നക്ഷത്ര ചിഹ്നം ഇല്ലാത്ത ചോദ്യം നം. 1671   **11-09-2023 - ൽ മറുപടിയ്ക്**

ഡിജിറ്റൽ സർവ്വേ ഡിജിറ്റൽ സർവ്വേ നടത്താനുള്ള ഉപകരണങ്ങൾ

ചോദ്യം	ഉത്തരം
ശ്രീ. റോജി എം. ജോൺ	ശ്രീ. കെ. രാജൻ (റവന്യൂ-ഭവനനിർമ്മാണ വകുപ്പ് മന്ത്രി)
(എ) സംസ്ഥാനത്ത് ഡിജിറ്റൽ സർവ്വേ നടത്താനായി ഉപകരണങ്ങൾ വാങ്ങുന്നതുമായി ബന്ധപ്പെട്ട എസ്റ്റിമേറ്റിന്റെ പകർപ്പ് ലഭ്യമാക്കാമോ?	(എ) സംസ്ഥാനത്ത് ഡിജിറ്റൽ സർവ്വേ നടത്താനായി ഉപകരണങ്ങൾ വാങ്ങുന്നതുമായി ബന്ധപ്പെട്ട എസ്റ്റിമേറ്റിന്റെ പകർപ്പ് അനുബന്ധമായി ചേർത്തിരിക്കുന്നു.

സെക്ഷൻ ഓഫീസർ

		Digital Survey Program - Revised estimate for the phase - 1			
Sl No	Components	Estimate as per DPR - Phase I (Rs.)	Revised Estimate for Phase I (Rs.)	Remarks	Saving in Phase II, III & IV
1. Policy, Institutional and Regulatory Development					
1.1	Clear legal/regulatory statement on status of cadastral map and RoR	5,00,000	1,00,000	Due to COVID situation, many of the workshops and meetings are conducted in the online mode. In the same fashion, the future programs also will be conducted. Hence savings are expected in this component	3,00,000
1.2	Joint activity on policy, regulations, SOPs, capacity building plans	5,00,000	0	Due to COVID situation, many of the workshops, meetings and meetings are conducted in the online mode. In the same fashion, the future programs also will be conducted. Hence savings are expected in this component	3,00,000
1.3	Policy, regulations and SOPs for contract surveyors	5,00,000	0	Due to COVID situation, many of the workshops, meetings and meetings are conducted in the online mode. In the same fashion, the future programs also will be conducted. Hence savings are expected in this component	3,00,000
1.4	Public Awareness Campaign for improved land administration	2,00,000	2,00,000	No changes	
1.5	Business plan for the Survey Department	1,00,000	1,00,000	No changes	
2. Development of ICT System for Land Administration					
2.1	Implementation of e-maps	10,00,000	0	e-maps is a part of the comprehensive IT solution proposed in the DPR. This mapping application will be integrated with the IT solution developed by the vendor in the procurement project. Therefore, a separate funding is not reqruied for the e-maps development. This amount (**Rs. 10 lakhs**) may be utilized for the procurement project.	30,00,000
2.2	Implementation of Integrated LIS and data migration	20,00,000	0	ILIS will be developed throgh the State NIC by integrating the IT solutions of Revenue, Survey and Registration department. As NIC is a Centrel Government agency and hence there are amount reduction expecting in the software development. This amount (**Rs. 20 lakhs**) may be utilized for the procurement project.	60,00,000
2.3	Implementation of resurvey application	1,00,00,000	50,00,000	Resurvey application will be developed by NIC only and there are amount reductions are expected in the software development.	
2.4	Procurement of hardware, software and communication lines — Tab (For each RTK machines) Phase I	1,70,00,000	479769002	During the preparation of the initial budget, the department expected that the Tablet PC would be required along with RTK rover machines only. As the normal ETS does not have advanced features and hence the integrated management with Tablet PCs will be difficult. But Robotic ETS is capable of such integration and data sharing with Tablet PCs. By understanding the above and considering the ease of field operations possible, the subsequent Technical Committee decided to procure additional Tablet PCs for 700 Robotic ETS. This has been approved by the Apex committee as well. Therefore, 1700 Tablet PCs are to be procured in total. In the subsequent meetings, the Technical Committee has decided to go for industrial grade Tablet PC (rugged tablet) instead of normal Tablet PC which was mentioned in the previous RfP. The sunlight readability of the screen in the field survey operation is a very critical part for the smooth execution of the digital survey program. The normal tab is not suitable for such operations. In addition to that, an 8 year life period and CAMC etc are also a major challenge in the normal Tablet PCs segment. Considering the rough usage of such devices in the field survey works under the various terrain and climatic conditions, the Technical Committee has decided to include the specification of the rugged Tablet PC in the present re-tender RfP document. Price difference from Rs. 17,000 per unit mentioned in the original DPR to Rs. 2.82 Lakhs for the rugged Tab is also contributing to the increase of the revised estimate. 1700 Tab x Rs. 2.82lakh = **Rs. 47.97 Cr (90%)**	

