

F.No. 07/07/JDH/SUR/TS/2016-17

Date : 25.06.2019

NOTICE INVITING QUOTATIONS

Quotations for the following as given below in sealed cover are invited, which should reach to this office on or before date 02.07.2019 till 03:30 PM. The same will be opened on dated 02.07.2019 at 04:30 PM. The quotation letter should be addressed to the Superintending Archaeologist, Archaeological Survey of India, Jodhpur Circle, Jodhpur and the envelope be superscribed "QUOTATION FOR PREPARATION OF PHOTOGRAMMETRIC SURVEY BASED SITE PLAN OF KALIBANGAN SITE".

SI.NO.	Particular	Parameters / Terms & Condition	Quantity
1.	Preparation of Photogrammetric Survey based site plan of Kalibangan Site in District Hanumangarh, Rajasthan.	Before submitting the quotations, the interested firms/ companies are directed to read the parameters / terms & condition referred at website http://www.asijodhpurcircle.in/	03 hard copies in printed form and 02 soft copies in AutoCad format.

Superintending Archaeologist

Superintending Archaeologist
Archaeological Survey of India
Jodhpur Circle, Jodhpur

**QUOTATION FOR PREPARATION OF PHOTOGRAMMETRIC SURVEY BASED SITE
PLAN OF KALIBANGAN SITE**

Parameters :

1. Mapping of all existing structures like buildings, boundary wall, roads, gates, pathways, canals, water channels, tank, embankment, mud fortifications, remains of ancient structures, important land marks etc., including protected area of the site in such a manner that all features can be easily identified.
2. Detailed documentation of all erosional gullies, pits and unfilled excavated trenches.
3. Contouring at 20 CM interval for all ancient mounds situated within the site. Contour interval for plain area will be 50 CM.
4. Indicating garden area, green area, open areas, water bodies and trees on the survey plan.
5. Fixing of Bench Mark on ground at one or more locations.
6. Fixing reference survey points on ground at one or more locations,
7. The Survey Plan shall be gridded suitably considering size of the area covered under survey plan.

Terms & Condition:

