

DNIT for Providing Highmast system with LED Lighting system in G.M. Jagroan, M.C. Jagroan, Distt Ludhiana. (Work code - EE/E-SASN-811)

App. Amount Rs :- ~~1,24,89,700/-~~ **1,24,90,000 / 1**
 Earnest Money Rs :- ~~2,49,800/-~~ **2,50,000 / 2**
 Time Limit :- 03 Month

S. No.	Description	Csr /Nsr	Qty	B.Rate	Prem.	Rate	Amount
Part-A (Highmast)							
1	S/L of aluminium conductor P.V.C. insulated unarmoured and PVC Sheathed cable to laid loose in the existing trench or Pipe working voltage 1100 V grade .						
a	Overall size 16sq.mm (2Core) Un-armoured (Loose)	34.10D.3	160 Mtr	68+5.35% 71.64	90%	136.11	21778
b	Overall size 25sq.mm (3½ Core) Un-armoured (Loose)	34.10D.22	1633 Mtr	125+5.35% 131.69	90%	250.21	408593
c	Overall size 35sq.mm (3½ Core) Un-armoured (Loose)	34.10D.23	245 Mtr	155+5.35% 163.29	90%	310.26	76014
d	Overall size 50sq.mm (3½ Core) Un-armoured (Loose)	34.10D.24	122 Mtr	202+5.35% 212.81	90%	404.33	49328
2	Earthing with G.I. wire/ rope in G.I. pipe partly recessed and partly on surface complete with 150cm long 50mm dia. G.I. earth pipe (Cutting threads and 36 Nos. holes, 1cm dia. to make a mesh around the GI Pipe) with., up to 8 metre in length (including boring & refilling).						
a	Earthing with 7/14 S.W.G. (7/2.18mm dia.)G.I. rope in 20mm dia G.I. pipe with G.I. reducing socket 50mm x 20mm (upto 8Metre in length)	34.13.13.b	24 No	2800+5.35% 2949.80	25%	3687.25	88494
3	Earthing with electrolytic Copper Tape rivetted (with 5Nos. copper rivets)/Steel Nut & bolts (with 4Nos. 32mm long, 8mm thick with washer and double nut) to 30cm x 120cm x 2mm thick copper plate (made cylindrical) burried 4.50 metre (14.76 feet) below ground level in the hole of excavation having bore dia. 125mm and surrounded by salt & charcoal dust mixture (20 kg.) including fixing the Copper Tape recessed in wall and in floor etc., up to 8metre in Length (including bore Length). G.I. pipe 20mm dia. (A-class), 3metre long should be laid in the hole of excavation 1 feet below ground level and having GI Reducer 50mm x 20mm with PVC Cap (For pouring water) fixed on the top level of the pipe. 300mm x 300mm x 300mm deep haudi of First class bricks finished with 1:4 cement plaster and haudi covered with cast iron lid having size 300mm x 300mm (Heavy) around the hole of excavation:-						
a	Earthing with 20mm x 3mm Copper Tape (upto 8Metre in Length)	34.14.2a	24 No	9309+ 5.35% 9807.03	70%	16671.95	400127
4	Supply and Erection of 20mm x 3mm thick copper tape (As additional length).	34.14.5a	30 Mtr	351+5.35% 369.78	70%	628.62	18859
5	Supply and erection of Miniature Circuit Breaker MCB's for circuit protection against overload and short circuit current fault suitable for 240/ 415 volts 50cycles AC supply with breaking capacity of 10kA, Curve-C and low watt losses as per IS/IEC 60898-1, energy limitation class-3, true contact indication, label holder facility in the existing MCB distribution board as per PWD General Specifications including connections with suitable size ofthimbles/lugs:-						
a	MCB Single Pole 6-32amp. (10kA, Curve-C)	34.16.a.2	65 No	134+5.35% 141.16	50%	211.75	13764
b	MCB Four Pole 50, 63amp. (10kA, Curve-C)	34.16.16	24 NO	1231+ 5.35% 1296.85	50%	1945.29	46687