		Laptop for ETS works	1,50,00,000	1,00,00,000	A comprehensive IT platform will be developed in the digital survey program. Laptops meant for the office process like progress updation, technical scruitny etc will be possible in the developed solution. Hence there are reduction of equipments is found possible.	
		A3 Printer Colour (one Each printer for Districts) Phase	28,00,000	28,00,000	No changes	
		A0 Printer Colour (one Each printer for Districts) Phase	1,40,00,000	70,00,000	Instead of 1 printer for each district, 1 printer for two districts is envisaged and hence cost reduction in this component is found possible.	
		A3 Printer B/W (One each for village) Phase I	1,20,00,000	1,20,00,000	No changes	
3. Old record preservation						
3.1		Testing and procurement of image base map for state	10,00,000	0	Drone survey under the SVAMITVA scheme of Govt. of India is being progressed in the state, the image base map (drone image) are obtained through this program and hence, the savings of **Rs. 10 lakhs** in this compoents may be utilized for the procurement project.	30,00,000
3.2		Restoration, scanning and archiving of the paper records	5,00,000	0	This components will be addressed in the State plan heads of Survey department and the scanning/digitization works are undertaken with inhouse resources and infrastructure. Therefore, separate funding is not reqruied from the RKI for this component. Hence, the savings of **Rs. 5 lakhs** in this compoents may be utilized for the procurement project.	15,00,000
4. Development and Scaling-Up of an Efficient Resurvey Procedure						
4.1	CORS network	Purchase of RTK Machines Phase 1	1,10,00,00,000	1,43,26,49,009	Survey equipment falling under the limited production segment and the unavailability of exact market price in the public domain are some of the constraints faced in the estimate preparation. There are factors which increase the cost such as the need to set up Service centers in two regions, Expert manpower for the service support of total 8 years, Software cost and customization, customs duty and GST etc. Similarly, some of the advanced features like IMU tilt technology (very useful for the survey works) are also some of the factors which increased the cost of equipment. After tender proces, the cost per RTK is Rs. 14.32 lakhs. In short an amount of **Rs. 143.26 Cr** is required for this procurement. However, as per the RfP condition, 90% only need to be released for the	
		ETS Machine Phase 1	56,00,00,000	982582354	In accordance with the initial budget submitted in the RKI, the department has proposed the normal Electronic Total Station (ETS) machine with an approximate cost of Rs. 8 Lakhs per machine. Thereafter, the detailed ground studies and research revealed that the Robotic ETS will be helpful in attaining more productivity in survey works with less human resources. It is pertinent to mention that lack of sufficient human resources and delay in survey works are the major problems affecting the re survey process over years. Robotic Total Station will solve the above problems and by undestanding the above merits, the Technicl Committee has recommended for the procurement of the same. Subsequent to that the Apex Committee has also approved the prposal. But the cost of the equipment is on the higher side (after tender proces, the cost per R-ETS is Rs. 14.03 lakhs). In short an amount of **Rs. 98.25 Cr** is required for this procurement. (90%)	
4.2	Implementation of resurveys in 1550 villages in 3years 8 months (200 Villages in 5.5 Months)	Advertising and Awareness	40,00,000	40,00,000	No change	
		Purchase of Survey stones & Transporting	5,00,00,000	5,00,00,000	No change	
		Planting of Ground Control Points (GCP's)	1,20,00,000	1,20,00,000	No change	
		Ayacut re-fixing (including stone transporting and plant	10,00,00,000	10,00,00,000	No change	
		Contract Surveyors	44,13,60,000	44,13,60,000	No change	
		Helper	73,56,00,000	58,84,80,000	Initial proposal submitted to RKI for posting of 4000 helpers as contract basis for the digital survey mission. With the advanced technology usage ie., Robotic ETS instead of normal ETS, there are reduction of number of contract helpers from 4000 to 3200. So there are reduction of 800 manpower from the previousely approved DPR. Salary per month/helper is = Rs. 18,390/Month **Amount Required for Ist Phase = 3200 x Rs. 18,390 = Rs. 58,848,000 x 10 month = Rs. 588,480,000** In this respect, the svavings due to the reduction of 800 contract helpers are given below : 800 x Rs. 18,390 = Rs. 1,47,12,000 x 10 month = Rs. 14,71,20,000. Hence the savings of **Rs. 14.71 Cr** in this compoents may be utilized for the procurement project.	44,13,60,000

