1. All images should be clear and sharp in detail with no light streaks, static marks, scratches, ice effect or other noticeable blemishes. The imagery should be free from defects, such as out-of-focus imagery, and should not contain inconsistencies in tone and/or density. The ortho-rectified image should be free from tilt and relief displacement. To ensure consistency, the imagery should be radiometrically and geometrically corrected to enable adjacent files to be displayed simultaneously without obvious distinctions between them.</p>

4. FINAL DELIVERABLES AND DATA SUPPLY SPECIFICATIONS

	Description	Specifications
1	File naming	File naming as defined by KSRSAC / SSLR which shall be shared with the service provider
2	GNSS Data for occupations of I base-stations and Check Points	<p>1. GNSS data (Raw and Processed) for all Base station and Check Points to be provided in RINEX format (Receiver Independent Exchange Format).</p> <p>2. GPS observation log sheets should include the following details:</p> <ul style="list-style-type: none"> a. Survey mark id b. Occupation time & date c. Antenna height measurements d. Instrument /antenna types & serial numbers <p>The GPS observation log sheets, raw and processed data sheet should be provided in pdf format and/or Excel spreadsheet.</p>
3.	Raw Aerial Data	Raw aerial surveyed data/images along with fly log, on board GNSS/IMU data
4.	Block Adjustment	<p>1. The village / grid wise block adjustment shall be carried out using all photographs.</p> <p>2. Adjacent block photographs shall be included in each block on overlapping areas</p> <p>3. Common photographs shall be included in each of the</p>

		<p>overlapping areas of blocks.</p> <p>4. The adjustment results shall be submitted and taken approval from SoI / KRSAC before proceeding with the DSM / ortho image generation.</p>
5.	Ortho Rectified Images	<p>5. Post Processed ORI of each village in ECW / JP2000 format with GSD 5 cm or better and Horizontal accuracy shall be 10 cm or better</p> <p>6. Digital surface Model with accuracy 20 cm or better</p> <p>7. Seamlines / breaklines used, if any for generating orthoimages shall be submitted.</p> <p>8. The QC report of positional accuracy against the measured control and check points shall be submitted. The format of QC report shall be shared to the service provider during start of the project.</p>
6.		<p>1. All deliverables must conform to the projection, datum, and coordinate system specified in the tender document. File sizes cannot exceed 1 gigabyte, unless otherwise specified by the SoI. Each file must be organized to facilitate data manipulation and processing.</p>
	Data Delivery Reports	<p>A delivery report describing the contents of the data supplied with every data delivery (interim, staged, final).</p> <p>1. Collection Report : Raw data collection report detailing mission planning and flight logs will be submitted.</p> <p>2. Survey Report: A survey report detailing the collection of all ground control including the following will be submitted:</p> <ul style="list-style-type: none"> • Base Ground Control points • Check points <p>3. Post Processing Report: Post Processing Report detailing GNSS data, Drone data / aerial image processing, DSM And ORI generation will be submitted. Any breaklines / DTM if generated for the generation of ORI shall also be part of the report.</p> <p>4. QA/QC Report: A QA/QC report, detailing procedures for analysis, accuracy assessment and validation of the following will be submitted.</p> <ul style="list-style-type: none"> • GNSS ground control Point data (Absolute vertical accuracy/relative vertical accuracy) • Drone / aerial image processing, • DSM and ORI generation
7	Delivery Media	<p>1. Data should be delivered on External Hard Drives. External hard drives will be retained by KRSAC/SOI.</p> <p>2. Data deliveries should be clearly labeled with name</p>

		of Service Provider, date of supply and list of contents.
8	Report Formats	All reports are to be provided in Word (.doc/.docx) format, Excel spreadsheet (.xls/.xlsx) or appropriate digital format as approved by SSLR.

5. PROJECT PLANNING AND REPORTING SPECIFICATIONS AND QUALITY ASSURANCE SPECIFICATIONS

Quality Control/Quality Assurance (QC/QA) of the drone / aerial data is primarily the responsibility of the Service Provider. The Survey of India may perform additional QC/QA testing if needed. Pragmatic QA specifications would need be agreed by the Service Provider with the Survey of India (SoI) in regard to intermediate steps of data acquisition and post-processed data. The derived products will be evaluated for spatial accuracy and general conformation to prescribed requirements.

6. QUALITY ASSURANCE REPORT SPECIFICATIONS FOR ORI

I FOR ORTHO RECTIFIED IMAGE		
Sl. no	Description	Specifications
1	Horizontal accuracy and GSD	(a) Horizontal accuracy shall be 10 cm or better (b) GSD 5cm or better
3	Procedure	<ol style="list-style-type: none"> 1. Visual inspection of the mosaic to check blurred imagery, improper colour balancing, colour bleeding and shadow details, edge mis-matches. Orthorectified Images should be clear and sharp in detail with no light streaks, static marks, scratches, ice effects or other noticeable blemishes. The ORI should be free from defects, such as out-of-focus image/photo, and should not contain inconsistencies in tone and/or density. The ORI should have no distortions and smearing and should be seamless edge-matched and of highest quality. 2. No building edges shall have distortions posing difficulty in mapping the building / property edges. 3. Horizontal accuracy of the Ortho rectified image of all village polygon will be checked using GNSS coordinated of Check Points. 4. Should more than 5% of the ORI that are subjected to external QC fail to meet the specifications laid down in Tender Document, all products will be returned to the service provider for further QA to identify the extent and cause of the problems so established. The service provider will be expected to rectify these problems, and (where necessary to comply

		<p>with the specification) make new products at his own cost.</p> <p>5. DSM on overlapping areas shall not have more than 10 cm variation in elevation. The accuracy of DSM generated and used for ortho rectification shall not be less than 25 cm in height in areas of buildings and ground features.</p> <p>6. The mapping of land ownership boundary lines is the objective of the project and the ORI images shall not have any obstruction / distortion and quality errors. If present, the complete project / block area shall be rejected and shall be reflowed and submitted.</p>
II FOR GROUND CONTROL POINT		
Sl. no	Description	Specifications
1.	Horizontal Accuracy	2.5 cm or better For both I base Stations and Check Points
2.	Procedure	<p>The accuracy of the ground control points (I base stations & Check Points) will be checked by Network Adjustment Report/Post Processing Report submitted by service provider as deliverables. KRSAC may process the GNSS data of Base station Base station and Check Points provided in RINEX format for independent check.</p> <p>Should more than 5% of the GNSS data that are subjected to external QC fail to meet the specifications the service provider is expected to rectify these problems, and (where necessary to comply with the specification) make fresh GNSS observation at his own cost to achieve the required accuracy.</p>

Format for Data Deliverables

- Orthoimage of 5 cm GSD - in uncompressed Tiff and/or lossless compression in ECW / JP2000 format
- DSM to be given as point cloud in LAS format. In case of grid format, 1 m grid shall be used
- DTM / Breaklines if generated for the generation of ortho images in ESRI 3D Shape file format / geo-database format
- GPS Control point data – RINEX formats wherever static data processing is observed. In case of Processing with CORS, the process reports matching to the accuracy requirements should be submitted.
- All report in Microsoft Excel / Word format. The same to be submitted in PDF format, as well.