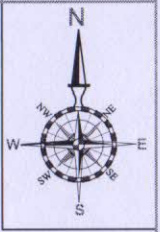
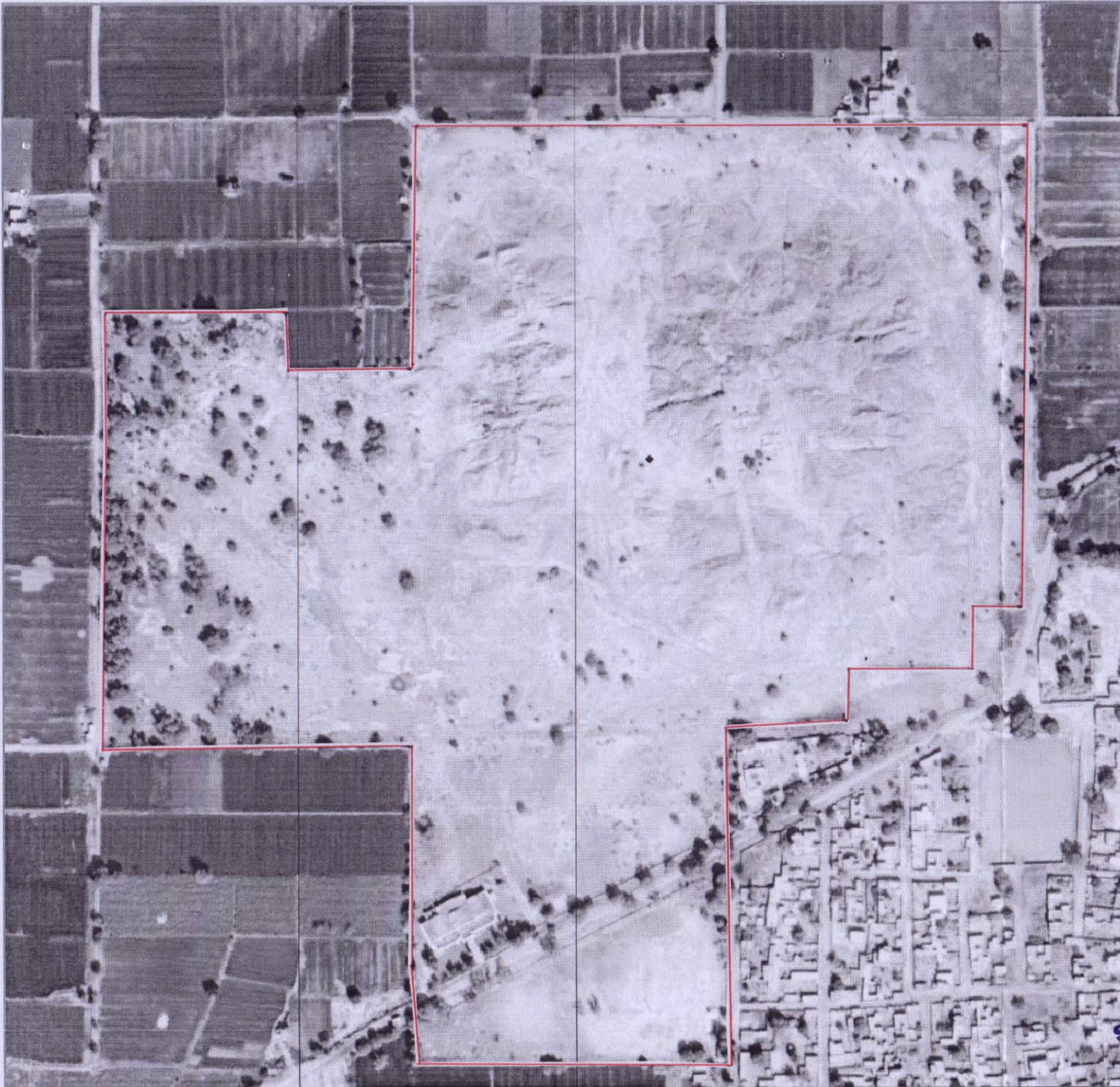
1. Interested Firm/ Agency/ Company should ensure that they have sufficient experience, properly calibrated equipments and professional manpower for - conducting Photogrammetric Survey and preparation of detailed site plan on aforesaid specifications. The Area proposed for survey is approx. 94 Acres and the same has been outlined in Google Earth map, which can be viewed at Annexure-1.
2. The Firm/ Agency/ Company should be registered with Tax department and should attach copy of G.S.T. registration certificate.
3. Rate per Acre (including GST) is to be quoted both in figures and in words. In case of discrepancy between the two, rate quoted in words will be taken as valid.
4. The work will commence by establishing precise and adequately timed Ground Control Points (GCP) for precise geographic location.
5. Aerial Photography capture High Resolution ≤ 10 cm or less GSD aerial imagery should be captured for the entire region. The photography shall be collected utilizing a direct digital aerial mapping.
6. The digital aerial camera system must be equipped with GPS and inertial measurement unit (IMU) systems. Aerial Photography should be done with modern sensors and which minimize the Ground control without affecting quality of deliverables.
7. Photography shall not be taken when the ground is obscured by snow, haze, fog, dust, or when cloud shadows shall appear on more than five percent (5%) of the area in any one photo.
8. The proposed approach to aerial photography acquisition should outline the respondent's intended flight plan including proposed date and time of photography,

