

**Tender Inviting Authority: JOINT MANAGER [ELECTRICAL DIVISION] ,
THE ODISHA STATE POLICE HOUSING & WELFARE CORPORATION LTD,**

Name of work :- SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF FIRE FIGHTING & SUPPRESSION SYSTEM AT CENTRAL RANGE FIRE OFFICE, CUTTACK IN THE DIST. OF CUTTACK.

Contract No: BID REF NO:-34/JM/ ELECT/OPHWC/2020-21

Bidder Name	
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SCHEDULE OF WORKS

Sl. No.	Description of work	Qty.	Unit	Estimated Rate	AMOUNT Rs.
A.	AUTOMATIC FIRE ALARM SYSTEM				
1.0	Supply, installation, testing and commissioning of Microprocessor based intelligent and electronically addressable fire alarm panel Single Loop expandable to 2 Loops, Maximum 477 addressable devices, 30 Zone, 2 Bell Circuit. The panel shall have 240 volts AC power supply, automatic battery charger, 24 volts, sealed lead acid maintenance free batteries with battery back up for 8 hours normal operation and 15 minutes alarm operation .Panel shall be provided with all accessories and equipment	Set	1	95,000.00	95,000.00
2.0	Supply, installation, testing & commissioning of Short circuit isolator with all the required components and accessories to complete the item.	Nos	4	2,060.00	8,240.00
3.0	Supply, installation, testing & commissioning of Intelligent Combined Optical Smoke, Fixed Temperature and Rate of Rise Heat Detector, Drift Compensation, Sensitivity Adjustment, 8 Bit Processor.(LPCB, CE & UL Approved)	Nos	66	2,700.00	178,200.00
4.0	Supply, installation, testing & commissioning of Common Detector Base for Addressable & Conventional Detectors (Certificated by LPCB)	Nos	66	380.00	25,080.00
5.0	Supply, installation, testing & commissioning of 4 x 4 GI Box	Nos	44	170.00	7,480.00
6.0	Supply, installation, testing & commissioning of Semi Flush Mounting Re-settable (Non-Breaking Glass), Supplied with Special Reset Tool - Compatible with both I & DI Series (Certified by LPCB)	Nos	4	5,590.00	22,360.00
7.0	Supply, installation, testing & commissioning of Anti Tamper Security Cover	Nos	4	590.00	2,360.00
8.0	Supply, installation, testing & commissioning of Addressable loop powered sandwich type Combined Sounder and Strobe certificated by LPCB	Nos	4	4,540.00	18,160.00
9.0	Supply, installation, testing & commissioning of Single Input/Output Module (Certificated by LPCB) - Loop Powered	Nos	2	6,240.00	12,480.00

10.0	Supply, laying, termination, testing & commissioning of 2 Core 1.5 sq.mm.rigid copper cable in MS Conduit.	Rmt	1000	150.00	150,000.00
B	EXTINGUISHERS				
1.0	Supply installation testing and commissioning of Clean Agent 2 ltrs capacity Fire Extinguisher with initial charge complete with wall fixing bracket. The extinguisher shall conform to IS 940 and have certification mark engraved.	Nos	8	8,500.00	68,000.00
2.0	Supply installation testing and commissioning of CO2 4.5kg capacity Fire Extinguisher made from seamless steel cylinder with initial charge complete with wall fixing bracket. The extinguisher shall conform to IS 2878 and have certification mark engraved.	Nos	4	6,500.00	26,000.00
3.0	Supply and installation testing and commissioning of DCP 6kg capacity Fire Extinguisher with brass forging cap, 120 Gms CO2 gas cartridge inner container, hose and plain nozzle supplied with initial charge complete with wall fixing bracket. The extinguisher shall conform to IS 2171 and have certificate mark engraved.	Nos	4	4,000.00	16,000.00
4.0	Supply installation testing and commissioning of Mechanical foam type 9 ltrs capacity Fire Extinguisher (AFFFConcentrate) with upright operation with air induction nozzle, 60Gms CO2 gas cartridge supplied with initial charge complete with wall fixing bracket. The extinguisher shall conform to IS 10204 and have certification mark engraved	Nos	1	4,000.00	4,000.00
5.00	Supply of Fire Buckets	Nos	1	1,900.00	1,900.00
C.	INTERNAL HYDRANT SYSTEM				
1.0	Supplying, installing, testing and commissioning of M.S Pipes conforming to IS 1239 Pt - I Medium grade with painting, suitable type of supports (Shall be fabricated by M.S. Channel / Angle / Flat for above 50 mm dia), anchor fasteners, bolts nuts, clamps, "U" bolte, malleable specials such as Reducers, Tees, elbows, flanges. Including cutting, Welding, fixing in / on walls, ceiling by using suitable supports etc, as per drawings. The quoted rate shall also include for chasing / chipping walls, making bore holes in walls / floor and making them good with filler material and finished in cement mortar etc. complete.				
a	100mm nominal dia	Rmt	20.00	1,784.00	35,680.00
2.0	Supplying, Installing, testing and commissioning ISI Mark CI butterfly valves(PN 16) slim seal standared lever operated type with required flanges, nuts, bolts etc. complete				
a	100mm nominal dia	Nos.	4.00	6,900.00	27,600.00