6	Supply and erection of sheet metal Double Door Distribution Boards IP 43- IK09 metal door (dust protected) as per IS 8623-1&3, IEC 61439-1&3 suitable for flush mounting with fully insulated copper busbars, shrouded neutral bars, earth bars, cement spill protector, color-coded interconnecting wire set, cable ties, blanking plates and circuit identifications label and of required no. of ways for mounting miniature circuit breakers/ RCBO's/ RCCB's in the distribution board (For SP&N distribution board with provision DP MCB's/ RCCB's/ RCBO's as incomer and SP MCB's as outgoing and for TP&N horizontal distribution board with provision TPN/ FP MCB's/ RCCB's/ RCBO's as incomer and SP MCB's as outgoing) as per PWD General specifications							
a	TP&N Horizontal Double Door Distribution Board 4 way each	34.17.5	12	No	2406+ 5.35% 2534.72	15%	2914.93	34979
7	Supply and erection of Double Walled Corrugated (DWC) HDPE pipe to be laid 1mtr. below ground level including excavation placing the pipe in position and back filling with excavated soil etc. of the required size:-							
a	Double walled corrugated (DWC) HDPE pipe 63/51(outer/inner dia)	34.37.2	1428	Mtr	148.00+ 5.35% 155.91		155.91	222639
b	Double walled corrugated (DWC) HDPE pipe 90/76mm (outer/ inner dia.)	34.37.3	307	Mtr	189+5.35% 199.11		199.11	61127
8	S/E of PVC insulated single core FR copper conductor cable ISI marked left bare in pipe or casting of suitable size excluding the cost of supply and erection of pipe							
a	Overall size 16sq.mm (Un-sheathed)	34:09:07	75	Mtr	137+5.35% 144.32	90%	274.23	20567
9	Supply and erection of Sheet metal cubical pedestal made from 50mmx50mmx6mm thick MS angle iron frame with 5 sides welded & covered with MS sheet 2mm thick & front side hinged with 4" hinges & locking system with single/ double door openable placed on MS strip of size 12.5mm x 2.5mm thick welded with MS sheet, 4Nos. legs of 50mmx50mmx6mm thick MS angle iron each of 600mm long with MS sheet 100mmx100mmx6mm thick at the bottom end of the legs. Front door welded x-sectionally with MS flat 25mmx5mm. The front side with MS sheet each 75mm wide & a bend of 75mm width outwards & inwards on all sides with tapered top 200mm high and pedestal with 4 Nos. supporting members each of MS flat 50mmx6mm thick according to cubical size duly welded & complete pedestal to be painted with 1 coat of red oxide & 2 coats of paint & bonding to the existing earth. The Pedestal platform should be filled with 1:2:4 cement concrete mixture and erected 150mm high from the top of the cement concrete platform. The job is to be completed as approved by Engineer-in-charge:-							
a	Cubical Size 1400mm high, 1200mm wide and 500mm deep	34.38.1.d	6	No	17673+ 5.35% 18618.50	40%	26065.90	156395
b	Cubical Size 900mmx600mmx350mm deep	34.38.1.a	12	No	8571+ 5.35% 9029.54	40%	12641.35	151696
10	Supply and erection of Moulded Case Circuit Breaker (Panel mounting Cubical type) in the existing Cubical Panel (confirm to IEC:60947-2) having Ics=100% Icu, 100% neutral with spreader terminal links, Extended rotary handle and relevant PWD general specifications complete with G.I. Bolts, Nuts & Connection on both sides of MCCB with suitable size of thimbles etc:-							
a	MCCB Four Pole 63/80/100amp., 415volts, ≥25kA Fixed Magnetic and Adjustable Thermal	34.23b.2	12	No	5251+ 5.35% 5531.92	50%	8297.89	99575
b	MCCB Four Pole 250amp., 415volts, ≥25kA Fixed Magnetic and Adjustable Thermal Setting	34.23b.6	5	No	10425+ 5.35% 10982.73	50%	16474.11	82371
c	MCCB Four Pole 400amp., 415volts, ≥36kA Microprocessor Based Adjustable Thermal and Magnetic Setting	34.23b.8	4	No	23901+ 5.35% 25179.70	50%	37769.55	151078