Note

- Processing shall be done with in the premises of SSLR / KRSAC in case of drone or aerial survey using large format camera provided that medium Format Digital Camera can be used which is capable of acquiring 5cm or better GSD and other outputs and deliverables required under this RFP – the decision of Technical Evaluation Authority in this regard shall be final. The bidder can establish their own processing facility in Karnataka. Such established processing facility shall be supervised and overseen by KRSAC / SSLR. In case of premises of the bidder, the work shall be done under the supervision of officers of SSLR if so desired by the Purchaser.
- Copy of the raw or processed data in any form shall not be retained by the service provider.
- All data (raw, processed and its derivatives) shall be the property of Government of Karnataka which shall be managed by KRSAC, the authorised agency.
- Data to be handed over in HDD, village / grid wise, as defined by SSLR / KRSAC
- The storage of HDD by KRSAC/SSLR shall be in the state data centre or in Cloud storage established by GoK.
- The submitted deliverable will be verified and reported for errors, if any within 30 days. In case of delay in submission of feedback by SSLR / KRSAC, the appropriate / equivalent additional time period shall be given for correcting the errors, if any.
- If data has no errors, the data acceptance shall also be provided. Acceptance of data by its virtue of time is not accepted.
- In case of errors, the penalties as per RFP terms shall be applicable. The additional time period for submission of the corrections shall be given without penalty in case of delay in providing the feedback on quality acceptance of data

8. RESPONSIBILITIES

Service Provider Responsibilities

- a) The Service Provider will have the responsibility for obtaining clearance from GoI agencies for flying over the survey area, acquiring and processing aerial data acquisition from Drone / Aircraft fitted with Large format Camera data including QA/QC, and delivery of raw and processed products to Survey of India.
- b) The Service Provider shall set up a local office in Bengaluru for coordinating flying and data acquisition, and processing, and interaction with the SSLR / SoI / KRSAC. Necessary infrastructure for office and technical work will be created in the local office.
- c) The Service Provider will have the responsibility to ensure compliance of DGCA issued guidelines for Requirements for Operation of Civil Remotely Piloted Aircraft System (RPAS) as applicable. Similarly, the Service Provider shall ensure all legal and statutory compliances.
- d) Register with CORS system of SOI for carrying out the GPS processing on behalf of the government
- e) Carrying out the Drone / aerial survey and carryout the GPS surveys, data processing as per the terms of RFP and deliver the products meeting the quality conditions mentioned in the RFP.

SSLR Responsibilities

- Provide necessary documentation for obtaining clearance from GoI agencies if needed.
- Facilitation of interactions with GoI agencies and with state agencies if needed.
- The SSLR shall provide Static observation data of CORS network for Ground Control.
- Release of funds and review of reports according to the agreed schedule.
- Constitution of a Technical Committee to support for interaction with the Service Provider on technical issues through the contract period, and in reviewing reports and recommending follow-on actions, QA/QC and for evaluating digital products prior to acceptance.
- The Survey of India shall nominate suitable officer to coordinate the activities, and provide necessary interaction at appropriate times to avoid any disturbance and loss of time for carrying out the assignment.
- Notification for entry to the land for surveying & authorization letter to civil authorities shall be given to the Service Provider.
- Any other facilities mutually agreed upon by employer and the Service Provider.

Purchaser or Survey of India Responsibilities

- a. Provide document on the technical methodology to be adopted for aerial survey using Large Format Digital Camera OR Drone based image acquisition
- b. Defining the process of GNSS survey for GCP and Check points
 - i. Static Survey
 - ii. Using CORS network
 - iii. Sharing the GCP's of SOI, for control extension if static differential processing is to be adopted
- c. Defining the accuracy parameters of method of quality acceptance for GCP, Block setup/adjustment, DEM and Ortho images
- d. Providing Training and support to SSLR and Service providers on GCP, drone / aerial Survey, DEM / ORI generation and creating parcel data on the supplied ORI

Purchaser or KSRSAC Responsibilities

- a. To provide the Grid / Village boundaries and defining the project areas and prioritization in discussion with SSLR
- b. Approval of flight plans and GCP layout
- c. Verification of submitted data (Images, GCP, Check points, DSM, DEM, ORI), as per the defined parameters and giving approval
- d. Training to the service providers/ SSLR along with SOI
- e. Development of IT portal / application for project management and status tracking
- f. Generating the statistics of data delivered
- g. Performing QA/QC validation and providing acceptance report, areawise, as prioritized
- h. Publishing / making the ORI image available to SSLR surveyors for creating Land parcel maps.
- i. Such other technical and other help and support as assigned from time to time as per requirement.

4. DRAWINGS

(To be inserted if required)

5. INSPECTIONS AND TESTS

(Refer to Section VI Clause 6)

6. TENTATIVE AREA OF PROJECT SURVEY

Drone/Aerial Survey - Package/LOT 2A		
S. No	District name	Area in Sq KM
1	Bengaluru Urban (excluding BBMP)	1390
2	Bengaluru Rural	2259
3	Mandya	4961
	TOTAL =	8610

NOTE: Area figures provided above is indicative. Final area & shape file will be provided to the Service Provider at the time of award. The payment shall be as per actual Square Kilometer successful delivery of ORIs as per this RFP.

7. CHECKLIST / FORMS TO BE SUBMITTED BY THE BIDDERS

Instruments proposed for the project (to be submitted for each Package, separately)

Package/LOT No and Name of Districts to be mentioned.

Description of Checklist to be submitted by Bidder	Section / Page No in the Bid document - to refer during evaluation	Submitted as per the requirement / form given in the RFP (Yes / No)
Details of Company Registration		
GST Registration		
Authorisation letter for the Signatory / bid submission		
Current Address / Email and Contact details of authorised Person		
Self-declaration that bidder is not blacklisted / barred from providing services		
Financial Year Audit Statement - 2021-22		
Financial Year Audit Statement - 2020-21		
Financial Year Audit Statement - 2019-20		
Financial Year Audit Statement - 2018-19		
Financial Year Audit Statement - 2017-18		
CA certificate on revenue from related services for last 5 years		
Cash flow Certificate from Bank		
Bank Details		
Details of Packages being applied		
Details of Sub Contractors, if any		
Details of GPS Instruments		
Details of Aircraft proposed, if applicable		
Details of Camera and other sensors to be used in Drone		
Details of Medium / Large Format Digital Camera		
Details of the Software license		
Details of Server / Storage		
Details of Manpower - Details of CV		
Details of Qualifying Projects		
Technical Compliance of each make / model of instruments GPS /Drone / Camera / Aircraft / Large Format Aerial Camera		
Proof of ownership of all the instruments to be considered for evaluation.		

Methodology- Aerial Survey, GPS Survey, Data Processing, Deliverables		
Implementation Plan - Resource Estimates, Time lines		
QA / QC Plan - Flight Plan, GCP Plan, Block Adjustment, OrthoImage Creation		
Resource Plan		
Price Bid		

PART 3 – CONTRACT

SECTION VI – GENERAL CONDITIONS OF CONTRACT

Section VI. General Conditions of Contract

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Section VI. General Conditions of Contract

1. General Provisions

1. Definitions	<p>Unless the context otherwise requires, the following terms whenever used in this Contract have the following meanings:</p> <ul style="list-style-type: none">(a) The Adjudicator is the person appointed jointly by the Employer and the Service Provider to resolve disputes in the first instance, as provided for in Sub-Clause 8.2 hereunder.(b) “Activity Schedule” is the priced and completed list of items of Services to be performed by the Service Provider forming part of his Bid;(c) “Completion Date” means the date of completion of the Services by the Service Provider as certified by the Employer(d) “Contract” means the Contract signed by the Parties, to which these General Conditions of Contract (GCC) are attached, together with all the documents listed in Clause 1 of such signed Contract;(e) “Contract Price” means the price to be paid for the performance of the Services, in accordance with Clause 6;(f) “Dayworks” means varied work inputs subject to payment on a time basis for the Service Provider’s employees and equipment, in addition to payments for associated materials and administration.(g) “Employer” means the party who employs the Service Provider(h) “Foreign Currency” means any currency other than the currency of the country of the Employer;(i) “GCC” means these General Conditions of Contract;(j) “Government” means the Government of the India;(k) “Local Currency” means the currency of India;(l) “Member,” in case the Service Provider consist of a joint venture of more than one entity, means any of these entities; “Members” means all these entities, and “Member in Charge” means the entity specified in the SC to act on their
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	<p>behalf in exercising all the Service Provider’ rights and obligations towards the Employer under this Contract;</p> <p>(m) “Party” means the Employer or the Service Provider, as the case may be, and “Parties” means both of them;</p> <p>(n) “Personnel” means persons hired by the Service Provider or by any SubService Provider as employees and assigned to the performance of the Services or any part thereof;</p> <p>(o) “Service Provider” is a person or corporate body whose Bid to provide the Services has been accepted by the Employer;</p> <p>(p) “Service Provider’s Bid” means the completed bidding document submitted by the Service Provider to the Employer</p> <p>(q) “SCC” means the Special Conditions of Contract by which the GCC may be amended or supplemented;</p> <p>(r) “Specifications” means the specifications of the service included in the bidding document submitted by the Service Provider to the Employer</p> <p>(s) “Services” means the work to be performed by the Service Provider pursuant to this Contract, as described in Appendix A; and in the Specifications and Schedule of Activities included inthe Service Provider’s Bid.</p> <p>(t) “SubService Provider” means any entity to which the Service Provider subcontracts any part of the Services in accordance with the provisions of Sub-Clauses 3.5 and 4.</p>
1.2 Applicable Law	The Contract shall be interpreted in accordance with the laws of the Employer’s country, unless otherwise specified in the Special Conditions of Contract (SCC).
1.3 Language	This Contract has been executed in the language specified in the SCC , which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Contract.
1.4 Notices	Any notice, request, or consent made pursuant to this Contract shall be in writing and shall be deemed to have been made when delivered in person to an authorized representative of the Party to whom the communication is addressed, or when sent by registered mail, telex, telegram, or facsimile or e-mail to such Party at the address specified in the SCC.

