

Government of Tamil Nadu

Agricultural Engineering Department

Supplying, Installation and Commissioning of Micro Irrigation System (Semi Permanent Raingun Sprinkler System) with Pump room in Western block No.5&6 at Sheep Farm, Thalaivasal Block, Thalaivasal Taluk, Salem District

Price Bid

PRICE BID

Supplying, Installation and Commissioning of Micro Irrigation System (Semi Permanent Raingun Sprinkler System) with Pump room in Western block No.5&6 at Sheep Farm, Thalaivasal Block, Thalaivasal Taluk, Salem District

Sl. No.	Approximate Quantity	Description	Rate in Figures and in Words	Unit of Calculation	Amount in Rupees
1	7980 Cum	Earthwork excavation and depositing on bank within the initial lead of 10m and lift of 2m in hard stiff black cotton, hard red earth shales murrams, ordinary gravel stoney earth and earth mixed withsmall sized boulders as per SS20B & SI.62 for Pipe line works.		1 Cum (One Cubic metre)	
2	2360 Cum	SDR - (Not Requiring Blasting) Earth work excavating and depositing on bank with initial lead of 10 m & initial lift of 2m in Soft disintegrated rock, laterite, soft rock or kankar,not requiring blasting.SI 67		1 Cum (One Cubic metre)	

Sl. No.	Approximate Quantity	Description	Rate in Figures and in Words	Unit of Calculation	Amount in Rupees
3	1180 Cum	Quarrying and Blasting - Medium rock and dense medium rock requiring blasting SI 40A		1 Cum (One Cubic metre)	
4	820 RM	Supplying of 250 mm Dia (OD) HDPE (high-density polyethylene) Pipe (PE-100-PN10)IS No 4984/2016		1 RM (One Running metre)	
5	13350 RM	Supplying of 160 mm Dia (OD) HDPE (high-density polyethylene) Pipe (PE-100 PN10) IS No 4984/2016.		1 RM (One Running metre)	

Sl. No.	Approximate Quantity	Description	Rate in Figures and in Words	Unit of Calculation	Amount in Rupees
6	12 Nos	The Full and part Circle, Rotor type, Stainless steel Rain Gun Sprinkler with Throw radius 50.00 mtr, Flow 50.00 m ³ /h Pressure 5.50 Bar - Vari angle system with manually adjusted (adjustable Trajectory- 15deg to 45 deg)- automatic brake system for angle setting - Self Lubricating Sealed Bearing -Fan type Spray in startup of the system - Light weight - 2" BSP Female Threaded inlet.		1 Nos (One Number)	
7		Supplying and Fixing of DI Wafer type Butterfly Valve Manufacturing, supply and delivery of resilient seated wafer type butterfly valve in accordance with EN 593, centric disk mounted in three maintenance-free bearing bushes, tight in both flow directions, Replaceable rubber sleeve with integrated seal for functionally reliable use for flared flanges, welding flanges, PE flanges as well as loose flanges with V-collar, Stable seat due to collar with vulcanized support ring. Vacuum tight upto 1 Torr. Face to face length acc.to 558-1, basic series 20(DIN 3202/k1). With Electrostatic epoxy powder coating (EP-P) inside and outside color blue RAL 5005 with minimum coating thickness of 250 microns. The EPDM rubber & Epoxy Powder should be approved by W 270.(EP-P it is resi-coat powder approved for drinking water application, applied through fusion bonding technology process by dipping the shot-blasted casted components heated upto 200 deg C).			
a	8 Nos	150 mm		1 Nos (One Number)	

Sl. No.	Approximate Quantity	Description	Rate in Figures and in Words	Unit of Calculation	Amount in Rupees
b	4 Nos	250 mm		1 Nos (One Number)	
8	235 Nos	50 mm Aluminum Quick Coupling Suitable for Raingun Sprinkler (Bottom) - Female threaded		1 Nos (One Number)	
9	15 Nos	50 mm Aluminum Quick Coupling Suitable for Raingun Sprinkler (Top) - Female threaded		1 Nos (One Number)	