11	Supply and erection of sheet metal bus-bar chamber (factory fabricated) duly powder coated on existing surface with required 4Nos. of tin plated copper bus-bar strips of suitable length and cross-sectional area mounted on DMC/ SMC moulds at sufficient distance, enclosure made of M.S. sheet 1.6mm thick with hinged cover and lock, fitted with dust excluding gaskets and secured with sufficient no. of cadmium plated iron screws and of given overall dimensions and to be fixed with G.I. bolts and nuts/ rag bolts and nuts etc. complete with all accessories including connections with suitable size of thimbles, bonding to the existing earth and painting etc. as desired by the Engineer-in-charge at site:							
a	Bus Bar Chamber 200amp., 415volts Overall Dimensions (455mm x 455mm x 150mm) nominal	34.20.7	4	No	7598+ 5.35% 8004.49	30%	10405.84	41623
12	S/E of 12.5Mtr High Mast systems as per IS: 875:1987(part-II) manufactured on CNC automated Machine, Automatic plasma cutting machine mechanism for steel cutting, onliner scan welding with same strength Arc as steel for welding continuous polygonal structure as per wind speed of 180 Km per hour tested from IIT with wind tunnel testing, single hot dip galvanizing for maintenance life of Minimum 25 years with all the other exposed parts, High tensile sheet steel conforming to BSEN-10025 with tensile strength 355 N/Sqm with special Latching Arrangement head frame, galvanized lantern carriage etc as per below mentioned specifications. Mast shaft shell be in two sections as per IS 875, lighting finial including foundation bolts manufactured from special steel along with nuts washers, anchor plate, templates and LED type single dome aviation obstruction light. The mast shall have intergal power tool installed inside th base compartment for its operation. Lumanire wiring materials not included in the mast supply prices.	NSR	2	No	449518.00		449518.00	899036
13	S/E of 16Mtr High Mast systems as per IS: 875:1987(part-II) manufactured on CNC automated Machine, Automatic plasma cutting machine mechanism for steel cutting, onliner scan welding with same strength Arc as steel for welding continuous polygonal structure as per wind speed of 180 Km per hour tested from IIT with wind tunnel testing, single hot dip galvanizing for maintenance life of Minimum 25 years with all the other exposed parts, High tensile sheet steel conforming to BSEN-10025 with tensile strength 355 N/Sqm with special Latching Arrangement head frame, galvanized lantern carriage etc as per below mentioned specifications. Mast shaft shell be in two sections as per IS 875, lighting finial including foundation bolts manufactured from special steel along with nuts washers, anchor plate, templates and LED type single dome aviation obstruction light. The mast shall have intergal power tool installed inside th base compartment for its operation. Lumanire wiring materials not included in the mast supply prices.	NSR	10	No	493450.00	0%	493450.00	4934500
14	Supply of Light Emitting Diode (L.E.D.) Flood Light Fitting 240/250 W having sufficient lens complete with power supply and related accessories suitable for installing inside and outside cover shed for obtaining sufficient lux level as per BIS standards at a height of atleast 6/9 meter above the ground level Complete in all respects	NSR	24	No	21872.00		21872.00	524928