1.5 Location	The Services shall be performed at such locations as are specified in Section V in the specifications and, where the location of a particular task is not so specified, at such locations, whether in the Government of India or elsewhere, as the Employer may approve.
1.6 Authorized Representatives	Any action required or permitted to be taken, and any document required or permitted to be executed, under this Contract by the Employer or the Service Provider may be taken or executed by the officials specified in the SCC .
1.7 Inspection and Audit	Inspection and Audit shall be carried out as per provisions of GFR 2017
1.8 Taxes and Duties	The Service Provider, SubService Providers, and their Personnel shall pay such taxes, duties, fees, and other impositions as may be levied under the Applicable Law, the amount of which is deemed to have been included in the Contract Price.
2. Commencement, completion, modification and termination of contract	
2.1 Effectiveness of Contract	This Contract shall come into effect on the date the Contract is signed by both parties and such other later date as may be stated in the SCC .
2.2 Commencement of Services	
2.2.1 Program	Before commencement of the Services, the Service Provider shall submit to the Employer for approval a Program showing the general methods, arrangements, order and timing for all activities. The Services shall be carried out in accordance with the approved Program as updated.
2.2.2 Starting Date	The Service Provider shall start carrying out the services thirty (30) days after the date the Contract becomes effective, or at such other date as may be specified in the SCC .
2.3 Intended Completion Date	Unless terminated earlier pursuant to Sub-Clause 2.6, the Service Provider shall complete the activities by the Intended Completion Date, as is specified in the SCC . If the Service Provider does not complete the activities by the Intended Completion Date, it shall be liable to pay liquidated damage as per Sub-Clause 3.8. In this case, the Completion Date will be the date of completion of all activities
2.4 Modification	Modification of the terms and conditions of this Contract, including any modification of the scope of the Services or of the Contract Price, may only be made by written agreement between the Parties and shall not be effective until the consent of competent authority in Government of India, has been obtained.

<p>2.5 Force Majeure</p> <p>2.5.1 Definition</p> <p>2.5.2 No Breach of Contract</p> <p>2.5.3 Extension of Time</p> <p>2.5.4 Payments</p>	<p>For the purposes of this Contract, “Force Majeure” (FM) means extraordinary events or circumstance beyond human control such as an event described as an Act of God (like a natural calamity) or events such as war, strike, riots, crimes (but not including negligence or wrong-doing, predictable/seasonal rain and any other events specifically excluded in the clause). An FM clause in the contract frees both parties from contractual liability or obligation when prevented by such events from fulfilling their obligations under the contract. An FM clause does not excuse a party’s nonperformance entirely, but only suspends it for the duration of the FM. The firm has to give notice of FM as soon as it occurs and it cannot be claimed ex-post facto. There may be a FM situation affecting the purchase organization only. In such a situation, the purchase organization is to communicate with the supplier along similar lines as above for further necessary action. If the performance in whole or in part or any obligation under this contract is prevented or delayed by any reason of FM for a period exceeding 90 (Ninety) days, either party may at its option terminate the contract without any financial repercussion on either side.</p> <p>The failure of a Party to fulfill any of its obligations under the contract shall not be considered to be a breach of, or default under, this Contract insofar as such inability arises from an event of Force Majeure, provided that the Party affected by such an event (a) hastaken all reasonable precautions, due care and reasonable alternative measures in order to carry out the terms and conditions of this Contract, and (b) has informed the other Party as soon as possible about the occurrence of such an event.</p> <p>Any period within which a party shall, pursuant to this Contract, complete any action or task, shall be extended for a period equal to the time during which such Party was unable to perform such action as a result of Force Majeure.</p> <p>During the period of their inability to perform the Services as a result of an event of Force Majeure, the Service Provider shall be entitled to continue to be paid under the terms of this Contract, as well as to be reimbursed for additional costs reasonably and necessarily incurred by them during such period for the purposes of the Services and in reactivating the Service after the end of such period.</p>
<p>2.6 Termination</p> <p>2.6.1 By the Employer</p>	<p>The Employer may terminate this Contract, by not less than fifteen (15) days’ written notice of termination to the Service Provider, to be given after the occurrence of any of the events specified in paragraphs (a) through (f) of this Sub-Clause 2.6.1:</p>

<p>2.6.2 By the Service Provider</p> <p>2.6.3 Shortage of Budget</p> <p>2.6.4 Payment upon Termination</p>	<p>(a) if the Service Provider does not remedy a failure in the performance of its obligations under the Contract, within fifteen (15) days after being notified or within any further period as the Employer may have subsequently approved in writing;</p> <p>(b) if the Service Provider fails to deliver ORIs and flying as per Monthly Implementation Schedule as approved and made part of the Contract unless the same is specifically extended or modified by the Purchaser.</p> <p>(c) if the Service Provider become insolvent or bankrupt;</p> <p>(d) if, as the result of Force Majeure, the Service Provider is unable to perform a material portion of the Services for a period of not less than ninety (90) days; or</p> <p>(e) if the Service Provider, in the judgment of the Employer has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.</p> <p>(f) If the Service Provider violates DGCA and other statutory/prescribed Guidelines in doing his work.</p> <p>In case of termination the Bid Winner/Service Provider is liable to be black listed – in addition to liquidated damages and forfeiture of PBG.</p> <p>The Service Provider may terminate this Contract, by not less than thirty (30) days’ written notice to the Employer, such notice to be given after the occurrence of any of the events specified in paragraphs (a) of this Sub-Clause 2.6.2:</p> <p>(a) if, as the result of Force Majeure, the Service Provider is unable to perform a material portion of the Services for a period of not less than ninety (90) days.</p> <p>In the event the budget is curtailed by Govt of Karnataka or Government of India and it would not be possible to make future payments to Service provider due to shortage of budget, the Contract may be terminated with approval of competent authority of relevant Government.</p> <p>Upon termination of this Contract pursuant to Sub-Clauses 2.6.1 or 2.6.2, the Employer shall make the following payments to the Service Provider:</p> <p>(a) remuneration pursuant to Clause 6 for Services satisfactorily performed prior to the effective date of termination;</p> <p>(b) except in the case of termination pursuant to paragraphs (a), (b), (d) of Sub-Clause 2.6.1, reimbursement of any reasonable cost incident to the prompt and orderly termination of the Contract, including the cost of the return travel of the Personnel</p>
<p>3. Obligations of the Service Provider</p>	

<p>3.1 General</p>	<p>The Service Provider shall perform the Services in accordance with the Specifications and the Activity Schedule, and carry out its obligations with all due diligence, efficiency, and economy, in accordance with generally accepted professional techniques and practices, and shall observe sound management practices, and employ appropriate advanced technology and safe methods. The Service Provider shall always act, in respect of any matter relating to this Contract or to the Services, as faithful adviser to the Employer, and shall at all times support and safeguard the Employer’s legitimate interests in any dealings with SubService Providers or third parties.</p>
<p>3.2 Conflict of Interests</p> <p>3.2.1 Service Provider Not to Benefit from Commissions and Discounts</p> <p>3.2.2 Service Provider and Affiliates Not to be otherwise Interested in Project</p> <p>3.2.3 Prohibition of Conflicting Activities</p>	<p>The remuneration of the Service Provider pursuant to Clause 6 shall constitute the Service Provider’s sole remuneration in connection with this Contract or the Services, and the Service Provider shall not accept for their own benefit any trade commission, discount, or similar payment in connection with activities pursuant to this Contract or to the Services or in the discharge of their obligations under the Contract, and the Service Provider shall use their best efforts to ensure that the Personnel, any Sub-Service Providers, and agents of either of them similarly shall not receive any such additional remuneration.</p> <p>The Service Provider agree that, during the term of this Contract and after its termination, the Service Provider and its affiliates, as well as any Sub-Service Provider and any of its affiliates, shall be disqualified from providing goods, works, or Services (other than the Services and any continuation thereof) for any project resulting from or closely related to the Services.</p> <p>Neither the Service Provider nor its Sub-Service Providers nor the Personnel shall engage, either directly or indirectly, in any of the following activities:</p> <ul style="list-style-type: none"> (a) during the term of this Contract, any business or professional activities in the Government’s country which would conflict with the activities assigned to them under this Contract; (b) during the term of this Contract, neither the Service Provider nor their Sub-Service Providers shall hire public employees in active duty or on any type of leave, to perform any activity under this Contract; (c) after the termination of this Contract, such other activities as may be specified in the SCC.