Sl. No.	Approximate Quantity	Description	Rate in Figures and in Words	Unit of Calculation	Amount in Rupees
10		Supplying, laying and jointing GI pipes of approved quality and best variety of B Class pipes of the following dia including labour for fixing GI Specials (excluding charges for cutting and threading and cost of such specials) with necessary shellac, thread ball, etc.,			
a	987 RM	80 mm For Riser Pipe for sprinkler		1 RM (One Running metre)	
b	90 RM	50 mm For Riser in Pressure Gauge and Air Release Valve		1 RM (One Running metre)	
11	235 Nos	Supplying and Fixing of 65 mm G.M. Gate Valve		1 Nos (One Number)	

Sl. No.	Approximate Quantity	Description	Rate in Figures and in Words	Unit of Calculation	Amount in Rupees
12	20 Nos	Supplying and Fixing of 50 mm G.M. Gate Valve		1 Nos (One Number)	
13		Supplying of HDPE Fittings (PE -100,PN 10)AS PER IS 8360/1977/ Part I(Reaffirmed 1992) Part II and III (Reaffirmed 2002) for Electro FusionFusion Welding-ASTM D3350			
a	2300 Nos	160 mm Coupling - Electro Fusion		1 Nos (One Number)	
b	100 Nos	160 mm Equal TEE- Electro Fusion		1 Nos (One Number)	
c	185 Nos	160 mm 90 Degree Elbow - Electro Fusion		1 Nos (One Number)	

Sl. No.	Approximate Quantity	Description	Rate in Figures and in Words	Unit of Calculation	Amount in Rupees
d	235 Nos	160 mm X 90 mm HDPE Service Saddle- Brass Threaded outlet		1 Nos (One Number)	
e	60 Nos	160 mm X 63 mm HDPE Service Saddle- Brass Threaded outlet		1 Nos (One Number)	
f	153 Nos	250 mm Coupling - Electro Fusion		1 Nos (One Number)	
g	5 Nos	250 mm TEE -Electro Fusion		1 Nos (One Number)	
h	40 Nos	250 mm 90 Degree Elbow - Electro Fusion		1 Nos (One Number)	
i	10 Nos	250 X 160 mm Reducer- Electro Fusion		1 Nos (One Number)	

Sl. No.	Approximate Quantity	Description	Rate in Figures and in Words	Unit of Calculation	Amount in Rupees
j	7 Nos	250 mm X 63 mm HDPE Service Saddle - Brass Threaded		1 Nos (One Number)	
k	2 Nos	Supplying and Fixing of 250 X 200 mm Reducer- Electro Fusion		1 Nos (One Number)	
l	4 Nos	Supplying and Fixing of 250 X 140 mm Reducer- Electro Fusion		1 Nos (One Number)	
14	20 Nos	Pressure Gauge 63 mm (Glycerine filled upto 400 kg/cm ²)		1 Nos (One Number)	
15		G.I. SPECIALS AS PER IS 1239/PART II			
a	235 Nos	Supplying and Fixing of 80 mm G.I. Elbow		1 Nos (One Number)	
b	235 No	Supplying and fixing of Reducer 80mm X 65 mm		1 No (One Number)	

Sl. No.	Approximate Quantity	Description	Rate in Figures and in Words	Unit of Calculation	Amount in Rupees
c	470 No	Supplying and fixing of G.I. Hex Nipple 65 mm		1 No (One Number)	
d	235 No	Supplying and fixing of Reducer 65mm X 50 mm		1 No (One Number)	
e	470 Nos	Supplying and fixing of G.I. Hex Nipple 50 mm		1 Nos (One Number)	
f	235 Nos	Supplying and fixing of G.I. Coupling 50 mm		1 Nos (One Number)	
g	235 Nos	Supplying and fixing of G.I. union 80 mm		1 Nos (One Number)	
h	20 Nos	Supplying and fixing of 50 mm X 25 mm G.I. Reducer for Pressure gauge		1 Nos (One Number)	
i	20 Nos	Supplying and Fixing 50 mm Falnge Set for Air release valve		1 Nos (One Number)	

Sl. No.	Approximate Quantity	Description	Rate in Figures and in Words	Unit of Calculation	Amount in Rupees
16		Jointing HDPE Pipes and Specials by electro fusion welding joints using fusion equipment as per ISO 21307-2011 and as per IS 7634 (part-2) : 2012 including cost of hire charges for Electro fusion equipment power supply arrangements etc., complete as per directed by Departmental Officers.			
a	2950 Nos	For 160 mm dia (OD)		1 Nos (One Number)	
b	280 Nos	For 250 mm dia (OD)		1 Nos (One Number)	
17		Lowering HDPE pipes and specials to trench and laying to proper grade and alignment and as directed by the Departmental Officers			
a	13350 RM	160mm dia (OD) HDPE pipe		1 RM (One Running metre)	
b	820 RM	250mm dia (OD) HDPE pipe		1 RM (One Running metre)	