15	Supply of Light Emitting Diode (L.E.D.) Flood Light Fitting 350W having sufficient lens complete with power supply and related accessories suitable for installing on High Mast for obtaining sufficient lux level as per BIS standards at a height of atleast 20 meter above the ground level Complete in all respects	NSR	56	No	26109.00		26109.00	1462104
16	Supply of Light Emitting Diode (L.E.D.) Flood Light Fitting 300W having sufficient lens complete with power supply and related accessories suitable for installing on High Mast for obtaining sufficient lux level as per BIS standards at a height of atleast 20 meter above the ground level as Complete in all respects	NSR	16	No	23012.00		23012.00	368192
17	Supply of Light Emitting Diode (L.E.D.) Street Light Fitting 120 W having sufficient lens complete with power supply and related accessories suitable for installing inside and outside cover shed for obtaining sufficient lux level as per BIS standards at a height of atleast 6/9 meter above the ground level Complete in all respects	NSR	11	No	5144.00		5144.00	56584
18	Dismantling of Piller box size 1400x1200x500mm complete Errection/2 - Rate 1975/2=987/50	34.38.1d	4	No	987.50		987.50	3950
19	Labour for dismantling 3-stepped steel tubular pole upto 16m.	34.33.3	69	No	1439+ 5.35% 1515.98	0%	1515.98	104603
20	Erection of G.I. Pipe/ 3-Stepped Steel tubular pole in suitable planting depth below ground level in a hole of excavation and suitable depth to filled in up to 15 cm below G/L with 1:2:4 cement concrete mixture but excluding cost of pole including two coats of approved aluminium paint etc:-							
a	Erection of 3-stepped steel tubular pole upto 10 m length (hole of excavation about 45 cm dia.)	34.33.4.b	11	No	1643+5.35% 1730.90	0%	1730.90	19040
21	Dismantling of Single Arm GI pipe bracket 50mm dia (34.29.C.2.B) Rate Errection/2 = Rate = 171/2=85/50	34.29c.2b	38	No	85.50		85.50	3249
22	Dismantling of Double Arm GI pipe bracket 50mm dia (34.29.C.2.F) Rate Errection/2 = Rate 226/2= 113/-	34.29c.2f	5	No	113.00		113.00	565
23	Dismantling of Round Arm GI pipe bracket 50mm dia (34.29.C.4) Rate Errection/2 = Rate 649/2= 324/50	34.29c.4	3	No	324.50		324.50	974
24	Dismantling of Six Arm GI pipe bracket 50mm dia (34.29.C.2.r) Rate Errection/2 = Rate 451/2= 225/50	34.29.C.2.r	14	No	225.50		225.50	3157
25	Dismantling of 150/250wattM.H Fittings	NSR	144	No	45.00		45.00	6480
26	Supply and erection of heavy duty aluminium thimbles/lugs for cable end termination duly crimped including making necessary connections completely:-							
a	Aluminium thimble cable Core size 25 -35sq.mm	34.38A.3	60	No	17.00+ 5.35% 17.91	0%	17.91	1075
b	Aluminium thimble cable Core size50sq.mm	34.38A.4	24	No	27.00+ 5.35% 28.44	0%	28.44	683
27	S/E of heavy duty Copper thimbles/lugs for cable end termination duly crimped including making necessary connections etc. completely.							
a	Copper cable core size 10 sq. mm - 16 sq. mm	34.38.b.2	180	No	22.00+ 5.35% 23.17	15%	26.65	4797
28	Construction of Inspection chamber of size 2'x2'x3'with bricks and plastering the same with precast RCC manhole cover /Slab as per approved by engineer-in charge.	NSR	33	No	6247+ 5.35% 6581.21		6581.21	217180
29	Dismantling of D.B Flooring and making it in original position	NSR	852	Sqm	143+5.35%150.6 5		150.65	128354
30	Dismantling of Road Cut and making it in original position	NSR	75	Sqm	332+5.35%349.7 6		349.76	26232
31	Dismantling of CC Floring and making it in original position	NSR	16	Sqm	1053+5.35% 1109.34		1109.34	17749
32	S/E of Surge Protection device (SPD) 3 Phase,4 pole, 4 Modules 40KA,Confirming to IEC 61643-1 in Main Piller box	NSR	15	No	15686.00		15686.00	235290
33	S/E of FR PVC insulated unsheathed indus Multistrand Cable ISI marked copper cable size 2.5mm ² , 3core for connection of LED fittings from Junction box at Lantern carriage and to provide electricity supply to 3 Phase Motor from MCB TPN in sub main Piller box near High mast	NSR	390	Mtr	114.00		114.00	44460
34	S/E of FR PVC insulated unsheathed indus Multistrand Cable ISI marked copper cable size 6mm ² ,5 core for connection of main supply from MCB TPN in sub main Piller box near High mastto connector inside High Mast.	NSR	130	Mtr	422.00		422.00	54860