3.0	Single headed hydrant valve as per IS 5290, made of S.S with 63 mm dia instantaneous outlet of 80 mm dia fanged inlet ,Blank caps , chain and hand wheels etc complete..	Nos.	4.00	5,780.00	23,120.00
4.0	1 lengths of 15 M long, 63mm dia RRL hose with instantaneous couplings and Hoses shall be stored in side the hose cabinet.	Nos.	4.00	4,550.00	18,200.00
5.0	1 no. S.S short branch pipe with nozzle..	Nos.	4.00	2,165.00	8,660.00
6.0	Hose reel drum of swinging type with 19mm dia Rubber braided hose of 30M. length with Gate valve (upstream) and Shut off nozzle, complete.	Nos.	4.00	6,600.00	26,400.00
7.0	M.S. Hose Cabinet fabricated out of M.S. sheet of 16 swg. with glass fronted (4mm thick glass with rubber beeding) and size of the Cabinet shall be 600 mm (L)x450mm(H)x250mm(Width).Quoted rate shall be includes Hinges, all fasteners etc, and Door shall be powder coated of approved colour both inside and out side.	Nos.	4.00	10,700.00	42,800.00
8.0	Supplying and installation of Fire Air vessel of 150mm dia and 1m high fabricated from 6-8 mm thick M.S. plate suitable for 10kg/sqcm. working pressure with accessories, painted with two coats of Postal red enamel outside over a coat of primer	Nos.	1.00	15,300.00	15,300.00
9.0	Supplying, installing and commissioning of fire brigade inlet connection of 4 way with 2nos. 63 mm dia. built - in Gun metal Non-return valves instantaneous coupling type arranged on 150 mm dia. Pipe manifold and connected to wet riser main . Qouted rate shall be included with C.I. Butterfly valve, complete.	Nos.	1.00	17,650.00	17,650.00
10.0	Supplying, installing, testing and commissioning of Gun metal /Brass Forged chrome finished Ball valves with fittings of screwed end type.			-	-
a	25mm dia.(For hose reel)	Nos.	4.00	1,180.00	4,720.00
D	FIRE PUMP ROOM EQUIPMENT				
1.0	Supply, erection, testing & commissioning of electrical motor driven main pump of horizontal centrifugal end suction backpull out type with gland packing and capable to deliver 1620LPM at 70MWC.The pump shall be coupled to TEFC motor of suitable HP with speed of 2900 RPM and complete set shall mounted on common base frame. The quoted rate shall includes providing & fixing of coupling, coupling gaurd,etc.	Nos.	1.00	285,000.00	285,000.00

