

HINDUSTAN PREFAB LIMITED						
PALAYAM TRIVANDRUM						
NAME OF WORK : PROPOSED IEC (INTERNET CONNECTIVITY & CCTV CAMERA) AT ECO –ADVENTURE PARK VAGAMON, PINE VALLEY FOREST AT VAGAMON, ECO LOG LODGE IDUKKI PARK, AND GOVT GUEST HOUSE PEERUMEDU, FOR THE DEVELOPMENT OF PATHANAMTHITTA - GAVI - VAGAMON - THEKKADY AS A ECO TOURISM CIRCUIT IN IDUKKI AND PATHANAMTHITTA DISTRICTS IN KERALA UNDER SWADESH DARSHAN SCHEME						
ESTIMATE AS PER DSR 2016						
Sl. No	DSR CODE No:	Description	Units	Qty	Rate	Amount
COMPONENT I - CIVIL WORK FOR ALL THE SITES.						
A		CIVIL WORKS				
		SCHEDULE ITEMS				
		EARTH WORKS				
1	2.6	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30cm in depth. 1.5m in width as well as 10 sum on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be levelled and neatly dressed.				
a	2.6.1	All kinds of soil	Cum	310.00	125.95	39,044.50
2	2.25	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	Cum	310.00	125.75	38,982.50
		CONCRETE WORKS				
3	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - All work upto plinth level :				
a)	4.1.8	1:4:8 (1 Cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size).	Cum	27.00	4478.15	120,892.14
		REINFORCED CEMENT CONCRETE				
4	5.1	Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centring, shuttering, finishing and reinforcement - All work upto plinth level :				
a)	5.1.2	1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20mm nominal size)	Cum	145.00	6215.35	901,225.75
5	5.2	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc., above plinth level up to floor five level, excluding cost of centering, shuttering, finishing and reinforcement :				
a)	5.5.2	1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20mm nominal size)	Cum	13.00	7145.80	92,895.40
		FORM WORK				
6	5.9	Centering and shuttering including strutting, propping etc. and removal of form for :				
a)	5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers	Sqm	752.60	342.90	258,066.54
7	5.22	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete.				
a)	5.22.6	Thermo-Mechanically Treated bars	Kg	15800.00	56.60	894,280.00
8	7.1	Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20mm nominal size) at plinth level with :				
a)	7.1.1	Cement mortar 1:6 (1 cement : 6 coarse sand)	Cum	60.00	3965.85	237,951.00
		STEEL WORK				
9	10.16	Steel work in built up tubular(round ,square or rectangular hollow tubes etc.) trusses including cutting, hoisting fixing in position and applying a priming coat of approved steel primer, welded and bolted including special shaped washers etc. complete.				
a)	10.16.1	Hot finished welded type tubes	Kg	5100.00	90.25	460,275.00

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		FLOORING				
10	11.2	Chequered precast cement concrete tiles 22 mm thick in footpath and courtyard jointed with neat cement slurry mixed with pigment to match the shade of tiles including rubbing and cleaning etc. complete on 20 mm thick bed of cement mortar 1:4 (1 cement: 4 coarse sand).				
a)	11.20.2	Medium shade using 50% white cement 50% Grey cement.	Sqm	100.00	878.60	87,860.00
		FINISHING				
11	13.6	20 mm cement plaster of mix :				
a)	13.6.2	1:6 (1 cement : 6 coarse sand)	Sqm	1500.00	232.85	349,275.00
		PAINTING				
12	14.53	Wall painting with plastic emulsion paint of approved brand and manufacture to give an even shade :				
a)	14.53.1	One or more coats on old work	sqm	300.00	84.45	25,335.00
13	13.47	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade				
a)	13.47.1	New work (Two or more coats applied @ 1.43 ltr/ 10 sum. over and including base coat of water proofing cement paint applied @ 2.20 kg/ 10 sqm).	sqm	470.00	96.80	45,496.00
14	13.61	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade :				
a)	13.61.1	Two or more coats on new work	Sqm	800.00	78.40	62,720.00
		Total Schedule Items				3,614,298.83
		Add Cost Index 59.80%				2,161,350.70
		Total				5,775,649.53
		NON SCHEDULE ITEMS				
15	1	Supply and fixing of 6mm Multi wall poly carbonate aluminium sky lighting profile sheet etc.	Sqm	335.00	2801.00	938,340.60
16	2	Supplying and erection of standard pre cut GFRG hollow core panels for walls and columns measured with out cuttings and openings.				