7	Supply and erection of sheet metal Double Door Distribution Boards IP 43- IK09 metal door (dust protected) as per IS 8623-1&3, IEC 61439-1&3 suitable for flush mounting with fully insulated copper busbars, shrouded neutral bars, earth bars, cement spill protector, color-coded interconnecting wire set, cable ties, blanking plates and circuit identifications label and of required no. of ways for mounting miniature circuit breakers/ RCBO's/ RCCB's in the distribution board (For SP&N distribution board with provision DP MCB's/ RCCB's/ RCBO's as incomer and SP MCB's as outgoings and for TP&N horizontal distribution board with provision TPN/ FP MCB's/ RCCB's/ RCBO's as incomer and SP MCB's as outgoings) as per PWD General specifications							
a	TP&N Horizontal Double Door Distribution Board 4 way each	34.17.5	4 No	2406+5.35%253 4.72	15%	2914.92	11660	
8	Supply and erection of Double Walled Corrugated (DWC) HDPE pipe to be laid 1mtr. below ground level including excavation placing the pipe in position and back filling with excavated soil etc. of the required size:-							
a	Double Walled Corrugated HDPE Pipe 90/76mm (Outer/ Inner dia.)	34.37.a.3	320 Mtr	189+5.35%199.1 1	0%	199.11	63715	
9	S/E of PVC insulated single core FR copper conductor cable ISI marked left bare in pipe or casting of suitable size excluding the cost of supply and erection of pipe							
a	PVC insulated copper conductor single core FR cable (ISI marked) overall 1sq mm, 1100v grade	34.09.1	3216 Mtr	14.00+ 5.35% 14.75	60%	23.60	75898	
b	PVC insulated copper conductor single core FR cable (ISI marked) overall 1.5sq mm, 1100v grade	34.09.2	6432 Mtr	18.00+ 5.35% 18.96	60%	30.34	195147	
c	Overall size 10sq.mm (Un-sheathed)	34.09.6	40 Mtr	88+5.35% 92.71	90%	176.15	7046	
10	Supply & erection of PVC Conduit Pipes (ISI marked) as per IS9537:Part-III & HDPE pipes (ISI marked) as per IS:4984:1995 for wiring purposes including bends, junction boxes, Steel hooks, M.S. saddle clamps and other petty materials etc., as per PWD General Specifications:-							
a	HDPE Electrical Conduit Pipe 40mm dia. (On Surface)	34.12.20	494 Mtr	67+ 5.35% 70.58	15%	81.16	40093	
11	Supply and erection of Sheet metal cubical pedestal made from 50mmx50mmx6mm thick MS angle iron frame with 5 sides welded & covered with MS sheet 2mm thick & front side hinged with 4" hinges & locking system with single/ double door openable placed on MS strip of size 12.5mm x 2.5mm thick welded with MS sheet, 4Nos. legs of 50mmx50mmx6mm thick MS angle iron each of 600mm long with MS sheet 100mmx100mmx6mm thick at the bottom end of the legs. Front door welded x-sectionally with MS flat 25mmx5mm. The front side with MS sheet each 75mm wide & a bend of 75mm width outwards & inwards on all sides with tapered top 200mm high and pedestal with 4 Nos. supporting members each of MS flat 50mmx6mm thick according to cubical size duly welded & complete pedestal to be painted with 1 coat of red oxide & 2 coats of paint & bonding to the existing earth. The Pedestal platform should be filled with 1:2:4 cement concrete mixture and erected 150mm high from the top of the cement concrete platform. The job is to be completed as approved by							
a	Cubical Size 1400mm high, 1200mm wide and 500mm deep	34.38.d.1	2 No	17673+ 5.35% 18618.50	40%	26065.90	52132	
12	Supply and erection of Moulded Case Circuit Breaker (Panel mounting Cubical type) in the existing Cubical Panel (confirm to IEC:60947-2) having Ics=100% Icu, 100% neutral with spreader terminal links, Extended rotary handle and relevant PWD general specifications complete with G.I. Bolts, Nuts & Connection on both sides of MCCB with suitable size of thimbles etc:-							
a	MCCB Four Pole 63/80/100amp., 415volts, ≥25kA Fixed Magnetic and Adjustable Thermal Setting	34.23b.2	2 No	5251+ 5.35% 5531.92	50%	8297.89	16596	

