

<b>MUNICIPAL CORPORATION OF GREATER MUMBAI</b>		
<b>PROPOSED BMC GENERAL HOSPITAL &amp; STAFF QUARTERS</b>		
<b>On Plot bearing CTS No. 11A/4,Chandivali, Sangharsha Nagar, Kurla - 400072</b>		
<b>SUMMARY - FIRE FIGHTING SYSTEM HOSPITAL &amp; RESIDENTIAL BUILDING</b>		
<b>Sr. No.</b>	<b>Description</b>	<b>Amount</b>
<b>1</b>	<b>FIRE FIGHTING HOSPITAL BUILDING</b>	<b>₹ 6,42,40,122.00</b>
<b>2</b>	<b>FIRE FIGHTING RESIDENTIAL BUILDING</b>	<b>₹ 1,78,13,670.00</b>
<b>Grand Total</b>		<b>₹ 8,20,53,792.00</b>

**MUNICIPAL CORPORATION OF GREATER MUMBAI**

**PROPOSED BMC GENERAL HOSPITAL & STAFF QUARTERS  
On Plot bearing CTS No. 11A/4,Chandivali, Sangharsha Nagar, Kurla 400072**

**BILL OF QUANTITIES - FIRE FIGHTING WORK (HOSPITAL BUILDING)**

SR.NO	REF. CODE	DESCRIPTION	QTY	UNIT	S/I/T/C RATE	S/I/T/C TOTAL AMOUNT
	R2-ME-15-15	Providing and fixing in position G.I. Heavy grade 'C' class pipes (I.S. 1239 part I) with necessary clamping to wall beams and ceilings with hangers and clamps anchor fasteners wherever required to firmly support piping,				
1	RBH18-PWD 16-5-1	Supplying and erecting G.I.pipe 15 mm dia. „C" class at position with accessories. As per specification No. CW-PLB/GP	50.00	Mtr	165.00	8,250.00
2	R2-ME-15-15-h	25 mm	7000.00	Mtr	479.00	33,53,000.00
3	R2-ME-15-15-g	32 mm	300.00	Mtr	545.00	1,63,500.00
4	R2-ME-15-15-f	40 mm	2000.00	Mtr	640.00	12,80,000.00
5	R2-ME-15-15-e	50 mm	1860.00	Mtr	863.00	16,05,180.00
6	R2-ME-15-15-d	65 mm	1800.00	Mtr	1077.00	19,38,600.00
7	R2-ME-15-15-c	80 mm	1300.00	Mtr	1322.00	17,18,600.00
8	R2-ME-15-15-b	100 mm	950.00	Mtr	1836.00	17,44,200.00
9	R2-ME-15-15-a	150 mm	1800.00	Mtr	2701.00	48,61,800.00
10	R2-ME-15-15-i	200 mm dia	50.00	Mtr	4002.00	2,00,100.00
11	RBH18-FF-FA-01	Supplying and installing G.I.pipe above ground of „C" class ERW of size 300 mm dia with necessary fittings.	20.00	Mtr	7497.00	1,49,940.00
12	RBH18-FF-FA-02	Providing,fixing and jointing including testing heavy quality GI C Class Pipes conforming to IS:1239 including cutting, welded (all type) joints as per detailed specification & providing suitable flange wherever required, complete providing saddles cutting holes & chases in brick or RCC walls or floors and making good the same and giving suitable statement for corrosion as per IS: 10221 (4mm thick "PYPKOTE") wherever the pipe goes under groundwith necessary excavation, backfilling and carting away surplus earthcomplete. <b>80 mm dia</b>	30.00	Mtr	2142.00	64,260.00
13	RBH18-FF-FA- 03	Providing,fixing and jointing including testing heavy quality GI C Class Pipes conforming to IS:1239 including cutting, welded (all type) joints as per detailed specification & providing suitable flange wherever required, complete providing saddles cutting holes & chases in brick or RCC walls or floors and making good the same and giving suitable statement for corrosion as per IS: 10221 (4mm thick "PYPKOTE") wherever the pipe goes under groundwith necessary excavation, backfilling and carting away surplus earthcomplete. <b>100 mm dia</b>	40.00	Mtr	2618.00	1,04,720.00