		Walls	Cum	320.00	2241.00	717,120.00
17	3	Infilling with specially mixed micro concrete and poured or pumped to the cavities in three stages	Cum	22.00	3356.00	73,832.00
18	4	Water proofing application for external side joints between concrete and GFRG panels.	Metre	300.00	202.00	60,600.00
19	5	Water proofing primer for out side walls including cost and conveyance all materials to site , labour charges etc complete	Sqm	770.00	134.00	103,180.00
20	6	Camera pole MS pipe 100 x 100 rectangle 8 metre hight approximate, cutting and fixing base plate etc.. Painting PU with primer and base coat including all finishing .	Each	117.00	32000.00	3,744,000.00
21	7	Supply and fixing on camera pole lightning protection Earthnet surge lightningning protector size 91 x 61 x 32.5 mm approximate weight 80 gram including cabling and earthing all expence	Each	117.00	43000.00	5,031,000.00
		Non - Schedule Items				10,668,072.60
		TOTAL CIVIL WORKS				16,443,722.00

Sl. No	DSR CODE No:	Description	Units	Qty	Rate	Amount
COMPONENT II - IEC CCTV NETWORK SYSTEM INCLUDING OPERATION AND MAINTENANCE PERIOD OF 6 MONTHS						
22	1	Supply and installation of 32 CH 2U 4KandH.265 Network Video Recorder-Up to 8/16/32 channel IP camera input ,H.265/H.264/MJPEG dual codec decoding , Max 256Mbps incoming bandwidth Up to 8ch@1080P(4ch@H.265+4ch@H.264) realtime live-viewUp to 12Mp resolution previewandplayback ,2HDMI/1 VGA simultaneous video output ,8/16 channel synchronous realtime playback, GRID interface Support Multi-brand network cameras: ONVIF Version 2.4 conformance 3D intelligent positioning with PTZ camera Support 8 SATA HDDs up to 48TB, 4 USB(2 USB3.0), 1 eSATA port ,Support IPC UPnP, 16PoE ports (for -16P model) Multiple network monitoring: Web viewer, CMS(DSS/Smart PSS) and Smart Phone(DMSS) with 6 TB 8 nos for backup				
		For Eco Adventure Park at Vagamon, Pine Valley Forest at Vagamon, Eco Log Lodge at Idukki and Govt Guest House at Peerumedu	Each	6.00	175967.00	1,055,802.00
23	2	Supply and installation of Digital 8 TB Hard disk Survilalnce Camera (4 Nos. for each NVR)				-
		For Eco Adventure Park at Vagamon, Pine Valley Forest at Vagamon, Eco Log Lodge at Idukki and Govt Guest House at Peerumedu	Each	24.00	25422.00	610,128.00
24	3	Supply and installation of 4 Mega pixel IR Dome camera, 0EP-S ,25/30fps@1.3M, 3.6mm 20 mtrs				
		For Eco Adventure Park at Vagamon, Pine Valley Forest at Vagamon, Eco Log Lodge at Idukki and Govt Guest House at Peerumedu	Each	10.00	13625.00	136,250.00
25	4	Supply and installation of 4MP Full HD WDR IR VF Bullet Camera - 50Mtr. ,1/3" 4MP PS CMOS Image Sensor ,Max 20fps@4MP and 25/30fps@3MP ,H.264 and MJPEG Triple-Stream Encoding, WDR(120dB), Day/Night(ICR), Auto Iris, 3DNR, AWB, AGC, BLC ,2.7-12mm Motorized Lens ,IR Range of 50 Mtrs, Micro SD, IP67, PoE Mobile Software: iCMOB, gCMOB, wCMOB ,CMS Software: KVMS Pro, vOptimus ProBackLightComp.BLC/HLC/WDR(120dB) ,Image Sensor1/3" 4MP Progressive scan CMOS ,IRIR Range of 50 Mtr. Lens2.7-12mm Motorized Lens, Micro SDMicro SD, Max 128GB ,Minimum Illumination0.01Lux/F1.4(Color); 0 Lux/F1.4(IR on) Resolution4M(2560x1440)/3M(2048x1536)/1080P(1920x 1080) /720P(1280x 720) /D1(704x 576) /CIF(352x 288),ShutterSpeedAuto/Manual,1/3(4)~1/10000s,VideoCompressionH.264/H.264H/H.264B/MJPEG ,Video StreamingMain Stream: 4M(1~20fps)/3M(1 ~ 25/30fps), Extra Stream: D1/CIF(1 ~ 25/30fps), Third Stream: 720P(1~5/8fps) WDR on, 720P(1~18/2fps) WDR off , Weatherproof StandardIP67.				