Sl. No.	Approximate Quantity	Description	Rate in Figures and in Words	Unit of Calculation	Amount in Rupees
18	11100 Cu.m	Refilling with excavated soil (other than sand) complying with standard specification for filling in foundation and basement.		1 Cu.m (One Cubic metre)	
19	2 Set	Pump -Vertical, multistage centrifugal pump with inlet and outlet ports on same the level (inline).The pump head and base are in cast iron – all other wetted parts are in stainless steel.System - Single Variable frequency Drive with Hydro pneumatic pumping SystemMani Fold – 2 Working + 1 Stand by Pump(3 Nos parallely connected)Each Pump capacity – 55.00 Cum/ HrTotal Head – 80.0MRPM – 2900-3000Efficiency Code – IE 3Minimum Operating Capacity for one unit – 110 Cum/HrSuction Manifold – 5” X 3” or Suitable with 3 Nos of Butterfly ValveDelivery Manifold – 5” X 3” or Suitable with Check Valve – 3 Nos., Butterfly Valve- 3 Nos, Pressure Switch, Pressure Transmitter, Pressure Gauge ,and Pressure relief ValvePressure Tank – 1000 Lits in 16 BarImpeller Make – Stainless SteelChamber – Stainless SteelShaft – Stainless SteelBase Frame – Cast IronPressure rating for connection: PN 16Power (P2) required by pump: 18.5 kWMains frequency: 50 HzRated voltage: 3 x 220-240D/380-415Y VMaximum Operating Pressure 16 BarThe pump is fitted with a 3-phase, fan-cooled asynchronous motorControl panel – Suitable for Operating 3 Pumps (1 unit) simultaneously with dry run protection		1 Set (One Set)	

Sl. No.	Approximate Quantity	Description	Rate in Figures and in Words	Unit of Calculation	Amount in Rupees
20	2 Nos	Supplying and Fixing of 250 mm DI Non - Return Valve - Manufacture, Supply and Delivery of DI D/F Slanted seat Swing Check Valve. Body of ductile cast iron of Grade GGG 40 or equivalent grade and disc of ductile cast iron GGG 40 or equivalent grade with fully encapsulated EPDM rubber, where both faces can be used. Electrostatic epoxy powder/liquid coating (EP-P) inside and outside color blue RAL 5005 with minimum coating thickness of 250 microns. The EPDM rubber & Epoxy Powder should be approved by W 270. (EP-P) it is a resi-coat powder approved for drinking water application, applied through fusion bonding process by dipping the shot-blasted casted components heated up to 200 deg C). Face to face dimensions as per EN558-1, series 48 and flange connections as per EN 1092-2/IS 1538.-		1 Nos (One Number)	
21		DI SINGLE CHAMBER AIR RELEASE VALVE - Manufacture, Supply and Delivery of Tamper proof DI single chamber air release valves with pressure range from PN 10/16 with body and cover made of Ductile Iron of Grade GGG 40 or equivalent grade conforming to IS 1865 with Food Grade Epoxy Powder coating(EP-P) inside and for outside of colour blue RAL 5005. All internal parts such as float, shell etc., cover bolts, made of Austenitic alloy steel of SS AISI 304/316. The float shall be made of Polytetrafluoroethylene/ Austenitic alloy steel of AISI 304/316. Gaskets and seals of EPDM / Neoprene rubber for TWAD Board works anywhere in Tamil Nadu.			
a	20 No	50 mm		1 No (One Number)	