<p>3.3 Confidentiality</p>	<p>The Service Provider, its Sub-Service Providers, and the Personnel of either of them shall not, either during the term or within two (2) years after the expiration of this Contract, disclose any proprietary or confidential information relating to the Project, the Services, this Contract, or the Employer’s business or operations without the prior written consent of the Employer.</p>
<p>3.4 Insurance to be Taken Out by the Service Provider</p>	<p>The Service Provider (a) shall take out and maintain, and shall cause any Sub-Service Providers to take out and maintain, at its (or the Sub-Service Providers’, as the case may be) own cost but on terms and conditions approved by the Employer, insurance against the risks, and for the coverage, as shall be specified in the SCC; and (b) at the Employer’s request, shall provide evidence to the Employer showing that such insurance has been taken out and maintained and that the current premiums have been paid.</p>
<p>3.5 Service Provider’s Actions Requiring Employer’s Prior Approval</p>	<p>The Service Provider shall obtain the Employer’s prior approval in writing before taking any of the following actions:</p> <ul style="list-style-type: none"> (a) entering into a subcontract for the performance of any part of the Services, (b) appointing such members of the Personnel not listed by name in Appendix C (“Key Personnel and Sub-Service Providers”), (c) changing the Program of activities; and (d) Changes in Monthly Implementation Plan of Flying and ORI generation. (e) any other action that may be specified in the SCC
<p>3.6 Reporting Obligations</p>	<p>The Service Provider shall submit to the Employer the reports and documents specified in Appendix B in the form, in the numbers, and within the periods set forth in the said Appendix.</p>
<p>3.7 Documents Prepared by the Service Provider to Be the Property of the Employer</p>	<p>All plans, drawings, specifications, designs, reports, and other documents and software submitted by the Service Provider in accordance with Sub-Clause 3.6 shall become and remain the property of the Employer, and the Service Provider shall, not later than upon termination or expiration of this Contract, deliver all such documents and software to the Employer, together with a detailed inventory thereof. The Service Provider may retain a copy of such documents and software. Restrictions about the future use of these documents, if any, shall be specified in the SCC.</p>
<p>3.8 Liquidated Damages</p> <p>3.8.1 Payments of Liquidated</p>	<p>The Service Provider shall pay liquidated damages to the Employer at the rate per day stated in the SCC for each day that the Completion Date is later than the Intended Completion Date. The total amount of</p>

<p>Damages</p> <p>3.8.2 Correction for Overpayment</p> <p>3.8.3 Lack of performance penalty</p>	<p>liquidated damages shall not exceed the amount defined in the SCC. The Employer may deduct liquidated damages from payments due to the Service Provider. Payment of liquidated damages shall not affect the Service Provider’s liabilities.</p> <p>If the Intended Completion Date is extended after liquidated damages have been paid, the Employer shall correct any overpayment of liquidated damages by the Service Provider by adjusting the next payment certificate. The Service Provider shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rates specified in SubClause 6.5.</p> <p>If the Service Provider has not corrected a Defect within the time specified in the Employer’s notice, a penalty for Lack of performance will be paid by the Service Provider. The amount to be paid will be calculated as a percentage of the cost of having the Defect corrected, assessed as described in Sub-Clause 7.2 and specified in the SCC. This penalty is in addition to termination, black-listing and PBG forfeiture which is be liable to be done as per Clause 2.6.1.</p>
<p>3.9 Performance Security</p>	<p>The Service Provider shall provide the Performance Security of amount as specified in the SCC to the Employer no later than the date specified in the Letter of acceptance. The Performance Security shall be issued in an amount and form and by a bank or surety acceptable to the Employer, and denominated in the types and proportions of the currencies in which the Contract Price is payable. The performance Security shall be valid until a date 28 days from the Completion Date of the Contract in case of a bank guarantee, and until one year from the Completion Date of the Contract in the case of a Performance Bond.</p>
<p>4. Service Provider Personnel</p>	
<p>4.1 Description of Personnel</p>	<p>The titles, agreed job descriptions, minimum qualifications, and estimated periods of engagement in the carrying out of the Services of the Service Provider’s Key Personnel are described in Appendix C. The Key Personnel and SubService Providers listed by title as well as by name in Appendix C are hereby approved by the Employer.</p>
<p>4.2 Removal and/or Replacement of Personnel</p>	<p>a. Except as the Employer may otherwise agree, no changes shall be made in the Key Personnel. If, for any reason beyond the reasonable control of the Service Provider, it becomes necessary to replace any of the Key Personnel, the Service Provider shall provide as a replacement a person of equivalent or better qualifications.</p> <p>b. If the Employer finds that any of the Personnel have (i) committed serious misconduct or have been charged with having committed a criminal action, or (ii) have reasonable cause to be dissatisfied with the performance of any of the Personnel, then the Service Provider shall, at the Employer’s written request specifying the grounds</p>

	<p>thereof, provide as a replacement a person with qualifications and experience acceptable to the Employer.</p> <p>c. The Service Provider shall have no claim for additional costs arising out of or incidental to any removal and/or replacement of Personnel.</p>
5. Obligation of the Employer	
5.1 Assistance and Exemptions	The Employer shall use its best efforts to ensure that the Government shall provide the Service Provider such assistance and exemptions as specified in the SCC.
5.2 Change in the Applicable Law	If, after the date of this Contract, there is any change in the Applicable Law with respect to taxes and duties which increases or decreases the cost of the Services rendered by the Service Provider, then the remuneration and reimbursable expenses otherwise payable to the Service Provider under this Contract shall be increased or decreased accordingly by agreement between the Parties, and corresponding adjustments shall be made to the amounts referred to in Sub-Clauses 6.2 (a) or (b), as the case may be.
5.3 Services and Facilities	The Employer shall make available to the Service Provider the Services and Facilities listed as stated in SCC.
6. Payment to the Service Provider	
6.1 Lump-Sum Remuneration	The Service Provider's remuneration shall not exceed the Contract Price and shall be a fixed lump-sum including all Sub-Service Providers' costs, and all other costs incurred by the Service Provider in carrying out the Services described in Appendix A. Except as provided in Sub-Clause 5.2, the Contract Price may only be increased above the amounts stated in Sub-Clause 6.2 if the Parties have agreed to additional payments in accordance with Sub-Clauses 2.4 and 6.3.
6.2 Contract Price	<p>(a) The price payable in local currency is set forth in the SCC.</p> <p>(b) The price payable in foreign currency is set forth in the SCC.</p>
6.3 Payment for Additional Services, and Performance Incentive Compensation	<p>1.3.1 For the purpose of determining the remuneration due for additional Services as may be agreed under Sub-Clause 2.4, a breakdown of the lump-sum price is provided in Appendices D and E.</p> <p>1.3.2 If the SCC so specify, the service provider shall be paid performance incentive compensation as set out in the Performance Incentive Compensation appendix.</p>
6.4 Terms and Conditions of Payment	Payments will be made to the Service Provider according to the payment schedule stated in the SCC. Unless otherwise stated in the SCC , the advance payment (Advance for Mobilization, Materials and Supplies) shall be made against the provision by the Service Provider of a