2.0	Supply, installation, testing & commissioning of diesel Engine driven common stand by pump, horizontal centrifugal end suction backpull out type with gland packing and capable to deliver 1620LPM at 70MWC. The pump shall coupled to suitable HP of Diesel engine radiator water cooled type with speed of 1800RPM and complete set shall be mounted on common base frame. Batteries & battery leads with stand, Fuel tank (for 6 Hrs. operation) with stand & gauge glass, Fuel piping with valves. The quoted rate shall includes radiator water cooling piping (if required) coupling gaurd and other stanadrd accessories.	No.	1.00	555,000.00	555,000.00
3.0	Supply, erection, testing & commissioning of electrical motor driven Jockey pump of horizontal centrifugal end suction back pull out type with gland packing and capable to deliver 180LPM at 70MWC.The pump shall be coupled to TEFC motor of suitable HPwith speed of 2900RPM and complete set shall mounted on common base frame. The quoted rate shall includes providing & fixing of coupling, coupling gaurd etc	No.	1.00	118,000.00	118,000.00
4.0	Supply, erection, testing & commissioning of electrical motor driven Booster pump with gland packing and capable to deliver 450LPM discharge, with weather proof control panel complete. The quoted rate shall includes providing & fixing of coupling, coupling gaurd etc.	No.	1.00	133,000.00	133,000.00
5.0	Control Panel for Fire pumps.				
a	Fabricating & Supply, installing, testing and commissioning of compartmentalised common control panel for Electrical motor driven pumps and Diesel engine driven pumps.	No.	1.00	203,000.00	203,000.00
b	Fabricating & Supply, installing, testing and commissioning of control panel for Terrace Pump.	No.	1.00	25,000.00	25,000.00
6.0	1100 V GRADE POWER / CONTROL				
	Supplying, laying, testing & commissioning of PVC outer sheath, steel armoured, aluminium / copper conductor, 1100v grade power cables with glands etc.The cables shall be laid in tray / Hume pipe / in trenches / on walls / floor etc. as required. For cables laid out door the rate shall exclude earth excavation providing brick and sand protection, refilling and compacting the earth.				
a	95 sq.mm 3.5 Core Aluminium Cable (Main Pump)	Rmt	10.00	678.56	6,785.60
b	16 sq.mm 4 Core Aluminium Cable (For Jockey Pump)	Rmt	10.00	291.82	2,918.20
c	16 sq.mm 4 Core Aluminium Cable (For Booster Pump)	Rmt	20.00	291.82	5,836.40
d	1.5 sq.mm 12 Core copper Cable (Diesel Engine)	Rmt	10.00	403.00	4,030.00

7.0	CABLE TRAY				
	Supplying and fixing of perforated G.I.sheet cable tray with necessary angle iron suspension supports, anchor fasteners etc. complete. Maximum height of suspension shall not exceed 500 mm.	Rmt	43.00	660.00	28,380.00
8.0	G.I. Earthing strips of 50mm x 6mm thick, strip shall be run on floor / ceiling / walls, from the equipment to the nearest Earth pit with necessary accessories as required. (Earth pit shall be executed by other agencies).	Rmt	52.00	245.00	12,740.00
9.0	Supplying, installing, testing and commissioning of M.S. Pipes conforming to IS 1239 Pt - I Heavy grade with painting, suitable type of supports, anchor fasteners, bolts nuts, clamps, "U" bolt, malleable specials such as Reducers, Tees, elbows, flanges. Including cutting, Welding, fixing in / on walls, ceiling by using suitable supports etc, as per drawings. The quoted rate shall also include for chasing / chipping walls, making bore holes in walls / floor and making them good with filler material and finished in cement mortar etc. complete.				
a	250mm nominal dia	Rmt	6.00	3,350.00	20,100.00
b	200mm nominal dia	Rmt	6.00	2,780.00	16,680.00
c	150mm nominal dia	Rmt	15.00	2,332.00	34,980.00
d	100mm nominal dia	Rmt	80.00	1,884.00	150,720.00
e	80mm nominal dia	Rmt	6.00	1,370.00	8,220.00
10.0	Supplying, installing, testing and commissioning of ISI Mark Dual Plate Wafer Type Non-return valves (PN 16) with required flanges, nuts, bolts and gaskets etc. complete				
a	150 mm nominal dia	Nos.	1.00	10,000.00	10,000.00
b	100 mm nominal dia for (Terrace)	Nos.	1.00	7,250.00	7,250.00
c	80 mm nominal dia	Nos.		5,600.00	-
11.0	Supplying, Installing, testing and commissioning ISI Mark CI butterfly valves(PN 16) slim seal standard lever operated type with required flanges, nuts, bolts etc. complete.				
a	250mm nominal dia (Tank Connection)	Nos.	1.00	13,500.00	13,500.00
b	150mm nominal dia	Nos.	6.00	8,750.00	52,500.00
c	100mm nominal dia (For Terrace)	Nos.	2.00	6,850.00	13,700.00
d	80mm nominal dia	Nos.	4.00	4,450.00	17,800.00
12.0	Supplying, Installing, testing and commissioning ISI Mark Rubber Bellow with required flanges, nuts, bolts etc. complete.				
a	150mm nominal dia	Nos.	4.00	8,300.00	33,200.00
b	80mm nominal dia	Nos.	2.00	5,600.00	11,200.00
13.0	Supplying, installing and commissioning C.I.flanged "Y Strainer" with suitable flanges, nuts, bolts, gaskets etc. complete.				
a	250mm dia.	Nos.	1.00	28,800.00	28,800.00
b	80mm dia.	Nos.	1.00	8,800.00	8,800.00