Sl. No.	Approximate Quantity	Description	Rate in Figures and in Words	Unit of Calculation	Amount in Rupees
22		Supplying and Fixing of Flange type Carbon Steel Basket Type Strainer (Connection Size 250 NB, Body size 300NB) with SS 40 Mesh containing perforated sheet and Drain Provision including all accessories			
	2 No	250 mm		1 No (One Number)	
23	1 No	Vertical TPN Distribution Boards (with MCCB Incomer); Double Door; IP43, as per IS 8623 III; Impact resistance IK09; Frame MCCB Incomer & Single Phase/Three Phase MCBs as Outgoing (for power loads exceeding 100A)with 4 way MCCB + 12 Modules (100 A)		1 No (One Number)	
24	6 Nos	Labour Charges for erection of Horizontal shaft, centrifugal pumpset (Coupled/Monoblock) in bore well/Open well including fixing of suction pipe and foot valve upto a maximum depth of 7 metres and delivery pipes to the required length with valves, pressure gauges upto the exterior wall of pump room and erection of panel board consisting of TPIC switches starter, Voltmeter, Ammeter, Capacitor single phasing preventor and laying and jointing the cables and twin earthing as per IE rules including providing bed blocks etc., complete and operating the pumps and trial run for 10 days including signing of completion of reports as required by EB authorities Above 20.0 Hp to 30 HP.		1 Nos (One Number)	

Sl. No.	Approximate Quantity	Description	Rate in Figures and in Words	Unit of Calculation	Amount in Rupees
25	1 Nos	Supply and fixing of TNEB meterboard suitable for 3 phase 200A service connection madeup of suitable angle iron frame work of size 3feetx2feet using angle iron of size 1-1/2"x1-1/2"x1/4" rigidly fixed on wall covered with hylem sheet of size 3feetx2feet of 12mm thickness with necessary bolts and nuts supports and supply and fixing of 3No.200A fuse units (500V), 1No.neutral link ,coppe rearth flat of size 1"x1/4 "with inter connection of EB meter to fuse units by 19/16 PVC insulated copper wire with earth connection complete(SD 131)		1 Nos (One Number)	
26	1 Nos	Supply and fixing of 200A TPN sheet steel double break switch with HRC fuses and neutral on suitable angle iron frame work with MS cable entry boxes and with earth connection only(SD 171)		1 Nos (One Number)	
27	30 RM	Supply and laying of 3-1/2 x 35 sq.mm PVC armoured LTUG cable in a trench to be excavated at a depth of 0.75 metre putting 0.15 metre layer of sand and covering the cable completely with bricks and sand and refilling the earth to make good (SD 205)		1 RM (One Running metre)	

Sl. No.	Approximate Quantity	Description	Rate in Figures and in Words	Unit of Calculation	Amount in Rupees
28	1 No	Earthing as per the ISI specification with an earth electrode of 2.10 metre Class'B' GI pipe of dia not less than 40mm with copper earth plate of size 125m x 50 mm x 6mm with necessary funneling arrangements with necessary masonry work and with 38mm RCC (SD 233)		1 No (One Number)	
29	20 RM	Supply and run of 1 of No.8 SWG GI wire for earth connection (SD 74)		1 RM (One Running metre)	
30	301 Cum	Earthwork excavation and depositing on bank within the initial lead of 10m and lift of 2m in hard stiff black cotton, hard red earth shales murrams, ordinary gravel stoney earth and earth mixed with small sized boulders as per SS20B & SI.62 for foundation.		1 Cum (One Cubic metre)	
31	66.7 Cum	Supplying and filling in foundation, basement, etc with filling sand in layers of not more than 15 cm thick well watered, rammed and consolidated etc. complete complying with standard specification and as directed by the departmental officers.		1 Cum (One Cubic metre)	

Sl. No.	Approximate Quantity	Description	Rate in Figures and in Words	Unit of Calculation	Amount in Rupees
32	92.4 Cum	Cement Concrete 1:5:10 (One Cement, Five sand and Ten hard broken stone jelly) using 40 mm gauge hard broken granite stone jelly for foundation including dewatering wherever necessary and laid in layers of not more than 15 cm thick well rammed, consolidated and curing etc. complete complying with standard specification		1 Cum (One Cubic metre)	
33	938 Sqm	Supplying and erecting steel centering including necessary supports for plane surfaces for Reinforced Cement Concrete works such as column footings, column pedestals, plinth beams, grade beams, staircase steps, etc. which require only nominal strutting using mild steel sheets of size 90cm x 60cm and 10 BG stiffened with welded mild steel angles of size 25mm x 25mm x 3 mm for boarding, laid over silver oak joists of size 10cm x 6.5cm spaced at about 75cm centre to centre or at suitable intervals etc. complete in all floors complying with standard specification. (Payment for centering shall be given after the concrete is laid)		1 Sqm (One Square metre)	