	<p>bank guarantee for the same amount, and shall be valid for the period stated in the SCC. Any other payment shall be made after the conditions listed in the SCC for such payment have been met, and the Service Provider have submitted an invoice to the Employer specifying the amount due.</p>
<p>6.5 Interest on Delayed Payments</p>	<p>If the Employer has delayed payments beyond fifteen (15) days after the due date stated in the SCC, interest shall be paid to the Service Provider for each day of delay at the rate stated in the SCC.</p>
<p>6.6 Price Adjustment</p>	<p>6.6.1 Prices shall be adjusted for fluctuations in the cost of inputs only if provided for in the SCC. If so provided, the amounts certified in each payment certificate, after deducting for Advance Payment, shall be adjusted by applying the respective price adjustment factor to the payment amounts due in each currency. A separate formula of the type indicated below applies to each Contract currency:</p> <p style="text-align: center;">$P_c = A_c + B_c L_{mc}/L_{oc} + C_c I_{mc}/I_{oc}$</p> <p>Where: P_c is the adjustment factor for the portion of the Contract Price payable in a specific currency “c”.</p> <p>A_c, B_c and C_c are coefficients specified in the SCC, representing: A_c the nonadjustable portion; B_c the adjustable portion relative to labor costs and C_c the adjustable portion for other inputs, of the Contract Price payable in that specific currency “c”; and</p> <p>L_{mc} is the index prevailing at the first day of the month of the corresponding invoice date and L_{oc} is the index prevailing 28 days before Bid opening for labor; both in the specific currency “c”.</p> <p>I_{mc} is the index prevailing at the first day of the month of the corresponding invoice date and I_{oc} is the index prevailing 28 days before Bid opening for other inputs payable; both in the specific currency “c”.</p> <p>If a price adjustment factor is applied to payments made in a currency other than the currency of the source of the index for a particular indexed input, a correction factor Z_o/Z_n will be applied to the respective component factor of p_n for the formula of the relevant currency. Z_o is the number of units of currency of the country of the index, equivalent to one unit of the currency payment on the date of the base index, and Z_n is the corresponding number of such currency units on the date of the current index.</p>

	6.6.2 If the value of the index is changed after it has been used in a calculation, the calculation shall be corrected and an adjustment made in the next payment certificate. The index value shall be deemed to take account of all changes in cost due to fluctuations in costs.
6.7 Day works	<p>6.7.1 If applicable, the Daywork rates in the Service Provider's Bid shall be used for small additional amounts of Services only when the Employer has given written instructions in advance for additional services to be paid in that way.</p> <p>6.7.2 All work to be paid for as Dayworks shall be recorded by the Service Provider on forms approved by the Employer. Each completed form shall be verified and signed by the Employer representative as indicated in Sub-Clause 1.6 within two days of the Services being performed.</p> <p>6.7.3 The Service Provider shall be paid for Dayworks subject to obtaining signed Dayworks forms as indicated in Sub-Clause</p>
7. Quality Control	
7.1 Identifying Defects	The principle and modalities of Inspection of the Services by the Employer shall be as indicated in the SCC . The Employer shall check the Service Provider's performance and notify him of any Defects that are found. Such checking shall not affect the Service Provider's responsibilities. The Employer may instruct the Service Provider to search for a Defect and to uncover and test any service that the Employer considers may have a Defect. Defect Liability Period is as defined in the SCC .
7.2 Correction of Defects, and Lack of Performance Penalty	<p>(a) The Employer shall give notice to the Service Provider of any Defects before the end of the Contract. The Defects liability period shall be extended for as long as Defects remain to be corrected.</p> <p>(b) Every time notice a Defect is given, the Service Provider shall correct the notified Defect within the length of time specified by the Employer's notice.</p> <p>(c) If the Service Provider has not corrected a Defect within the time specified in the Employer's notice, the Employer will assess the cost of having the Defect corrected, the Service Provider will pay this amount, and a Penalty for Lack of Performance calculated as described in Sub-Clause 3.8.</p>
8. Settlement of Disputes	
8.1 Amicable Settlement	The Parties shall use their best efforts to settle amicably all disputes arising out of or in connection with this Contract or its interpretation
8.2 Dispute Settlement	8.2.1 If any dispute arises between the Employer and the Service Provider in connection with, or arising out of, the Contract or

	<p>the provision of the Services, whether during carrying out the Services or after their completion, the matter shall be referred to the Adjudicator within 14 days of the notification of disagreement of one party to the other.</p> <p>8.2.2 The Adjudicator shall give a decision in writing within 28 days of receipt of a notification of a dispute.</p> <p>8.2.3 The Adjudicator shall be paid by the hour at the rate specified in the BDS and SCC, together with reimbursable expenses of the types specified in the SCC, and the cost shall be divided equally between the Employer and the Service Provider, whatever decision is reached by the Adjudicator. Either party may refer a decision of the Adjudicator to an Arbitrator within 28 days of the Adjudicator's written decision. If neither party refers the dispute to arbitration within the above 28 days, the Adjudicator's decision will be final and binding.</p> <p>8.2.4 The arbitration shall be conducted in accordance with the arbitration procedure published by the institution named and in the place shown in the SCC.</p> <p>8.2.5 Should the Adjudicator resign or die, or should the Employer and the Service Provider agree that the Adjudicator is not functioning in accordance with the provisions of the Contract, a new Adjudicator will be jointly appointed by the Employer and the Service Provider. In case of disagreement between the Employer and the Service Provider, within 30 days, the Adjudicator shall be designated by the Appointing Authority designated in the SCC at the request of either party, within 14 days of receipt of such request.</p>
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SECTION VII. SPECIAL CONDITIONS OF CONTRACT

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

GCC 1.1 (a)	The Adjudicator is Principal Secretary to Government of Karnataka, Revenue Department,
GCC 1.1 (d)	The contract name is HIRING OF DRONE OR AERIAL SURVEY AS A SERVICE FOR ORI GENERATION FOR LARGE SCALE MAPPING LOT 2A
GCC 1.1 (h)	The Employer is Survey Settlement and Land Records Department
GCC 1.1 (p)	The Service Provider is _____
GCC 1.2	The Applicable Law is: Laws of Union of India and rules / acts of Govt of Karnataka
GCC 1.3	The language is English
GCC 1.4	The addresses are: Employer or Purchaser: Commissioner, Survey Settlement and Land Records Department K.R.Circle, Bangalore Service Provider: Attention: e-Mail: Facsimile:
GCC 1.5	Location of Service will be in Karnataka State.
GCC 1.6	The Authorized Representatives are: For the Employer: Commissioner, SSLR For the Service Provider:
GCC 2.1	The date on which this Contract shall come into effect is date of signing of Contract by both the parties.
GCC 2.2.1	The work awarded will be divided in revenue villages/cluster of villages / geographical grids as defined by employer. These revenue villages/cluster of villages/grids shall be units of processing and delivery. Program submitted should contain Implementation plan, Details showing timelines, resource deployment for each revenue villages/cluster of villages and delivery dates for each revenue villages/cluster of villages. The updated Program should be consistent with the Method Statement, Work Plan, & Time Schedule submitted in Section IV as part of this RFB. However, the bidder may be permitted to re-deploy his resources and re-schedule the delivery plans during program update as per SCC 2.2.1, to prioritize submission of revenue villages/cluster of villages as specified by employer but without changing the final completion

GCC 2.2.2	<p>The Starting Date for the ‘Commencement of Services’ shall be the earlier of following dates:</p> <p>i.15 days from date of signing of contract</p> <p>ii. Date of issue of necessary security & flight clearances,</p> <p>However the service provider will be allowed to start the activities which are not related to above clearances immediately after signing of the contract.</p>														
GCC 2.3	<p>Implementation Timelines for Activities for each Revenue Village</p> <table border="1"> <thead> <tr> <th>Sl No.</th> <th>Activity</th> <th>Av. daily out turn (Village)</th> <th>Time of completion (Days)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Drone OR Aerial Data Acquisition and base observation</td> <td rowspan="3">derived from the data submitted by bidder as his implementation plan</td> <td>-</td> </tr> <tr> <td>3.</td> <td>Provision of Ground controls including check points</td> <td>T+3</td> </tr> <tr> <td>4.</td> <td>Post Processing & Generation of DSM and ORI</td> <td>T+15</td> </tr> </tbody> </table> <p>T shall be the date of data acquisition</p> <p>The time mentioned above is indicative for completing the works. As the field survey is being done far from the base data processing facility, Weekly deliverable as defined in the RFP shall be considered.</p> <p>However, the Intended Completion Date for entire work including delivery of final deliverables as per Section V is 12 months from date of commencement of services. If the ‘actual area’ increases beyond that specified in Section V, the Project duration shall be extended beyond 2 months on pro rata basis by an explicit communication by the Purchaser.</p>	Sl No.	Activity	Av. daily out turn (Village)	Time of completion (Days)	1	Drone OR Aerial Data Acquisition and base observation	derived from the data submitted by bidder as his implementation plan	-	3.	Provision of Ground controls including check points	T+3	4.	Post Processing & Generation of DSM and ORI	T+15
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3.	Provision of Ground controls including check points		T+3												
4.	Post Processing & Generation of DSM and ORI		T+15												
GCC 3.2.3	<p>Activities prohibited after termination of this Contract are: Use or transmit in any form of maps/data supplied by employer or data/services generated by the service provider during the Project. The Service Provider will not use, transfer, propagate any of the deliverables, information etc.</p>														
GCC 3.4	<p>The risks and coverage by insurance shall be:</p> <p>(i) Aviation insurance to protect against Third Party property and bodily damage claims during drone / aerial survey Work (In accordance with the statutory requirements applicable to India)</p> <p>(ii) Personal injury or death insurance for Service Provider’s Employees (In accordance with the statutory requirements applicable to India)</p> <p>(iii) Loss or damage to equipment and data till project completion</p>														