SR.NO	REF. CODE	DESCRIPTION	QTY	UNIT	S/I/T/C RATE	S/I/T/C TOTAL AMOUNT
14	RBH18-FF-FA- 04	Providing,fixing and jointing including testing heavy quality GI C Class Pipes conforming to IS:1239 including cutting, welded (all type) joints as per detailed specification & providing suitable flange wherever required, complete providing saddles cutting holes & chases in brick or RCC walls or floors and making good the same and giving suitable statement for corrosion as per IS: 10221 (4mm thick "PYPKOTE") wherever the pipe goes under groundwith necessary excavation, backfilling and carting away surplus earthcomplete. <b>150 mm dia</b>	200.00	Mtr	3332.00	6,66,400.00
15	RBH18-FF-FA- 05	Providing,fixing and jointing including testing heavy quality GI C Class Pipes conforming to IS:1239 including cutting, welded (all type) joints as per detailed specification & providing suitable flange wherever required, complete providing saddles cutting holes & chases in brick or RCC walls or floors and making good the same and giving suitable statement for corrosion as per IS: 10221 (4mm thick "PYPKOTE") wherever the pipe goes under groundwith necessary excavation, backfilling and carting away surplus earthcomplete. <b>200 mm dia</b>	50.00	Mtr	5355.00	2,67,750.00
16	RBH18-FF-FA-06	S/I/T/C OF Y strainer 100 mm dia	4.00	Nos	12546.00	50,184.00
17	RBH18-FF-FA-07	S/I/T/C OF Pot strainer 150 mm dia	2.00	Nos	22140.00	44,280.00
18	RBH18-FF-FA-08	S/I/T/C OF Pot strainer 200 mm dia	2.00	Nos	32473.00	64,946.00
19	R2-ME-15-6-a	Supplying & Installing cast iron double flange butterfly valve 80 mm.	44.00	Nos	3644.00	1,60,336.00
20	R2-ME-15-6-b	Supplying & Installing cast iron double flange butterfly valve 100 mm	10.00	Nos	5019.00	50,190.00
21	R2-ME-15-6-c	Supplying & Installing cast iron double flange butterfly valve150 mm	45.00	Nos	7933.00	3,56,985.00
22	R2-ME-15-6-d	Supplying & Installing cast iron double flange butterfly valve 200 mm	6.00	Nos	10846.00	65,076.00
23	R2-ME-15-7-b	Supplying and installing double flange NRV 100 mm	4.00	Nos	12335.00	49,340.00
24	R2-ME-15-7-c	Supplying and installing double flange NRV 150 mm	6.00	Nos	20349.00	1,22,094.00
25	R2-ME-15-7-d	Supplying and installing double flange NRV 200 mm	2.00	Nos	33060.00	66,120.00
26	R2-ME-15-8-a	Supplying and installing gun metal <b>single outlet hydrant valve</b> fitted with necessary accessories	44.00	Nos	9527.00	4,19,188.00
27	R2-ME-15-8-b	Supplying and installing gun metal Double outlet hydrant valve fitted with necessary accessories	2.00	Nos	19457.00	38,914.00
28	R2-ME-15-18	Supplying and installing wall mounting swinging <b>Hose reel drum</b> fitted with 19 mm dia. 30m high pressure polypropylene (Polyhose) long fitted with necessary accessories complete as per specification	41.00	Nos	11531.00	4,72,771.00
29	RBH18-FF-FA-09	Providing & fixing Standard short size <b>SS branch pipe</b> with SS nozzle 16 mm dia outlet with standard instantaneous type 63 mm dia coupling.	41.00	Nos	6010.00	2,46,410.00