		For Eco Adventure Park at Vagamon, Pine Valley Forest at Vagamon, Eco Log Lodge at Idukki and Govt Guest House at Peerumedu	Each	78.00	50957.00	3,974,646.00
26	5	Supply and installation of 32x PTZ IR Camera with 360 Dgree Rotate and PAN/TILT up to 150 Mtrs Day Light Coverage				-
		For Eco Adventure Park at Vagamon, Pine Valley Forest at Vagamon, Eco Log Lodge at Idukki and Govt Guest House at Peerumedu	Each	29.00	104000.00	3,016,000.00
27	6	Supply and laying of 4-pair unshielded twisted pair (UTP) cable; Pairs are braided in aluminum foil with drain wire; 23 AWG solid copper conductor .				
		For Eco Adventure Park at Vagamon, Pine Valley Forest at Vagamon, Eco Log Lodge at Idukki and Govt Guest House at Peerumedu	Each Box	61.00	36400.00	2,220,400.00
28	7	Supply and laying of 2.5 Sqr 3 Core PVC Insulated Solid/Stranded Copper/Aluminium Conductor power cable				
		For Eco Adventure Park at Vagamon, Pine Valley Forest at Vagamon, Eco Log Lodge at Idukki and Govt Guest House at Peerumedu	Metre	8900.00	125.00	1,112,500.00
29	8	Supply and laying of High Density Polyethylene Pipes 32mm PIPE with Accessories				
		For Eco Adventure Park at Vagamon, Pine Valley Forest at Vagamon, Eco Log Lodge at Idukki and Govt Guest House at Peerumedu	Metre	10400.00	94.00	977,600.00

Sl. No	DSR CODE No:	Description	Units	Qty	Rate	Amount
30	9	SITC of 8 port Switch 10/100/ Mbps POE 10/16 Gbps switching fabric Full/half-duplex for Ethernet/Fast Ethernet speeds IEEE 802.3x Flow Control				
		For Eco Adventure Park at Vagamon, Pine Valley Forest at Vagamon, Eco Log Lodge at Idukki and Govt Guest House at Peerumedu	Each	29.00	14156.00	410,524.00
31	10	SITC of 24 Port POE BASE-T Ethernet , IEEE 802.3u 100BASE-TX Fast Ethernet , IEEE 802.3ab BASE-T Gigabit Ethernet				
		For Eco Adventure Park at Vagamon, Pine Valley Forest at Vagamon, Eco Log Lodge at Idukki and Govt Guest House at Peerumedu	Each	6.00	25169.00	151,014.00
32	11	Supply and laying of 6 Core Single Single Mode Optic fiber Cable				
		For Eco Adventure Park at Vagamon, Pine Valley Forest at Vagamon, Eco Log Lodge at Idukki and Govt Guest House at Peerumedu	Metre	8900.00	56.00	498,400.00
33	12	Supply and fixing of OFC Patch Cord SC to SC				
		For Eco Adventure Park at Vagamon, Pine Valley Forest at Vagamon, Eco Log Lodge at Idukki and Govt Guest House at Peerumedu	Each	76.00	1709.00	129,884.00
34	13	Supply and fixing of OFC Enclosure BOX				
		For Eco Adventure Park at Vagamon, Pine Valley Forest at Vagamon, Eco Log Lodge at Idukki and Govt Guest House at Peerumedu	Each	44.00	350.00	15,400.00
35	14	Supply and installation 12 Port LIU Box with Pigtaile and accessories				
		For Eco Adventure Park at Vagamon, Pine Valley Forest at Vagamon, Eco Log Lodge at Idukki and Govt Guest House at Peerumedu	Each	25.00	5958.00	148,950.00
36	15	Supply and installation 15 U Wall Mount Rack with Tray and Power Manager and Colling Fan				
		For Eco Adventure Park at Vagamon, Eco Log Lodge at Idukki and Govt Guest House at Peerumedu	Each	4.00	13926.00	55,704.00
37	16	Supply and installation 36 U Wall Mount Rack with Tray and Power Manager and Colling Fan				