	(Minimum Cover Contract Price)
GCC 3.5(a)	<p>Sub-Contracting is permitted which are part of the Technical Bid and approved and accepted therein.</p> <p>A change of the sub-contractor is NOT allowed without intimation to the purchaser. Any changes to the sub-contractor can be accepted only if the proposed sub-contractor meet all the qualification criteria mentioned in the RFP and such a change is aprior accepted and approved by the Purchaser. Every change (inclusion / exclusion) of the sub-contractor will lead to deduction of 2% of overall contract fee to the bidder</p>
GCC 3.5(d)	The other actions are: None
GCC 3.7	Restrictions on the use of documents prepared by the Service Provider are: All data, documents, reports generated during the Contract shall be exclusive property of Employer and the Service Provider shall have no claims over it. The Service Provider shall be bound by restrictions imposed by Security Classification of such data, documents and reports.
GCC 3.8.1	Delay in completion of the full work due to reasons attributable to the Service Provider shall attract Liquidated Damages @2% of Contract Price per month of delay to be computed on per day basis. The liquidated damage is over and above the penalties for delay in delivery of monthly deliverables as mentioned in the implementation plan which include (i) termination (ii) Black Listing (iii) forfeiture of PBG. The maximum amount of liquidated damages for the whole contract is Ten percent of the final Contract Price. Pursuant to SCC 2.3, if the project duration is extended, LD clause shall not apply in the extended period. However, LD clause shall resume for delay beyond the extended period
GCC 3.8.3	<p>The delivery in which defects have been detected and/or which have failed the Acceptance Test as per Section V, shall be returned to the Service Provider for further QA. In effect, Employer will pass responsibility to the service provider to provide adequate and clear internal Quality Audits to identify the extent and cause of the problems so established. The service provider will be expected to rectify these problems, and (where necessary to comply with the specification) make new products at his own cost. Redelivery of products will be followed by a further independent check on a new sample of the products. This procedure will continue until the products become finally acceptable under the terms above. The acceptance report (Pass/Fail) shall be given by the Employer within 4 weeks of each delivery/re-delivery of the data made by the Service Provider.</p> <p>If delivery fails the acceptance test of the Employer, it shall be construed as ‘Lack of Performance’ and the 100% of cost towards Acceptance Test by the Employer @ INR 1,00,000 for each subsequent delivery shall be imposed on Service Provider towards penalty for ‘Lack of performance’.</p>
GCC 3.9	The amount of the Performance Security shall be of 5% of contract value.
GCC 5.1	The Employer shall use its best efforts to ensure that the Government shall provide the Service Provider

GCC 5.3	<p>Following data, Service and facilities will be provided to the Service Provider after award of Contract:</p> <p>(i) Area of Interest (AOI) in shp and kmz format (ii) Static Observation Data of CORS stations for post processing OR Description and co-ordinates of GCP library ground control points in and around the Project area on WGS 84 datum (as available) (iii) Facility of NRTK (Network RTK) if RTK rovers are used.</p> <p>Production Site: The Service Provider will be responsible for setting up secure and high performance Production Centre at _____. The production center should be adequate to handle and store raw Data, key intermediate data, data under process and Processed Data/deliverable. Survey of India will not be responsible for providing space or any other facility for production centers.</p>
GCC 6.2	All payments shall be made in Indian Rupees
GCC 6.1	<p>The incidence, extent and area provided in IFB & Section V of this RFB are limited by scale and accuracy (spatial & temporal) of existing maps on 1:50K scale. Considering this aspect, the payments made to the Service Provider shall be on the basis of ‘actual area’ and ‘area surveyed’.</p> <p>All submissions of deliverables shall be accompanied by ‘area polygons’ in .shp format. Shape file generated by KRSRAC shall be used to measure and ascertain the actual area completed by the Service Provider.</p> <p>However, if the ‘actual area’ comes out to be more than that mentioned in IFB & Section V of this RFB, approval of competent authority shall be taken before making payment beyond the ‘Contract Price’.</p>
GCC 6.3.2	<p>The performance incentive paid to the Service Provider shall be:</p> <p>An incentive @ 1% (one percent) of per square kilometer cost of the bid winner shall be paid for ORIs delivered and accepted for quantities beyond the monthly deliverable target for ORIs. For example if 3000 Sq KM ORI is deliverable and 4000 Sq KM ORI is delivered and accepted, say for the month of February, then for the extra 1000 Sq KM (4000 – 3000) the payment shall be made at a rate of Rs [Z x (1.01)] – where Z is the per Sq KM rate of the awarded contract. Provided that this incentive shall be paid only once for ahead to time delivery so the overall the incentive shall be not more than 1% of the total awarded cost.</p>
GCC 6.4	<p>6.4.1. The Contract Price as specified in the Contract Agreement shall be paid as under.</p> <p>6.4.2. The payment made to the Service Provider shall be on the basis of ‘Actual area’ of revenue village. ‘Actual area’ of the revenue village will be calculated on the basis of Shape file of the villages provided by the purchaser.</p>

	<p>6.4.3. Payment to the Service provider will be made on monthly basis (Calendar month) by the office after deduction of applicable taxes and recoveries if any at the quoted rates as per the contract. Monthly payment shall be calculated as per following formula</p> <p>= $A * 0.95 * [\text{Per Square Kilometer Rate Awarded}]$</p> <p>Whereas A is ‘Actual area’ in Sq KM of revenue village fully delivered in particular month on successful completion and acceptance of activities (1), (2) & (3) as per Section V sub section 3:</p> <ul style="list-style-type: none"> • Provision of Ground controls including check points & Drone / aerial Data Acquisition • Post Processing for generation of DSM and ORI <p>Details of revenue village / grids that are successfully completed & accepted and its actual area will be maintained by service provider and will be provided to the purchaser for verification. The service provider shall become entitled for payment after completion and acceptance of ORI. No payment will separately be made for activities such as GNSS control, and drone / aerial flying.</p> <p>6.4.4 Remaining 5% retained will be released after submission and acceptance of final deliverables.</p> <p>6.4.5 The payment shall be released subject to certification by the Employer that services have been rendered satisfactorily. Acceptance test shall be carried out by Employer according to principle, modalities laid down in SCC Clause 7.1 & Section V of this RFB which shall form the basis of certification mentioned above. Should the certification (satisfactory or unsatisfactory) not be provided, by the employer within ‘one’ months of the date of receipt of the corresponding invoice, the certification will be deemed to have been provided, and the progress payment will be released at such date. “Payment of Local Taxes such as GST will be against valid Invoice as per GST ACT & Rules and submission of GST Registration Certificate along with declaration that GST Registration is valid and all liabilities towards GST have been discharged by the vendor. GST amount will be paid after submission of valid Invoice and all required documents and declaration by vendor”.</p> <p>6.4.6 Every month delay in delivery and submission of Deliverables (color balanced ortho mosaic) will lead to penalty of 2% per week based on the quantities (in Sqkm) that was not delivered but due as per plan. For the penalty, the amount will be computed based on per sqkm area cost quoted by the bidder</p>
GCC 6.5	Payment shall be made within 30 days of receipt of the invoice and the relevant documents specified in Sub-Clause 6.4, and within 60 days in the case of the final payment. No Interest shall be payable
GCC 6.6.1	Price adjustment is not to be applied in accordance with Sub-Clause