SR.NO	REF. CODE	DESCRIPTION	QTY	UNIT	S/I/T/C RATE	S/I/T/C TOTAL AMOUNT
30	R2-ME-15-11-a	Providing and fixing in position 2 lengths of 15 M long flexible canvas rubber lined <b>hose reels</b> 63 dia with adapter, branch pipe and nozzle and storing them in metal cabinets with lockable glass shutters and fixing the metal cabinet at ground level in a location where it can be easily spotted including painting etc	41.00	Nos	12061.00	4,94,501.00
31	RBH18-FF-FA-10	Proving & fixing G.M. <b>fire Brigade inlet connection</b> head as per IS:904 specification three way tested for 20kg/sq.cm. with 63mm with built in non-return valve for fire brigade connection to underground tanks including companion flanges of Table E with nuts, bolts & washers etc. ( Draw Out Connection)	1.00	Nos	16303.00	16,303.00
32	R2-ME-15-20	Supplying and installing fire brigade Header ( <b>Siamese Connection</b> ) of 150 mm Ø for supplying water to wet riser system as per specification	1.00	Nos	10175.00	10,175.00
33	RBH18-FF-FA-11	Providing & Fixing gunmetal breaching head as per IS:904 specification tested for 20 kg/cm. with 63 mm Dia 4 Nos instantaneous type inlet and 150 mm dia flanges outlet with built in non- return valve for fire brigade connection to fire risers including companion flanges of Table E withnuts, bolts & washers etc. ( tank Filling)	1.00	Nos	38437.00	38,437.00
34	R2-ME-15-21	Supplying and installing <b>Air Vessel</b> of 300 mm Ø 1.5m in height M.S. tank installed inside pump house as per specification	2.00	Nos	19671.00	39,342.00
35	R2-ME-15-22	Supplying and erecting 20/25mm Ø G.M.air release cock, with necessary G.I. coupling to be fitted on top of Air vessel or on wet riser as per specification	8.00	Nos	1424.00	11,392.00
36	R2-ME-15-13-a	Supplying and installing <b>pressure gauge</b> of 100 mm Ø., 0-300 PSI or 0- 14 kg per cm square fitted with 12/15 mm Ø. pad cock valve, and G.I. pipe, elbow etc	41.00	Nos	3483.00	1,42,803.00
37	R2-ME-15-23	Supplying and installing <b>pressure switch</b> with 12/15 mm Ø isolation valve, G.I. nipple, elbow etc. in an approved manner as per specification	6.00	Nos	7936.00	47,616.00
38	R2-ME-15-14-a	Supplying and erecting one no. Brass <b>orifice plate</b> having 6 mm. thickness, 140 mm outer dia of 140 mm at every single outlet hydrant valve	44.00	Nos	1536.00	67,584.00
39	R2-ME-15-14-b	Supplying and erecting one no. Brass <b>orifice plate</b> having 6 mm. thickness, 160 mm outer dia of 160 mm at every single outlet hydrant valve	2.00	Nos	2182.00	4,364.00
40	R2-ME-15-24-a	Supplying and erecting M.S./CRCA <b>cabinet for housing single hydrant</b> valve (size 400 x 400 x 400mm.) made from 16 SWG sheet and angle iron 25 mm. x 25 mm. x 4 mm. having front doors with viewing glass (8"x6") and locking arrangement with necessary fixing material such as rubber bidding etc. duly painted in post box red colour	4.00	Kgs	18992.00	75,968.00