Sl. No.	Approximate Quantity	Description	Rate in Figures and in Words	Unit of Calculation	Amount in Rupees
34		Supplying and erecting centering for sides and soffits including necessary supports and strutting upto 3.29 M height for plane surfaces in all floors with all cross bracings using Mild Steel sheets of size 90 x 60 cm and 10 BG stiffened with welded Mild Steel angle of size 25mm x 25mm x 3 mm for boarding laid over silver oak joists of size 10cm x 6.50 cm spaced at abote 90 cm centre to centre and supported by casurina props of 10cm to 13 cm dia spaced at not more than 75 cm centre to centre etc. complete complying with the standard specification. (Payment for centering shall be given after the concrete is laid)			
a	74 Sqm	For Plane Surfaces such as RCC Floor Slab, roof beam, Beams , Lintel landing slab, waist slab,etc.,		1 Sqm (One Square metre)	
b	390 Sqm	For Plane Surfaces such as rectangular or square column, RCC column, Sunshade, top and bottom slab of rcc boxing etc.,		1 Sqm (One Square metre)	

Sl. No.	Approximate Quantity	Description	Rate in Figures and in Words	Unit of Calculation	Amount in Rupees
35		Reinforced Cement Concrete with 1:1½:3 (One Cement, One and half sand and Three hard broken stone jelly) using 20 mm gauge hard broken granite stone jelly for all RCC items of works excluding cost of reinforcement grill and fabricating charges centering and shuttering but including laying, vibrating with mechanical vibrators, finishing, curing, etc. and providing fixtures like fan clamps in the RCC floor / roof slabs wherever necessary and bearing surfaces of walls, beams etc. shall be finished smooth with Cement Mortar 1:3 (One Cement and Three Sand) etc., complete complying with standard specification and as directed by the departmental officers			
a	88.5 Cum	Foundation and Basement		1 Cum (One Cubic metre)	
b	44.4 Cum	S.S. in GF		1 Cum (One Cubic metre)	
36	140 Cum	Plain Cement Concrete 1:3:6 (one cement, three sand and six hard broken stone jelly) using 20mm jelly including laying, compacting, finishing and curing, etc., Complete as per standard specificatins and as directed by the departmental officers		1 Cum (One Cubic metre)	

Sl. No.	Approximate Quantity	Description	Rate in Figures and in Words	Unit of Calculation	Amount in Rupees
37	113 Qtl	Supplying, fabricating and placing in position Mild Steel / Ribbed Tor Steel grills for all RCC works as per design given including cost of steel and G.I. binding wire in all floors etc. complete complying with standard specification. (Contractor has to make his own arrangements for the supply of steel and binding wire)		1 Qtl (One Quintal)	
38	265 Sqm	Special ceiling plastering and finishing the exposed surface of all RCC items of work such as slabs, beams, sunshades, facia, canopy slab, staircase waist slab, landing slab etc., with Cement Mortar 1:3 (One Cement and Three Sand) 10mm thick including hacking the surfaces, providing cement mortar nosing, beading for sunshades, staircases, steps, landing slabs and curing, etc., in all floors complying with standard specification and as directed by the departmental officers		1 Sqm (One Square metre)	

Sl. No.	Approximate Quantity	Description	Rate in Figures and in Words	Unit of Calculation	Amount in Rupees
39	1355 Sqm	White washing one coat with freshly burnt white shell lime in all floors including cost of lime, blue powder, fevicol type gum, brushes, scaffolding charges, etc., complete complying with standard specification and as directed by the departmental officers.		1 Sqm (One Square metre)	
40	5.5 Cum	Earth work open excavation in all soils and sub-soils and to full depth as may be directed except in rock requiring blasting inclusive of shoring shuttering, bailing out water wherever necessary and depositing the excavated earth with a lead of 10 mts. within the compound in places shown by the departmental officers and clearing and levelling the site, etc., complete complying with standard specification.		1 Cum (One Cubic metre)	
41	11.5 Cum	Supplying and filling of conveyed Gravel by lorry in Basement filling including stacking for Pre-measurement conveyance loading and unloading charges and all other incidental charges including filling, layering, watering and consolidation etc., complete as directed by the dept. officers and complying with standard specification		1 Cum (One Cubic metre)	