		For Eco Adventure Park at Vagamon, Pine Valley Forest at Vagamon	Each	2.00	51723.00	103,446.00
38	17	Supply and installation 5 Amps with 3 Socket with one Switch power Box				
		For Eco Adventure Park at Vagamon	Each	20.00	934.00	18,680.00
39	18	Supply and installation of 5 Amps with 5 Socket with one Switch power Box				
		For Pine Valley Forest at Vagamon, Eco Log Lodge at Idukki and Govt Guest House at Peerumedu	Each	12.00	1074.00	12,888.00
40	19	Supply and fixing of HDMI Cable 10 Mtrs				
		For Eco Adventure Park at Vagamon, Pine Valley Forest at Vagamon, Eco Log Lodge at Idukki and Govt Guest House at Peerumedu	Each	8.00	5417.00	43,336.00
41	20	Supply and installation Media Convertor OFC to RJ45				
		For Eco Adventure Park at Vagamon, Pine Valley Forest at Vagamon, Eco Log Lodge at Idukki and Govt Guest House at Peerumedu	Each	64.00	8815.00	564,160.00
42	21	SITC of 32 Inch LED TV With Wall Mount Kit				
		For Eco Adventure Park at Vagamon, Pine Valley Forest at Vagamon, Eco Log Lodge at Idukki and Govt Guest House at Peerumedu	Each	6.00	39000.00	234,000.00
43	22	Supply and fixing of RJ 45 Connectors having 30 nos. in each box				
		For Eco Adventure Park at Vagamon	Each Box	3.00	1106.00	3,318.00

Sl. No	DSR CODE No:	Description	Units	Qty	Rate	Amount
44	23	Supply and installation PVC Weather Proof Box for Camera				
		For Eco Adventure Park at Vagamon, Pine Valley Forest at Vagamon, Eco Log Lodge at Idukki and Govt Guest House at Peerumedu	Each	117.00	1182.00	138,294.00
45	24	Supply and installatio of Outdoor Rack with Floor Mount Fabricated and Fan with accessories				
		For Eco Adventure Park at Vagamon, Pine Valley Forest at Vagamon, Eco Log Lodge at Idukki and Govt Guest House at Peerumedu	Each	20.00	23444.00	468,880.00
46	25	Supply and installation 24V 300 milli amp Power Supply For PTZ				
		For Eco Adventure Park at Vagamon, Pine Valley Forest at Vagamon, Eco Log Lodge at Idukki and Govt Guest House at Peerumedu	Each	29.00	3091.00	89,639.00
47	26	Supply and installation Workstation PC for Monitoring				
		For Eco Adventure Park at Vagamon, Pine Valley Forest at Vagamon, Eco Log Lodge at Idukki and Govt Guest House at Peerumedu	Each	4.00	85426.00	341,704.00
48	27	Supply and installation 10 KVA on Line UPS on Line UPS , Low Distirtion ,High Efficiency with SMF battery, battery stand And UPS Fixing Accessories				
		For Eco Adventure Park at Vagamon & Pine Valley Forest at Vagamon	Each	2.00	387000.00	774,000.00
49	28	Supply and installation 6 KVA on Line UPS on Line UPS , Low Distirtion ,High Efficiency with SMF battery, battery stand And UPS Fixing Accessories				
		For Eco Log Lodge at Idukki and Govt Guest House at Peerumedu	Each	2.00	179000.00	358,000.00
50	29	Charges for OFC Termination				
		For Eco Adventure Park at Vagamon, Pine Valley Forest at Vagamon, Eco Log Lodge at Idukki and Govt Guest House at Peerumedu	Each	279.00	631.00	176,049.00
51	30	Operation& Maintenance charge of the CCTV Network System				
		1% of the total amount of CCTV Network System = 1%*17839596.00 = 178395.96 (Say) 178396.00				
		O&M period for 6 months	Per month	6.00	178396.00	1,070,376.00
		TOTAL				18,909,972.00
		GRAND TOTAL				35,353,694.00