SR.NO	REF. CODE	DESCRIPTION	QTY	UNIT	S/I/T/C RATE	S/I/T/C TOTAL AMOUNT
41	R2-ME-15-24-b	Supplying and erecting M.S./CRCA cabinet for housing Fire Brigade / SIEMESE connections (size 1250 x 400 x 300 mm.) made from 16 SWG sheet and angle iron 25 mm. X 25 mm. x 4 mm. having front doors with viewing glass (8" x 6") and locking arrangement with necessary fixing material such as rubber bidding etc. duly painted in post box red colour. (External)	13.00	Nos	24419.00	3,17,447.00
42	RBH18-FF-FA-12	Providing & Fixing Fire doorwith frame for all internal fire hydrants fabricated from 20x20x3 mm and 40x40x3 mm M.S. anodized butt hinge on M.S. angle frame of 45x45x5 mm size with holdfasts fixed to wall with PCC (1:2:4) blocks 100x100x100 mm including 3 nos. allen key lock for fire red finish with "fire hose" written on front suitable to house 15 meter long two lengths of canvas hose with coupling, one no. of branch pipe one fire mans axe, two numbers of portable extinguishers, first aid hose and support for hosses, branch pipes Axe and reels, size 450 x 600x 250 mm complete as design including necessary fixing arrangements for hose & axe & branch pipe.	44.00	Nos	28322.00	12,46,168.00
43	R2-ME-15-26-a	Supplying and erecting 15 mm (1/2") dia. NBCM Body chrome finished quartzoid bulb <b>sprinkler having 68° C</b> fixed temperature rating with deflector disc of conventional construction and quality conforming to international standards and listed by LPC (formally FOC U.K.) U.L.F.M. of USA or approved and listed by Tariff Advisory Committee (TAC) OF India <b>Pendent type</b>	4600.00	Nos	372.00	17,11,200.00
44	RBH18-FF-FA-13	Providing and fixing 15mm gunmetal sprinkler head with quartzoid bulband set to operate at specified temperature pendent/ upright/ side wallas per the location indicated on the drawings. sprinklers 68 degree C FOC/UL/FM approved complete with socket nipple, adaptoret. Sprinkler shall be pendant type. Temperature of operation 68 deg.C A. <b>Side wall type</b> in brass chrome finish	100.00	Nos	952.00	95,200.00
45	R2-ME-15-26-a	Supplying and erecting 15 mm (1/2") dia. NBCM Body chrome finished quartzoid bulb sprinkler having 68° C fixed temperature rating with deflector disc of conventional construction and quality conforming to international standards and listed by LPC (formally FOC U.K.) U.L.F.M. of USA or approved and listed by Tariff Advisory Committee (TAC) OF India <b>Upright type</b>	4800.00	Nos	372.00	17,85,600.00
46	RBH18-FF-FA-14	Supplying & fixing Sprinkler heads quartzoid bulb type pendent type sprinklers (straight throw) 93 Deg. C Temperature. (for Kitchen)	20.00	Nos	536.00	10,720.00
47	RBH18-FF-FA-15	Supplying & fixing Sprinkler heads quartzoid bulb type pendent type sprinklers (Upright throw) 93 Deg. C Temperature. (for Kitchen)	20.00	Nos	631.00	12,620.00
48	BAH-FF-FA-06	Providing, installation, testing & commissioning of adjustable <b>rosette plate for 15mm</b> dia in white finish UL Listed or FM approved complete as required.	4600.00	Nos	207.00	9,52,200.00

SR.NO	REF. CODE	DESCRIPTION	QTY	UNIT	S/I/T/C RATE	S/I/T/C TOTAL AMOUNT
49	RBH18-FF-FA-22	Providing & fixing of Stainless steel corrugated <b>flexible pipe (hose)</b> for dropping sprinklers below false ceiling, pipe shall be 16 bar pressure rating and 1000 mm long 25 mm dia with union / reducer collar, clamps etc. as required.	4500.00	Nos	1899.00	85,45,500.00
50	RBH18-FF-FA-17	Providing and fixing 150mm installation <b>control valve assembly</b> with turbine type automatic alarm to be connected with control valve, drainvalve, test valve and piping as per manufacturer"s specifications complete in all respects.	14.00	Nos	111265.00	15,57,710.00
51	RBH18-FF-FA-16	Providing and fixing electrically operated <b>flow indicating switches</b> model system sensor in sprinkler branch line on each floor with necessary junction box installed in accessible place (Wiring from switches to panel and staircase pressurization not included)	41.00	Nos	11186.00	4,58,626.00
52	RBH18-FF-FA-18	Providing and fixing 15 mm (1/2") dia. <b>Ball valves</b>	10.00	Nos	2215.00	22,150.00
53	RBH18-FF-FA-19	Providing and fixing 25 mm (1") dia.	41.00	Nos	2952.00	1,21,032.00
54	RBH18-FF-FA- 20	Providing & Fixing 32 mm (1 1/4") dia.SITC of 32 mm (1 1/4") dia.Used for flow control in fire fighting water supply lines	10.00	Nos	1131.00	11,310.00
55	RBH18-FF-FA-21	Providing & Fixing 32 mm (1 1/4") dia.SITC of 40 mm (1 1/2") dia.	10.00	Nos	3689.00	36,890.00
56	R2-ME-15-31-a	Providing Round bottom <b>FIRE Bucket</b> of 9 Litres capacity as per IS : 2546 made out of 24 gauge G.I. sheet with extra handle at bottom duly painted white inside and red outside with FIRE Mark, on provided stand/ wall hook.	10.00	Nos	814.00	8,140.00
57	RBH18-FF-FA-25	<b>Mechanical Foam Trolley</b> (AFFF) Cap:50 Ltrs. Fire engine Mounted on solidrubber wheel Trolley, with brass.MT Discharge hose pipe, Nozzeland Foam (AFFF) Refills with CO2 type Fire Extinguishers fitted In outer body Complete as per: 1204/13386 (ISI)	1.00	Nos	148750.00	1,48,750.00
58	R2-ME-15-30-d	Supplying and erecting <b>ABC powder type</b> fire extinguisher as per IS : 13849 /15683 of 9 kg capacity with necessary clamp for erection on Wall.	80.00	Nos	4002.00	3,20,160.00
59	R2-ME-15-30-e	Supplying and erecting <b>D.C.P. type Fire Extinguisher 6 kg</b> capacity cartridge type with Gun Metal cap 150 gram CO2 gas cartridge, powder and brackets conforming to IS 2171- 1985/ IS 15683 and complete erected with necessary clamps made from 50x6 mm M.S. flat with nuts & bolts grouted in wall complete.	80.00	Nos	2645.00	2,11,600.00
60	BAH-FF-FA-07	Supplying & erecting Carbon Dioxide (CO 2 ) fire extinguisher of 4.5 kg. capacity cartridge type conform to IS 2878 /15683 complete erected with necessary clamp made from 50 x 6 mm. M. S.flat with nut & bolts grouted in wall complete.	40.00	Nos	10096.00	4,03,840.00
61	RBH18-FF-FA-26	Supplying & fixing flanged C.I. tested <b>sluice valve</b> with necessary nuts, bolts, rubber gaskets etc. complete. 300 dia.	1.00	Nos	65450.00	65,450.00