- flight height, scale, flight lines, end lap and side lap, planned aerial equipment, materials, and relevant quality control procedures.
9. Crab must not exceed five-degrees between any two consecutive flights, nor more than three degrees on anyone flight line. The aerial acquisition shall extend two exposures beyond the mapping limits to obtain full or the photo images and to reach pre-targeted ground control points, as necessary.
 10. Full Analytical Aerial Triangulation (FAAT) techniques shall be used in conjunction with ground control to establish a consistent horizontal datum for the entire project area. The bidder should satisfy himself regarding:
 - a) Gaps in stereo coverage.
 - b) Differentially corrected GNSS/GPS and IMU data of exposure stations.
 - c) Imaging of pre-pointed targets on aerial digital photographs.
 - d) Differentially corrected GNSS/GPS data of pre-pointed controls.
 - e) Image characteristics including ground sampling distance of aerial digital photography data
 11. Geo referencing & Creation of Ortho Photo, DEM Contours, for the entire project area should be created to support the generation ≤ 10 cm GSD orthophotos. The contour intervals of the area surveyed should be strictly adhered as specified in parameters. Apart from the topographic, features captured during feature extraction in Stereo mode stage (streams, drainage, embankments, raised field bunds, roads, railways, water-bodies etc.)
 12. Break lines shall also be captured comprehensively wherever slope changes are visible in stereo model due to complicated terrains or man-made structures. Proper use of hard and soft break lines shall be made in DTM editing.
 13. DTM points shall be captured automatically, semi-automatically or manually, as per the condition of the terrain and land use / land cover. It is required to produce digital colour orthophotoimages for the entire Area of Interest in exactly ≤ 10 CM GSD native pixel resolutions.
 14. Orthophoto files must have no overlap and must be precisely edge matched and contrast and tone balanced so as to appear to be a continuous photographic image over the entire AOI. Upon completion of the aerial photography, and as soon as possible afterwards, the surveyor shall provide with one or more sample digital image(s) in raw tiff format for overall image quality verification.
 15. The images procured shall be Tonal balanced, mosaic ked and feature enhanced for achieving the best result for the vectorization. All ground positions determined shall be in the common reference system that is WGS84 Datum and UTM Projection. Final values shall be in meter and 2 places of decimal.
 16. As far as possible Differential Global Positioning System (DGPS) instruments shall be used for collection of Ground Control Planning (GCP), and all DGPS equipment must be set-in to GCS -World Geodetic System 1984 (WGS84) Datum uniformly.
 17. RAW and post-processed DGPS readings along with original source file for each location shall be submitted. As soon as the work is completed, raw field survey data must be submitted.

18. All the maps and drawings should be prepared in digitized forms using Inkjet/ Pen plotter and standard computer software like Auto Cad (latest version) on standard A0 size polyester base film.
19. The Auto CAD drawings shall have different layers for different features as mentioned above and in consultation with the officer-In-Charge.
20. Contour maps at site-The grids for the survey work shall be established in N-S & E-W direction (Corresponding to magnetic North) and the survey reference shall be spheroid WGS 84.
21. Before finalizing, the draft of detailed site plan will be sent to the Superintending Archaeologist, ASI, Jodhpur Circle in three hard copies and two soft copies in CD/DVD of all draft reports for review and approval, not later than 15 days from the date of receipt of work order.
22. After approval, the final maps shall be submitted in 03 hard copies in printed form on polyester base film/ high quality paper and 02 soft copies in AutoCad format in CD/DVD.
23. The approved site-cum-contour plan will be submitted to the department in 1 : 200 scale. If site plan will be provided in separate sheets, they must have reference number in sequence.
24. The Firm/ Agency/ Company shall submit relevant documents, issued from the manufacturer or his authorized service agent / Service center, pertaining to specifications of the all instruments they will use in survey like Aerial Photography Camera, UAVs / Drone, DGPS etc.
25. The department shall have rights to make any alteration, omission, addition or substitution in the original work. No claim whatever on account of above shall be entertained except the payment for the actual rate quoted.
26. In all manners, the decision of the Superintending Archaeologist, Archaeological Survey of India, Jodhpur Circle will be final.

Superintending Archaeologist

Superintending Archaeologist
Archaeological Survey of India
Jodhpur Circle, Jodhpur



DRG.NO.-JDH/DGR/1/2019



Archaeological Survey Of India
 Jodhpur Circle, Jodhpur
 Arid Forest Research Institute Campus, Krishi Upaj Mandi,
 New Pali Road, Jodhpur, Rajasthan -342005

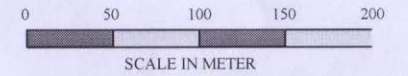
Name of Monument	Ancient Mounds (3)
Location	Kalibanga
Tahsil	Pilibanga
Dist.	Hanumangarh
State	Rajasthan