Sl. No.	Approximate Quantity	Description	Rate in Figures and in Words	Unit of Calculation	Amount in Rupees
42		Brick work in Cement Mortar 1:5 using best quality of Second Class Ground Moulded Chamber Burnts Bricks of Size 9" x 4-3/8" x 2-3/4" for foundation and basement including curing, etc., complete complying with standard specification.			
a	2.6 Cum	Foundation & Basement		1 Cum (One Cubic metre)	
43		Brick work in Cement Mortar 1:6 using best quality of Second Class Ground Moulded Chamber Burnts Bricks of Size 9" x 4-3/8" x 2-3/4" for foundation and basement including curing, etc., complete complying with standard specification.			
a	18.2 Cum	For S.S in G.F.		1 Cum (One Cubic metre)	

Sl. No.	Approximate Quantity	Description	Rate in Figures and in Words	Unit of Calculation	Amount in Rupees
44	3.7 Cum	Weathering course in brick jelly lime concrete using broken brick jelly of size 20mm uniform gauge in pure slaked lime (no sand to be used) to the proportion of brick jelly to lime being 32:12.5 by volume and laid over the RCC roof slab in a single layer of required slope and finished by beating the concrete with wooden beaters of approved pattern, keeping the surface constantly wet by sprinkling lime jaggery water, etc., complete as per standard specification and as directed by the departmental officers.		1 Cum (One Cubic metre)	
45	42 Cum	Finishing the top of roof with one course of machine pressed tiles of size 230mm x 230mm x 20mm of approved quality set in Cement Mortar 1:3 (One Cement and Three Sand) 12mm thick mixed with water proofing compound conforming to ISS at 2% by weight of cement used and the joints pointed neatly to full depth of tiles with the same cement mortar mixed with red oxide and water proofing compound including curing etc., complete complying with standard specification and as directed by the departmental officers		1 Cum (One Cubic metre)	
46	16 RM	Supplying and fixing in position best approved of BIS quality PVC rain water down fall pipes of 110mm dia., having a pressure of 4 kg. / sq.cm including cost of necessary PVC shoe, PVC bend, cast iron gratings of required diameter and special clamps, brass screws, nails, etc., and fixing of cast iron gratings at junction of parapet and the RCC roof slab including finishing neatly etc., complete. The rate shall be inclusive of cast of removable cast iron grating. The PVC pipe shall be fixed in wall with special type of "U" clamp at the centre of the pipe line in addition to those for more than 3.0 metre pipe length, etc., complete complying with standard specification.		1 RM (One Running metre)	

Sl. No.	Approximate Quantity	Description	Rate in Figures and in Words	Unit of Calculation	Amount in Rupees
47	220 Sqm	Plastering with Cement Mortar 1:5 (One cement and Five sand), 12mm thick in all floors including curing etc. complete complying with standard specification and as directed by the departmental officers.		1 Sqm (One Square metre)	
48	250 Sqm	Painting two coats of newly plastered wall surface with ready mixed plastic emulsion paint of first class quality and of approved colour over a priming coat including thorough scrapping, clean removal of dirt, and including necessary plaster of Paris putty, wherever required etc., complete complying with standard specification.		1 Sqm (One Square metre)	

Sl. No.	Approximate Quantity	Description	Rate in Figures and in Words	Unit of Calculation	Amount in Rupees
49	7.6 Sqm	Supply and fixing of pull & push type rolling shutter with ball bearings. Shutter made of Cold Rolled Steel Strips, GI Sheets and Plates used for guide channels, brackets and lock plate of hot rolled steel of 18 gauge thickness, all components of rolling shutter hot dip galvanised with a zinc coating containing 97.5% pure zinc with minimum weight of zinc coating of 230 g/sq.m., free from flaking/peeling. GI Pipes for the suspension shaft of the roller of heavy duty pipe, Castings used for roller pulley wheels & U-clamps conforming to Grade 15 of IS:210, springs for counter balancing made from high tensile spring steel wire conforming to Grade 2 of IS:4454. Lock Plate provided at the bottom of the shutter, composed of a GI Plate 3.15 mm thick, reinforced with GI angle 35 x 35 x 5 mm at bottom of the plate fitted with sliding bolts at either end to engage with suitable receiving pockets at the bottom of the guide channel, with two handles both inside and outside faces of the lock plate. Guide Channels in GI of thickness 3.15 mm. Bracket Plate fabricated out of GI Plate of 3.15 mm thick. The suspension shaft of the roller made of steel pipe conforming to heavy duty of IS:1161. The pulleys and the pipe shaft connected by means of pre-tensioned helical springs to keep the shutter in equilibrium in any partly opened position. Hood Covers made of GI sheets 20 gauge thick stiffened with angle stiffeners at top and bottom edges and fixed to the bracket plate by means of angle cleats etc complete as directed by the officials. Payment will be made for the area of net opening.		1 Sqm (One Square metre)	