SR.NO	REF. CODE	DESCRIPTION	QTY	UNIT	S/I/T/C RATE	S/I/T/C TOTAL AMOUNT
62	RBH18-FF-FA-27	Providing and fixing <b>M.S. cabinet</b> fabricated from 16 gauge M.S. sheet with full front plate glass door and locking arrangements for pad lock with suitable shelves for keeping 50 spare sprinklers and one spanner properly fixed in the shelves and cabinet painted fire red with stove enamel of approved shade size 750x600x150 including the cost of 50 Nos spare sprinklers (5 Nos side wall, 45 Nos pendent) spanner set and 2 rolls of locatite.	1.00	Nos	47124.00	47,124.00
63	KSS-EL-115	FIRE SUPPRESSION SYSTEM (FOR SERVER ROOM) Supply and fixing of <b>Novac 1230</b> , CCOE Approved 40.0 Ltrs. Cylinder working at 34.5 bar pressure with Valve Assembly and arrangement for Supervisory Switch connection for monitoring cylinder pressure, a pressure gauge with a safety burst disc and safety cap. Complete as required .	3.00	Nos	114992.00	3,44,976.00
64	KSS-EL-116	Supply and fixing of <b>Novac 1230</b> manufactured by 3M, with Zero Ozone Depletion Potential and Very Low Global Warming Potential of 1 with 20 Years Blue Sky Warranty against any regulatory Bans and Restrictions. Complete as required .	120.00	KG	3700.00	4,44,000.00
65	KSS-EL-117	Supply and fixing of <b>Master Cylinder Kit complete</b> comprises of Electric Control Head operated electrically from the detection and control system or locally with a manual actuator, complete with cylinder supervisory switch. Complete as required .	3.00	Nos	46233.00	1,38,699.00
66	KSS-EL-118	Supply and fixing of Manual Actuator Assembly complete with lever to activate the system manually. Complete as required .	1.00	Nos	14010.00	14,010.00
67	KSS-EL-119	Supply and fixing of Wire Braided Flexible Rubber Hose with Elbow and connectors complete assembly to Connect Novac 1230 Cylinder Assembly Discharge outlet with Discharge Pipe or Discharge Manifold. Complete as required .	1.00	Nos	5836.00	5,836.00
68	KSS-EL-120	Supply and fixing of Warning Signs and Plates for Inside Room and Outside Room application. Complete as required .	1.00	Nos	1400.00	1,400.00
69	KSS-EL-121	Supply and fixing of Discharge Nozzles to Discharge Novac 1230 Gas in the Hazard Area as hydraulic calculation and flow rate required in 180 Deg/360 Deg Discharge Pattern. Complete as required .	3.00	Nos	15723.00	47,169.00
70	KSS-EL-122	Supply and fixing of Cylinder Bracket for 40 Ltr.	1.00	Nos	1635.00	1,635.00
71	BAH-FF-FA-08	Supplying and erecting iron, sheet metal work consisting of CRCA sheets, various sections of iron, plates, chequered plates, rods, bars, MS pipes, etc. for panel board or any other purpose with bending, cutting, drilling and welding complete erected at the position with necessary materials duly painted with one coat of red oxide and two coats of enamel paint to match the switchgears or as per directions by the authority.	7125.00	KG	155.00	11,04,375.00
72	RBH-FA-AC-02	Supply / Installation / Testing / commissioning Single Arch Rubber Bellow for Chillers, Cooling Towers and Pumps complete with Control Guide Assembly For Secondary - 125mm DIA	18.00	Nos	12260.00	2,20,680.00

