GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
(RAILWAY BOARD)

No. 2017/C&IS/Project/FSDDR-CCC/22 **New Delhi, Dated: 17.07.2018**

The General Manager,
Northern Railway,
New Delhi.

Sub:- Sanction for the work of "Field Sensor Data, Drone Recording of IR and CC camera live feed from Projects Collection and Monitoring System".

Ref:-
1. **CRIS's letter No. 2017/CRIS/NDLS-HQ/CC/Project/WorkPrsal/0277/Pt-1 dated 21.09.2017.**
2. **Board's letter No. 2018-B-106 dated 18.06.2018.**
3. **Board's letter No. 2015/C&IS/Project/Executing/32 dated 06.07.2018.**

A new work **"Field Sensor Data, Drone Recording of IR and CC camera live feed from Projects Collection and Monitoring System" under the Pink Book Item No. 229/2018-19 of Northern Railway (Other Information Technology works on Indian Railways)** has been included in the Pink Book of the year 2018-19 as Item No. 229e of Northern Railway at the abstract cost of Rs. 18,02,16,000/- (Rupees eighteen crore two lakh and sixteen thousand only) under the allocation "DF-3" under the plan Head – 17 (Computerization).

Item-wise break up of cost is appended as "Annexure".

Vinita 17/7/18
(Vinita Narera)
Director Electronics(C&IS)

Copy to :-

1. **Executive Director/TK(P), Railway Board.**
2. **The FA & CAO, Northern Railway, New Delhi.**
3. **The Chief Commercial Manager, Northern Railway, New Delhi.**
4. **Managing Director, CRIS, Chanakyapuri, New Delhi.**
5. **F(X)-II and Budget Branches of Railway Board.**

Annexure

No. 2017/C&IS/Project/FSDDR-CCC/22 New Delhi, Dated: 17.07.2018

Item-Wise break up of cost of the work of "Field Sensor Data, Drone Recording of IR and CC camera live feed from Projects Collection and Monitoring System"

S. No.		Work Item	Qty (Q1)	Rate (R1)	Q1*R1 (In Rs.)
1	**Application Software - Development (Resources)**				
	1.1	SDLC parts Application SW, including up to Testing (UAT)	253		384,03,365
	1.2	Non SDLC prt of Application, including Rajbhasha (Hindi), Documentation etc.	40		48,34,520
	1.3	Project Management Support Cost			40,22,654
		Total - Application Software (1)			**472,60,539**
2	**Skills Development (of Resources & Customers) Costs**				
	2.1	Technical & Managerial Skills Development	L/s		10,00,000
	2.2	Consultancy/Specialists Hiring	L/s		500000
		Total - Skills Development(2)			**15,00,000**
3		**Implementation, Training and Data Mgt. Cost**			
	3.1	Implementation and handholding support at sites/locations	30	120863	3625890
	3.2	End Users' Training (of train-the-trainers)	20	120863	2417260
		Total Implementation and Training (3)			**6043150**
4	**System Software Costs**				
	4.1	**System Software for Production Systems**			
	4.1.1	RHEL Server Premium (1-2 Socket) (upto 1 guest) 3 years subscription with L1-L3 on-site support	2	1,56,435.00	3,12,870
	4.1.2	RHEL Server Premium (1-2 Socket) (upto 4 guest) 3 years subscription with L1-L3 on-site support	2	2,20,187.00	4,40,374
	4.1.3	SMS Charges	Lumpsum	1,00,000.00	1,00,000
	4.1.4	SSL Certificate	2	68,837.00	1,37,674
				Total 4.1	**9,90,918**
	4.2	**System Software Maintenance costs**			
	4.2.1	Software & hardware Subscription and Support for 2nd and 3rd years of IBM PureApp W3700-40 Core machine	1	13368637	13368637
		Sub Total System Software (4)			**143,59,555**
5	**Hardware Systems Costs**				

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	5.1	**Development/Pilot/Testing/Staging Environment**			
	5.1.1	Desktops for Development & Support	10	46,725.00	467250.00
	5.1.2	Printers - Color Printers for Tsting	5	16,820.00	84100.00
	5.13	Laptops	5	50,000.00	250000.00
				Sub Total (5.1)	**801350.00**
	5.2	**Production Environment**			
	5.2.1	Engineered System - 40 CPU Cores machine with bundled licenses of Application & DB servers, SAN Storage and other management utilities	1	33322000	33322000.00
	5.2.2	**HTTP/Application Servers (Quad Core Intel Xeon) with built-in 3 year on-sit warranty)**	**4**	**350600**	1402400.00
	5.2.3	**10% Installation/Commissioning cost of hardware (One time Installation/Commissioning cost of expert engineered system)**			3332200.00
	5.2.4	**Backup hardware e.g., server hardware, tape library, tape drives along with associated backup server software & clients softwares**	**Lumpsum**		3000000.00
		Sub Total (5.2)			**41056600.00**
		Total Hardware System (5)			**41857950.00**
6	**Network Equipment /Infrastructure Costs**				
	6.1	Firewall, IPS, IDS, SIEM, NOC augmentation Cost @CRIS DC	8	3,18,741.00	25,49,928
	6.2	Data Centre Local Network augmentation at CRIS DC @ Rs. 20,000/- per 1 Gbps connection	20	20,000.00	4,00,000
	6.3	License Cost of Servers/OS instances for SIEM, VA, NMS, HIPS et.	10	45,000.00	4,50,000
	6.4	Manpower Charges per annum applicable from 1st year onwards for 2 years	24	45,084.00	10,82,016
	6.5	Network performance and security audit charges applicable from 2nd year onwards for 1 year	8	8,334.00	66,672
	6.6	Cost of hiring lease line of 16 Mbps @8295 per 02 Mbps (E1) from 1st year onwards for 2 years	8	8,295.00	1,32,720
	5.6	Annual charges from upgradation of n/w security infra, replacement of equipment in RIDC applicable from 2nd year onwards for 1 year	8	60,000.00	4,80,000
		Total - Network Equipment /Infrastructure Costs (6)			**51,61,336**
7	**Project Management(Establishment)**				
	7.1	Phase 1 (Development of User and System Requirement Specifications, Designs)	24		63,63,804

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	7.2	Phase 2 (Development & Pilot Implementation of Software & Database System)	12		31,21,956
	7.2	Phase-3 (Other phases , eg., Roll-out Implementation, Enhancements etc.	12		31,21,956
		Sub Total Project (Management Establishment) (7)			**126,07,716**
(A)		**Sub Total (Project Cost) (1 to 7)**			**1287,90,246**
8		**CRIS Charges on (A) (Kept max. 10%)**			
	8.1	ICT Innovation @ 3%			38,63,707
	8.2	Quality/ ISO - Certifications @ 2%			25,75,805
	8.3	CRIS Internal IT Systems (HW/SW) and Info rotation Security @ 2%			25,75,805
	8.4	Procurement Services @ 2%			25,75,805
	8.5	Contingency Charges @ 1%			12,87,902
		Sub Total - CRIS Charges on above (9) :			**128,79,025**
(B)		**Total (A + 8)**			**1416,69,271**
(C)		**GST on Total (B) @18%**			**255,00,469**
		Total (B + C)			**1671,69,739**
(D)		**D&G Charges for Railways (@9.13% of (A))**			**117,58,549**
(E)		**Contingencies @1% of (A)**			**1287902.46**
		Grand Total (B+C+D+E)			**1802,16,191**
		Rounded Off			**Rs. 18,02,16,000**

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