Google Plan

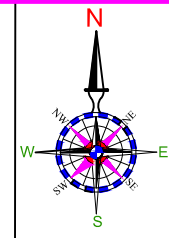
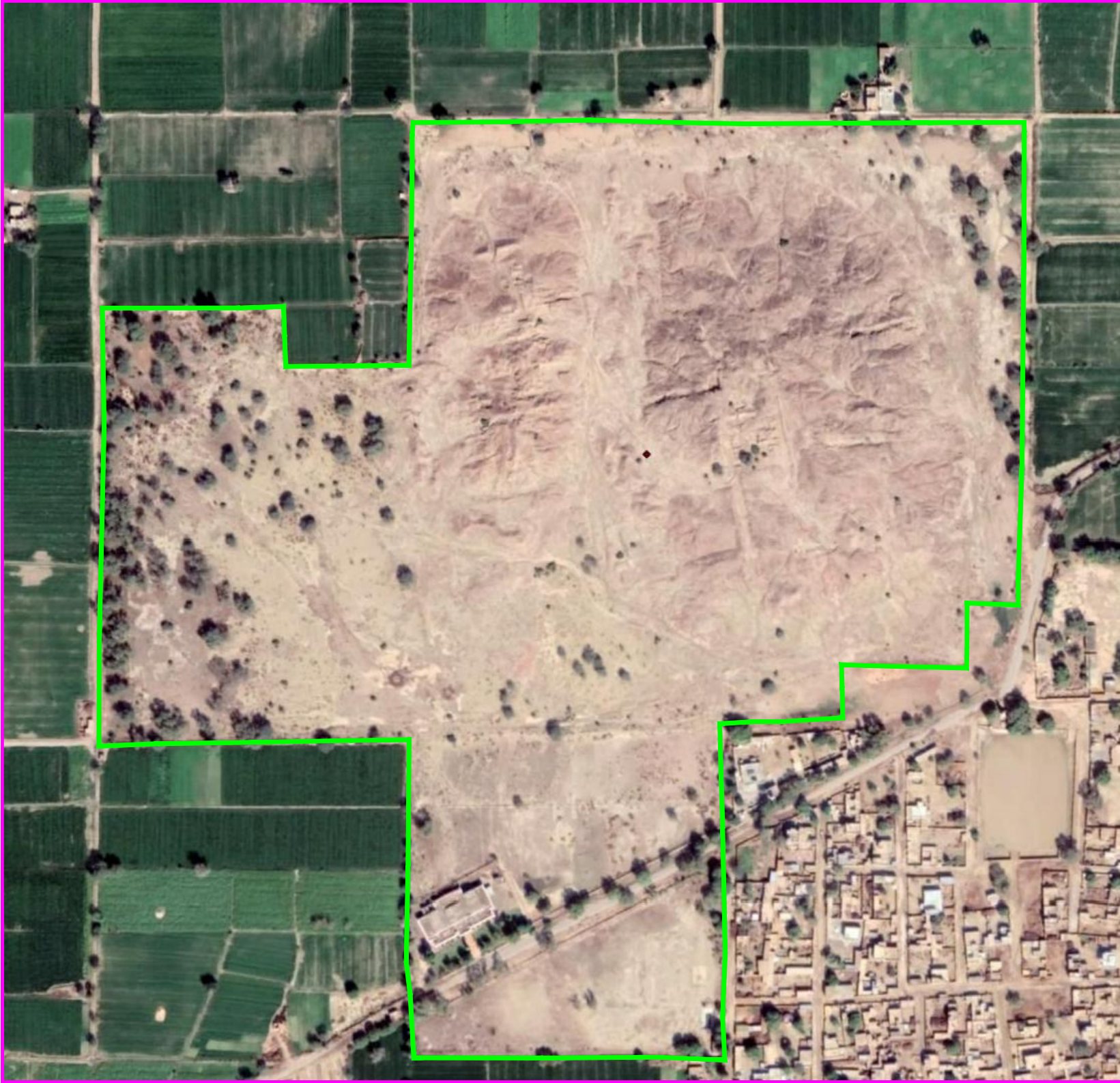
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Item	Symbol
Protected Area Line	

Protected Area Of The Site 94 Acres



*Superintending Archaeologist
 Archaeological Survey of India
 Jodhpur Circle, Jodhpur*



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Location	Kalibanga
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Google Plan

Legend	
Item	Symbol
Protected Area Line	

Protected Area Of The Site 94 Acres