SR.NO	REF. CODE	DESCRIPTION	QTY	UNIT	S/I/T/C RATE	S/I/T/C TOTAL AMOUNT
73	MTA-AC-4	Supply / Installation / Testing / commissioning Single Arch Rubber Bellow for Chillers, Cooling Towers and Pumps complete with Control Guide Assembly For Secondary - 150mm DIA	8.00	Nos	11305.00	90,440.00
74	RBH18-FF-FA- 29	<b>FIRE PUMPS</b> Supplying, Fixing, testing & commissioning <b>Diesel engine driven horizontal</b> multistage single outlet centrifugal pump set capable of delivering 2850 LPM at 100 M head, having cast iron casing, bronze impellers, EN-8 shaft with bronze shaft sleeves directly coupled to Engine, 1450 RPM, complete on MS channel base plate with coupling guard, Day tank, Battery starting kit, etc. complete (Diesel driven Pump) 100mm gi pipe upto terrace with aluminium cladding	1.00	Nos	971397.00	9,71,397.00
75	RBH18-FF-FA- 30	Supplying, Fixing, testing & commissioning horizontal multistage Single outlet centrifugal pump set (Split Casing) capable of delivering 2850 LPM at 100 M head for having cast iron casing, bronze impellers, EN-8 shaft with bronze shaft sleeves directly coupled to 125 HP, 1450 RPM, TEFC squirrel cage induction motor having class 'F' insulation complete on MS channel base plate with coupling guard ( <b>Main Fire Hydrant Pump ,Main Sprinkler &amp; Drencher</b> )	3.00	Nos	651168.00	19,53,504.00
76	RBH18-FF-FA- 31	Supplying, Fixing testing & commissioning multistage horizontal centrifugal pump set capable of delivering 200 LPM at 100 M head due to all causes with TEFC squirrel cage induction motor of 2900 RPM, foundation bolts, etc. complete 25 HP ( <b>joceky pumps- Main Fire Hydrant Pump ,Main Sprinkler &amp; Drencher</b> )	3.00	Nos	65117.00	1,95,351.00
77	RBH18-FF-FA- 32	Supplying, Fixing testing & commissioning <b>Terrace Fire Booster pump</b> , horizontal centrifugal pump set capable of delivering 900 LPM at 35 M head due to all causes with TEFC squirrel cage induction motor of 2900 RPM, foundation bolts, etc. complete 10 HP	1.00	Nos	102816.00	1,02,816.00