	6.6.				
GCC 7.1	<p>The principle and modalities of inspection of the Services by the Employer are as follows: The responsibility of Quality assurance that would include adoption of best practices, processes and sets of approaches leading to outcomes of quality specified in this Contract shall rest with the Service Provider. As part of Quality Assurance, the Service Provider shall submit quality control (or check) measures detailing clearly specified tasks that scrutinizes all, or a sample, of the items issuing during and/or at the end of various stages of processing in order to ensure that the final product is of satisfactory quality. The scrutiny involves review, inspection or quantitative measurement, against well-defined pass/fail criteria. The Service Provider shall systematically lodge Quality Control Records (QCRs) which may take various forms like Computer Generated Reports, Inspection notes, Stage Approvals etc. Service Provider shall ensure that every such QCR :</p> <ul style="list-style-type: none"> • marked with a date • uniquely identifies the item, operation or product to which it relates • identifies the operator who generated the QCR • Is countersigned by a supervisor or other independent inspector (for important records) • is stored in a well-defined and predictable location so that it can be found easily by others. <p>The responsibility for maintaining necessary versions of data during the QA/QC cycle till its final acceptance by Employer shall also rest with Service Provider.</p> <p>Employer will carry out Quality Audit as per Section V to ensure that that plan/methodology/ QA/QC measures etc. detailed are being properly followed. Employer shall also audit to ensure that the QCRs are being properly maintained.</p> <p>In addition following ‘Final Acceptance’ tests shall be carried out by the Employer on the delivery made by Service Provider.</p>				
GCC 8.2.3	<p>The Adjudicator proposed by the Employer is Principal Secretary/Secretary to Government of Karnataka, Revenue Department or a person decided by him; whose fees, if applicable, shall be governed by the Article 11 of ‘Arbitration and Conciliation (Amendment) Act 2015’ as given below:</p> <table border="1"> <thead> <tr> <th><i>Sum in Dispute</i></th> <th><i>Model Fee</i></th> </tr> </thead> <tbody> <tr> <td>Up to Rs.5,00,000</td> <td>Rs. 45,000</td> </tr> </tbody> </table>	<i>Sum in Dispute</i>	<i>Model Fee</i>	Up to Rs.5,00,000	Rs. 45,000
<i>Sum in Dispute</i>	<i>Model Fee</i>				
Up to Rs.5,00,000	Rs. 45,000				

	Above Rs.5,00,000 and Up to Rs. 20,00,000	Rs. 45,000 plus 3.5 per cent of the claim amount over and above Rs. 5,00,000
	Above Rs. 20,00,000 and up to Rs. 1,00,00,000	Rs.97,500 plus 3 per cent of the claim amount over and above Rs. 20,00,000
	Above Rs. 1,00,000 and up to 10,00,000	Rs. 3,37,500 plus 1 per cent of the claim amount over and above Rs. 1,00,00,000
	Above Rs. 10,00,00,000 and up to Rs. 20,00,00,000	Rs.12,37,500 plus 0.75 per cent of the claim amount over and above Rs. 10,00,00,000
	Above Rs. 20,00,00,000	Rs. 19,87,500 plus 0.5 per cent of the claim amount over and above Rs.20,00,00,000 with a ceiling of Rs. 30,00,000
GCC 8.2.4	Provisions of Arbitration and Conciliation Act 2015 will apply.	
GCC 8.2.5	The designated Appointing Authority for a new Adjudicator is Principal Secretary to Government, Revenue Department, Govt of Karnataka.	
ADDITIONAL CLAUSE 9.0	<p>Add the following as GCC clause 9.0 :</p> <p>9. Security to be reviewed as per new guidelines Security instructions for raw data acquisition and pre-processing shall be as follows: (a) Aerial data- acquisition/photography/survey is to be strictly confined to the exact area for which permission obtained. Moreover, the undertakings given in the application shall be strictly adhered to. (b) No sensor, other than those mentioned in the application should be used. (c) The date of survey is to be intimated to ATC if applicable in advance indicating specific date and time to enable them to issue necessary clearance (d) The Service Provider should be ready to offer his Drone / aircraft with sensor for inspection by the service agencies of MoD, MHA, DGCA to check survey equipment /sensor before undertaking aerial surveys. (e) The data should not be taken out of the drone / aircraft to any place other than directed by Employer. (f) After completion of survey, no data should be left in storage in the equipment fitted in the drone / aircraft. (g) At the end of each day operation, the data should be copied and stored as directed by the Employer.</p>	

	<p>(h) 'Restricted' security classification will be given to the data products. The data is to be handled by the Service Provider accordingly.</p> <p>(i) The data should be processed by Indian experts in India at the designated places within SoI complex. In case a foreign expert is required for processing the data, the Service Provider shall be responsible for obtaining necessary clearances / permissions as per the latest government of india guidelines on geospatial products and services, to handle data ensuring the storage of data within India.</p> <p>(j) Whenever Inspecting Officer is placed with aerial acquisition team, it will be mandatory on the part of Operator to provide the following documents for his perusal:-</p> <p>(i) Copy of valid DGCA permit and ATC clearance.</p> <p>(ii) Copy of valid MOD clearance (if required).</p> <p>(iii) Proof of Insurance cover.</p> <p>(iv) valid UAS pilot Licence / certification</p> <p>(l) Any change/addition and equipment/sensors at any stage of work, can be made only after obtaining prior Employer clearance.</p> <p>(m) Fortnightly progress report is to be submitted to the Employer.</p> <p>(n) All required permits and clearances for drone / aerial surveys and data acquisition (DGCA permit, ATC clearance, valid MoD clearance etc) will be the responsibility of the Service Provider and all operations will be undertaken in accordance with Indian Air Safety Regulations.</p> <p>(o) The data acquired/intermediately or final products will not be permitted to be taken elsewhere. Proper account of daily production and distribution should be maintained.</p> <p>(p) Post Processing of data acquired by drone / aerial survey will be carried out inside the secure premises of purchaser or the service provider under the supervision of SSLR appointed officers. Necessary equipment/infrastructure should be installed at the premises by the successful bidder. The data acquired/intermediately or final will not be permitted to be taken elsewhere. Proper account of daily production and distribution should be maintained.</p> <p>The Security instructions to be followed by the Service Provider during the Post Processing of Data at the Production Centre shall be as follows:</p> <p>(a) No Data storage devices or electronic devices including mobile phones, laptops , CD , pen drives etc should be allowed inside the Production Centre except for specific clearances to be taken from Security Officer of Survey of India in exceptional circumstances arising out of any requirements.</p> <p>(b) No data should be allowed to be taken outside the Production Centre by the Service Provider</p> <p>(c) Systems and storage in Production Centre should not be connected to unsecured internet lines.</p> <p>(d) All the personnel working inside the Production Centre should have valid Identity card of the company. Any foreign national working inside</p>
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	<p>the Production center should have valid visa and other documents verified by Ministry of External Affairs and permission from Ministry of Defense. Identity card of the company will be checked by the Security staff every day before the employee enters the Production Centre. Surprise checks for the same will also be carried out by the Security Officer of Survey of India during the working hours.</p> <p>(e) Work should only be executed inside Production Centre only in the Presence of SSLR officials.</p> <p>(f) All the hardcopy plots and printouts, other Project related materials are to be kept in Almirahs whose key will be with SOI officials.</p> <p>(g) The Survey of India Security Officer reserves the right to frisk the working personnel every day / during surprise check.</p> <p>(h) There should be two separate segments in the Production centre, one for administrative and other for the production / processing.</p> <p>(i) The Production centre should strictly adhere to the security measures in terms of entry and exit to Production centre (preferably Biometric methods etc), accessing data (Administrator /user passwords , Networking etc) , disabling USB ports for theft of data , authorising persons to handle the data , log books , CCTV cameras , fire and smoke protection , lock and key system etc.</p> <p>(j)Storage disks of network storage, servers, workstations etc used at production center shall not be allowed to be taken outside of production center.</p>
<p>Additional Clause 10.0</p>	<p>Add the following as GCC clause 10.0 :</p> <p>Salient Features of Major Labour Laws in India applicable to Establishments is given below. The law as current on the date of bid opening will apply</p> <p>a) Workmen Compensation Act 1923: The Act provides for compensation in case of injury by accident arising out of and during the course of employment.</p> <p>b) Payment of Gratuity Act 1972: Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed 5 years' service or more or on death the rate of 15 days wages for every completed year of service. The Act is applicable to all establishments employing 10 or more employees.</p> <p>c) Employees P.F. and Miscellaneous Provision Act 1952 (since amended): The Act Provides for monthly contributions by the employer plus workers @ 10% or 8.33%. The benefits payable under the Act are :</p> <p>(i) Pension or family pension on retirement or death, as the case may be.</p> <p>(ii) Deposit linked insurance on the death in harness of the worker.</p> <p>(iii) Payment of P.F. accumulation on retirement/death etc.</p> <p>d) Maternity Benefit Act 1951: The Act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.</p> <p>e) Contract Labour (Regulation & Abolition) Act 1970: The Act provides for certain welfare measures to be provided by the Service Provider to contract labour and in case the Service Provider fails to pro-</p>