No.		Description	Amount	Amount	Remarks	Amount
		Vehicle rent (Rs.40000 x 200 vehicle x 12 months)	8,40,00,000	9,60,00,000	Earlier the vehicle rent was calculated at Rs.35,000/vehicle. Due to the fuel price hyke, increase of maintancence charges, labour etc, this rate is not found feassible at present. In this situation, Rs. 40,000/vehicle is proposed for hiring. In this respect an amount of **Rs. 9.6 Cr** is proposed.	
		Camp office expenses (including rent) (200 Camp X 12	9,60,00,000	9,60,00,000	No change	
		Basic Infrastructures for camp offices	1,00,00,000	1,00,00,000	No change	
		Infrastructure improvement of DD/JD office	2,10,00,000	0	"This infrastructure upgradation will be taken up in the State plan/non plan budget of DSLR and hence, the savings of **Rs. 8.40 Cr** in this compoents may be utilized for the procurement project.	
		Infrastructure improvement of AD office	4,50,00,000	0		
		Purchase of Vehicles for JD/DD, AD	1,80,00,000	0		
		Stationary charges	2,00,00,000	1,00,00,000	Due to the usage of IT solutions, substantial cost reduction is expected in the paper, printing,, catridge etc. Hence there is a saving is expected.	3,00,00,000
4.3		Design and implementation of public awareness campaign to support	1,00,00,000	1,00,00,000	No change	
5. Project Management and Capacity Building						
5.1		Infrastructure for SPMU	50,00,000	50,00,000	No change	
5.2		Resource Hiring for SPMU	25,20,000	25,20,000	No change	
5.3		Capacity building and training	28,00,000	28,00,000	No change	
6. Miscellaneous and unforeseen expenses						
		SIM card and internet connection for Tablet PC (1700 nos.)		42,50,000	Working of Tablet PC with RTK devices (by using CORS signal), there should be an internet connection made available for the same. In this connection, SIM card of 1700 with GPRS connection need to be procured. For this an amount of Rs.100/SIM card and Rs. 2400 (yearly subscription) is required. So a total of **Rs.42.50 lakhs** is required for 1700 Tablet users.	
6.1		Miscellaneous, demarcation, SPMU establishment expenses and other unforeseen expenses for phase - 1		2,00,00,000	In order to conduct the digital survey program, demarcation work need to be performed. Hence, the expenses for the demarcation for 400 villages (Rs. 25,000 x 400 = **1 Cr**) and establishment expensces of SPMU and othere Miscellaneous expenses for the digital survey program required **Rs. 1 Cr**. Total of **Rs. 2** Cr is required in this component	
		Total	3,39,43,80,000	4,38,46,10,365		48,57,60,000

Eventhough the estimated amount for the first phase is increased by 99.02 Cr, due to the advanced technology and modern instrument Rs.48.58 Cr can be saved in the next three pahases. Therefore difference of the total project cost is only Rs.50.44 Cr. There can be more savings in the actual implemenation of the programme