14.0	Supply and installation of Pressure switches of suitable range (0 to 12 bar) for pumpsets with Fittings like Ball Valve unions / colors / reducers etc.	Set	3.00	5,950.00	17,850.00
15.0	Supply and installation of Pressure gauges of suitable range (0-16 bar), 100 mm diameter dial for pumpsets with Fittings like Ball Valve, Unions / colors / reducers etc.	Set	3.00	1,700.00	5,100.00
16.0	Supplying and installation of Fire pressure vessel of 300mm dia and 2.0m high fabricated from 6-8 mm thick M.S. plate suitable for 10kg/sqcm. working pressure with accessories, painted with two coats of Postal red enamel outside over a coat of primer for automatic operation of pump.	Nos.	1.00	43,500.00	43,500.00
17.0	Supplying & fixing MS Class 'C' diesel engine exhaust pipe duly insulated with 50mm. thick glass wool with 1 mm, thick aluminium sheet cladding, residential silencer, including all fittings, clamps, steel support of suitable dia for the engine. The pipe shall be provided with 12 mm thick supercera ceramic fibre rope.				
a	80mm dia	Rmt	6.00	2,000.00	12,000.00
18.0	12V 10A Float Cum Boost Charger	Nos.	1.00	9,500.00	9,500.00
19.0	Anti Vibration Mounts	Nos.	14.00	3,000.00	42,000.00
20.0	Supplying, installing, testing and commissioning of flow switch (water flow detector) , Flow switch shall have a paddle made of flexible material of the width to fit within the pipe bore. The terminal box shall be mounted over the paddle/ pipe through a connecting socket. The switch shall be potential free in either NO or NC position as required. The switch shall be able to trip and make/ break contact on the operation of a sprinkler head. The terminal box shall have connections for wiring to the Fire alarm panel. The seat shall be of stainless steel. The flow switch shall have IP: 55 protection.				
a	100mm dia	Nos.	1.00	12,000.00	12,000.00
21.0	Entire fire Supression /FACP /Fire Telephone System Instrumentaiton, Integration, testing & training charges.	LS	1.00	50,000.00	50,000.00
E	SIGNAGES				
1.0	Providing and installing in position the following type of sign boards made out of 3mm thick "Opaque" PVC foam board with computer cut, PVC non-reflective self adhesive vinyle painted foam board, complete with mirror fasteners.				
a	Floor identification signage (ie, GROUND FLOOR ...etc.) at each stair enclosure on every floor, indicating the floor number in words, lettering size shall be 7.5 cm with contrasting colour from back ground. Size shall be 15cm x 60cm.	Nos	4.00	650.00	2,600.00

b	Providing and fixing the signages "Fire Exit, Fire Exit Arrow Down, Fire Exit Arrow Left, Fire Exit Arrow Right" of 1.5in height letters in white with green back ground. The size of the board shall be 25cm x 15 cm and shall be fixed at the height of 2 mts	Nos	16.00	650.00	10,400.00
c	Providing and fixing the signages "In case of fire pull down - with Manual call point symbol ". Size 6" x 8"	Nos	4.00	400.00	1,600.00
d	Providing and fixing the signages "Main fire alarm panel." Size 6" x 8"	Nos	1.00	500.00	500.00
e	Providing and fixing the signages "In case of fire, Do not use Lift, Use Stair - with symbol." Size 8" x 8"	Nos	4.00	550.00	2,200.00
f	Providing and fixing the signages "Assembly point - with symbol (A2 Size)" - Size 17" x 22"	Nos	1.00	950.00	950.00
	Total Estimated Cost in Figures.				2872730.20
CESS @1%					28727.30
TOTAL RS.					2901457.50
SAY RS.					2901458.00
EXCESS <input type="checkbox"/>		LESS <input type="checkbox"/>		(Please Tick)	_____%
Quoted Amount in Figures.					
Quoted Amount in words					

N.B-The Estimate Cost is Exclusive of G.S.T i.e. @ 12%

Signature of Tenderer with seal

**Sd/-
Asst. Project Manager (Elect.)**

**Sd/-
Asst. Project Manager Elect.(Hqr)**

**Sd/-
Joint Manager (Elect.)**