	<p>vide, the same are required to be provided, by the Principal Employer by Law. The Principal Employer is required to take Certificate of Registration and the Service Provider is required to take license from the designated Officer. The Act is applicable to the establishments or Service Provider of Principal Employer if they employ 20 or more contract labour.</p> <p>f) Minimum Wages Act 1948: The Employer is supposed to pay not less than the Minimum Wages fixed by appropriate Government as per provisions of the Act if the employment is a scheduled employment. Constructions of Buildings, Roads, Runways are scheduled employments. Wage Code: to be included</p> <p>g) Payment of Wages Act 1936: It lays down as to by what date the wages are to be paid, when it will be paid and what deductions can be made from the wages of the workers.</p> <p>h) Equal Remuneration Act 1979: The Act provides for payment of equal wages for work of equal nature to Male and Female workers and for not making discrimination against Female employees in the matters of transfers, training and promotions etc.</p> <p>i) Payment of Bonus Act 1965: The Act is applicable to all establishments employing 20 or more employees. The Act provides for payments of annual bonus subject to a minimum of 8.33% of wages and maximum of 20% of wages to employees drawing Rs.3500/-per month or less. The bonus to be paid to employees getting Rs.2500/- per month or above upto Rs.3500/- per month shall be worked out by taking wages as Rs.2500/-per month only. The Act does not apply to certain establishments. The newly set-up establishments are exempted for five years in certain circumstances. Some of the State Governments have reduced the employment size from 20 to 10 for the purpose of applicability of this Act.</p> <p>j) Industrial Disputes Act 1947: The Act lays down the machinery and procedure for resolution of Industrial disputes, in what situations a strike or lock-out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.</p> <p>k) Industrial Employment (Standing Orders) Act 1946: It is applicable to all establishments employing 100 or more workmen (employment size reduced by some of the States and Central Government to 50). The Act provides for laying down rules governing the conditions of employment by the Employer on matters provided in the Act and get the same certified by the designated Authority.</p> <p>l) Trade Unions Act 1926: The Act lays down the procedure for registration of trade unions of workmen and employers. The Trade Unions registered under the Act have been given certain immunities from civil and criminal liabilities.</p> <p>m) Child Labour (Prohibition & Regulation) Act 1986: The Act prohibits employment of children below 14 years of age in certain occupations and processes and provides for regulation of employment of children in all other occupations and processes. Employment of Child Labour is</p>
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	<p>prohibited in Building and Construction Industry.</p> <p>n) Inter-State Migrant workmen’s (Regulation of Employment & Conditions of Service) Act 1979: The Act is applicable to an establishment which employs 5 or more inter-state migrant workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in another state). The Inter-State migrant workmen, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as housing, medical aid, travelling expenses from home upto the establishment and bank etc.</p> <p>o) The Building and Other Construction workers (Regulation of Employment and Conditions of Service) Act 1996 and the Cess Act of 1996: All the establishments who carry on any building or other construction work and employs 10 or more workers are covered under this Act. All such establishments are required to pay cess at the rate not exceeding 2% of the cost of construction as may be modified by the Government. The Employer of the establishment is required to provide safety measures at the Building or construction work and other welfare measures, such as Canteens, First-Aid facilities, Ambulance, Housing accommodations for workers near the work place etc. The Employer to whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the Government.</p> <p>p) Factories Act 1948: The Act lays down the procedure for approval at plans before setting up a factory, health and safety provisions, welfare provisions, working hours, annual earned leave and rendering information regarding accidents or dangerous occurrences to designated authorities. It is applicable to premises employing 10 persons or more with aid of power or 20 or more persons without the aid of power engaged in manufacturing process.</p> <p>q) Code of Wages 2019 (implemented from 1st April, 2021)</p>
<p>Additional Clause 11.Non-Disclosure Obligations</p>	<p>The Service Provider will ensure that complete data (Raw, Geotagged, GPS observed, logs etc) is handed over to the purchaser representative and do not copy in any form & in any media for any other purpose without explicit approval/consent of the Service consumer will be kept by Service provider after completion of data capturing & pre-QC and final acceptance of the data by Service consumer.</p>

SECTION VIII– CONTRACT FORMS

Table of Forms

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1. LETTER OF ACCEPTANCE

[Letterhead paper of the Purchaser]

[date]

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

Subject: **Notification of Award Contract No.** for LOT 2A

This is to notify you that your Bid dated . . . *[insert date]* . . . for execution of the *[insert name of the contract and identification number, as given in the SCC]* for the Accepted Contract Amount of *[insert amount in numbers and words in Rupees]*, as corrected and modified in accordance with the Instructions to Bidders is hereby accepted by our Agency.

You are requested to furnish the Performance Security within 15 days in accordance with the Conditions of Contract, using for that purpose the of the Performance Security Form included in Section VIII, Contract Forms, of the Bidding Document.

Authorized Signature: _____
Name and Title of Signatory: _____
Name of Agency: _____

Attachment: Contract Agreement

2. CONTRACT AGREEMENT

LUMP-SUM REMUNERATION

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

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

WHEREAS

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

NOW THEREFORE the parties hereto hereby agree as follows:

- 1. The following documents shall be deemed to form and be read and construed as part of this Agreement, and the priority of the documents shall be as follows:
 - (a) The letter of Acceptance
 - (b) The Service Provider’s Bid
 - (c) The Special Conditions of Contract
 - (d) The General Conditions of Contract
 - (e) Technical Requirements (including Schedule of Requirements and Technical Specifications and deliverables as per Section V)
 - (f) The Price Activity Schedule; and
 - (g) [Add here any other document(s) as part of contract]

3. The mutual rights and obligations of the Employer and the Service Provider shall be as set forth in the Contract, in particular:
 - a. the Service Provider shall carry out the Services in accordance with the provisions of the Contract; and
 - b. the Employer shall make payments to the Service Provider in accordance with the provisions of the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of *[insert the name of the Contract governing law country]* on the day, month and year indicated above.

For and on behalf of the Purchaser

Signed: *[insert signature]*
in the capacity of *[insert title or other appropriate designation]*
in the presence of *[insert identification of official witness]*

For and on behalf of the Supplier

Signed: *[insert signature of authorized representative(s) of the Supplier]*
in the capacity of *[insert title or other appropriate designation]*
in the presence of *[insert identification of official witness]*

3.PERFORMANCE SECURITY - BANK GUARANTEE

[Guarantor letterhead or SWIFT identifier code]

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

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

To: _____ *[name of Purchaser]*

_____ *[address of Purchaser]*

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

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

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

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Applicant, up to a total of _____ *[amount of guarantee³]* _____ *[in words]*, such sum being payable in the types and proportions of currencies in which the Contract Price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of _____ *[amount of guarantee]* as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

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

We further agree that no change or addition to or other modification of the terms of the Contract or of the Goods and related Services to be supplied thereunder or of any of the Contract documents which

³ *An amount shall be inserted by the Guarantor, representing the percentage of the Contract Price specified in the Contract and denominated in Indian Rupees.*

may be made between you and the Applicant shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid until (i.e.) 60 days following the Completion date of the Contract including any warranty obligations⁴, and any demand for payment under it must be received by us at this office on or before that date.

Signature and seal of the guarantor _____

Name of Bank _____

Address _____

Date _____

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

⁴ Completion date as described in GC Clause 18.4