13	S/E of Light Emitting Diode High Bey LED fitting 70 / 80 W having sufficient lens complete with power supply and related accessories suitable for installing inside and outside cover shed for obtaining sufficient lux level as per BIS standards at a height of atleast 6/9 meter above the ground level as Complete in all respect	NSR	24	No	7193.00	0%	7193.00	172632
14	Supply of Light Emitting Diode (L.E.D.) Flood Light Fitting 100/110 W having sufficient lens complete with power supply and related accessories suitable for installing inside and outside cover shed for obtaining sufficient lux level as per BIS standards at a height of atleast 6 meter above the ground level Complete in all respect	NSR	24	No	5383.00		5383.00	129192
15	Supply and Erection of MS angle iron (Channel)/ MS Flats of suitable size with cutting, bending and necessary holes as desired by Engineer-in-charge at site:-							
a	MS angle iron size 75mm x 40mm x 4mm thick	34.38.15f	40	Mtr	397+5.35%418.23	20%	501.87	20075
b	MS flat iron size 40mm x 5mm thick	34.38.15h	40	Mtr	92+5.35% 96.92	20%	116.30	4652
16	Supply and erection of M.S. Junction box of suitable size made from M.S. Sheet 16 SWG (1.60mm thick). Junction box should have one locking arrangement and 2 nos. hinges on front side. It should have 1 No. Brass terminal connecting strip, 1 No. Kit kat 16 Amp/240 Volts along with M.S. Flat 20mm x 2mm clamp with nuts and bolts for fixing on the pole. The junction box should be painted with one coat of good quality primer and two coats of post office red enamel paint inside and outside complete in all respect:-							
a	M.S. Junction Box 300mm x 200mm x 100mm	34.38.2b	12	No	689+5.35%725.86	20%	871.03	10452
17	Supply and erection of heavy duty aluminium thimbles/lugs for cable end termination duly crimped including making necessary connections completely:-							
a	Aluminium thimble cable Core size 25 -35sq.mm	34.38A.3	20	No	17+ 5.35% 17.91	0%	17.91	358
18	S/E of heavy duty Copper thimbles/lugs for cable end termination duly crimped including making necessary connections etc. completely.							
a	Copper cable core size 10 sq. mm - 16 sq. mm	34.38.b.2	60	No	22+ 5.35% 23.17	15%	26.65	1599
19	Supply and Erection of sheet metal bus bar chamber (factory fabricated) duly powered coated on existing surface with required 4Nos of tin plated bus bar strips of suitable length							
a	Bus Bar Chamber 100amp., 415volts Overall Dimensions (455mm x 455mm x 150mm) nominal	34.20.5	2	No	6339+5.35%6678.14	30%	8681.58	17363
20	Construction of inspection chamber of size 2'x2'x3'with bricks and plastering the same with precast RCC manhole cover /Slab as per approved by engineer-in charge.	NSR	4	No	6247+ 5.35% 6581.21	0%	6581.21	26325
21	Trenchless Moiling using,drilling/moiling machine alongwith sensor to locate easi path without any roadf cut etc except making of chambers fro erection of HDPE DWC under ground etcinsluding cost fo all petty material required at site as per satisfetion of Enginner -inchagre.	NSR	320	Mtr	799+ 5.35% 841.74	0%	841.74	269357
PART B Total								1310654
Total PART A+ PART B								12366088
Add Culture Cess @ 1%								123660.88
Total								12489749

SAY RS:- 1,24,89,700/-

ਪ੍ਰੋ. ਇੰਜ. ਡਾ. ਡੀ. ਡੀ. ਰੂਪਦੇ 24.9.26
 ਮੁੱਖ ਬਰਤਾਕਾਰ
 ਮ.ਮੁ.ਬ.

ਡੀ.ਐਨ.ਆਈ.ਟੀ ਰੂਪਦੇ 24.9.26
 ਡਾ. ਇੰਜ. ਡਾ. ਡੀ. ਡੀ. ਰੂਪਦੇ 24.9.26
 ਪ੍ਰਵਾਨ ਕੀਤਾ ਜਾਂਦਾ ਹੈ।
 ਮੁੱਖ ਇੰਜੀਨੀਅਰ (ਦੱਖਣ)
 ਪੰ.ਮੰ. ਬੋਰਡ, ਐਸ.ਏ.ਐਸ. ਨਗਰ।

ਪ੍ਰਵਾਨਗੀ ਦੀ ਸਿਫਾਰਿਸ਼ ਕੀਤੀ ਜਾਂਦੀ ਹੈ।
 ਨਿਗਰਾਨ ਇੰਜੀਨੀਅਰ, ਪੰ.ਮੰ.ਬੋ., ਐਸ.ਏ.ਐਸ. ਨਗਰ।

Executive Engineer (E)
 Punjab Mandi Board
 SAS Nagar