Sl. No.	Approximate Quantity	Description	Rate in Figures and in Words	Unit of Calculation	Amount in Rupees
50	25 Sqm	Painting new iron works such as steel doors, windows, ventilators, window bars, balustrades etc., with two coats of best approved first quality and colour of synthetic enamel paint over the existing red oxide priming coat in all floors excluding cost of priming coat etc., complete complying with standard specification. (The make, quality and colour of paint should be got approved by the Executive Engineer before use on works.)		1 Sqm (One Square metre)	
51	3.6 Sqm	Supplying, fabricating and fixing inposition Aluminium anodised natural colour matt finish louvered ventilator size 600mm x 600 mm of with outer frame section with 62x38x2mm at 1.174 kg/m and the louvered with moving arrangements made with aluminium channel of size 60x30x4mm @ 1.274 kg/m ALuminium clips 19.05x17.27/ 11.05x0.075mm @ 0.169kg/m with necessary 4mm thick plain glass panel for louvers including cost of all materials, labour and power required for fabrications, chipping dismantling making holes in RCC, masonry and made good to the original condition after fixing etc., complete. The Aluminium surface is to be anodised with matt finish under electrically controlled condition in accordance with ISI specification 1868/1962 for anodic film thickness of not less than 15 Microns, etc., complete.		1 Sqm (One Square metre)	

Sl. No.	Approximate Quantity	Description	Rate in Figures and in Words	Unit of Calculation	Amount in Rupees
52	9 Pt	Wiring with 2x1.5 sqmm (22/0.3) PVC insulated SC unsheathed Cu.Conductor of 1100V grade in suitable PVC rigid pipe concealed in wall and ceiling with PVC accessoires in flush with wall with suitable top cover with Metal switch box and 5A Modular switch and making good of the concealed portion with suitable colour for PVC concealed light (6 Points Per Coil) (For Rooms like Bath , Toilet,& Pump room etc..) (SD-26)		1 Pt (One Point)	
53	2 Pt	Wiring with 2x1.5sqmm (22/0.3) PVC insulated SC unsheathed Cu.Conductor of 1100 V grade in suitable PVC rigid pipe concealed in wall and ceiling with PVC accessories, in flush with wall, with 150mm x 100mm x 113mm Metal switch box with suitable top cover for 5 A 3 pin non inter locking CS Modular Plug with continuous earth wire connection of 14 SWG TC wire and making good of the concealed portion with suitable colour for concealed PVC plug point. (SD-38)		1 Pt (One Point)	

Sl. No.	Approximate Quantity	Description	Rate in Figures and in Words	Unit of Calculation	Amount in Rupees
54	5 No	Supply and fixing of single box type 4'36 W flu fitting complete with electronic ballast with TW round blocks on wall or ceiling with flu tube with PVC unsheathed Copper leads from terminals to the fitting. (SD-87)		1 No (One Number)	
55	4 No	Supply and fixing of 1 x 45w 4U Retro CFL B22 type street light fitting complete with 19mm dia GI pipe (class "B") on the existing post / wall with PVC unsheathed copper leads MS clamps and aluminium painting with CFL (CG / Philips or Equivalent) (SD94 Modified)		1 No (One Number)	

Sl. No.	Approximate Quantity	Description	Rate in Figures and in Words	Unit of Calculation	Amount in Rupees
56	1 No	Supply and fixing of horizontal type 4 way triple pole neutral MCB distribution board in sheet steel enclosure double door of double door type with metal door with IP43 protection with 40A 4 pole MCB isolater as incoming and 12 Nos.6A to 32A SP MCB as outgoing in flush with wall and making good of the concealed portion with earth connection.The MCBDB and MCB's should be with the ISI mark (like standard make)		1 No (One Number)	
		Total		Rs.	
		Plus GST 12%		Rs.	
		Grand Total		Rs.	