SR.NO	REF. CODE	DESCRIPTION	QTY	UNIT	S/I/T/C RATE	S/I/T/C TOTAL AMOUNT
78	BAH-FF-FA-01	<p>Fabrication, supply, Insallation testing &amp; commissioning of Fire Electrical control panel of cubical construction, floor mounted type, fabricated out of 2mm thick CRCA sheet, compartmentalised with hinged lockable doors, dust and vermin proof, powder coated of approved shade after 7 tank treatment process, cable alley, interconnection with suitable size copper conductor cable/solid copper strip, having switchgears and accessories, mountings and internal wiring, earth terminals, numbering etc. complete in all respect, suitable for main fire pump, pressurisation pump &amp; diesel pump set complete as per CPWD specification with following in coming and Outgoings, suitable for operation on 415V, 3 phase, 50Hz Ac Supply with enclosure protection class IP 42 as required :</p> <p>Incomings  1 Nos 630A, 50kA 4 Pole MCCB, Ics=100% Icu rating Digital Voltmeter 0-500V with selector switch Ammeter (0-630 A) with selector swtich &amp; CTs etc. LED type RYB phase indicating lamps, ON, OFF, trip indicating lamps Set of Copper Bus Bar 800Amps</p> <p>Outgoings  ( Note : All outgoing feeders for pumps should have digital Ammeter with selector switches, and LED type ON, OFF, trip indicating lamps)  2 nos Main Fire( Hydrent, Sprinkler Pump)  250 A, 36kA TPN MCCB, Ics=100% Icu, with fully automatic Star/Delta starter suitable hp pump with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation.</p>	1.00	Nos	1875000.00	18,75,000.00
		<p>2 Nos Jockey Pump  125 A, 25kA TPN MCCB, Ics=100% Icu, with Suitable HP fully automatic Star/Delta starter with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation.</p> <p>3 Nos Booster Pump  63 A, 15 kA TPN MCCB, Ics=100% Icu, with Suitable HP fully automatic Star/Delta starter with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation.</p> <p>Diesel Engine Control  Control for diesel engine comprising - Automatic/Manual selctor switch &amp; 3 attempts starting device, timers and relays as required, push buttons, start/stop in manual mode Indicating lamp for high/ Low Lub. Oil pressure, High Water Temp and Engine on indication Battery charger suitbale for 12V/24 V DC with boost and trickle selector switch, 0-30 V DC volt meter, and 0- 20 A DC Ammeter All standard relays and accessories for automatic operation of diesel engine System Controller</p>				

SR.NO	REF. CODE	DESCRIPTION	QTY	UNIT	S/I/T/C RATE	S/I/T/C TOTAL AMOUNT
79		LV Cables of following sizes to be laid buried in ground/laid in cable trays in ready made trenches, cables shall be fitted on wall / ceiling by the means of saddle & spacers. Miscellaneous items such as cable dressing accessories like nylon tie, Aluminium clamps, GI cleats,cable tags etc. are included in the scope. Removal of empty drums, cartoons and making the site normal as instructed by Purchaser client is included in scope.1.1 kV grade stranded Cu conductor, XLPE insulated, extruded PVC inner and outer sheathed FRLSHZ, galvanised steel round or strip armoured cables (SP-ME-TS- 6)				
80	R2-ME-2-3a-a	2C x 1.5 Sq.mm	100.00	Mtr	87.00	8,700.00
81	R2-ME-2-3a-b	3C x 1.5 Sq.mm	100.00	Mtr	106.00	10,600.00
82	R2-ME-2-3a-c	4C x 1.5 Sq.mm	100.00	Mtr	126.00	12,600.00
83	R2-ME-2-3a-g	4C x 2.5 Sq.mm	100.00	Mtr	178.00	17,800.00
84	R2-ME-2-3a-k	4C x 4 Sq.mm	150.00	Mtr	273.00	40,950.00
85	R2-ME-2-3a-o	4C x 6 Sq.mm	800.00	Mtr	337.00	2,69,600.00
86	R2-ME-2-3a-s	4C x 10 Sq.mm	100.00	Mtr	597.00	59,700.00
87	R2-ME-2-3a-u	4C x 16 Sq.mm	50.00	Mtr	863.00	43,150.00
88	R2-ME-2-3a-v	4C x 25 Sq.mm	200.00	Mtr	1450.00	2,90,000.00
89	R2-ME-2-3a-w	3.5C x 35 Sq.mm	50.00	Mtr	1740.00	87,000.00
90	R2-ME-2-3a-x	3.5C x 50 Sq.mm	50.00	Mtr	2416.00	1,20,800.00
91	R2-ME-2-3a-y	3.5C x 70 Sq.mm	100.00	Mtr	3419.00	3,41,900.00
92	R2-ME-2-3a-z	3.5C x 95 Sq.mm	10.00	Mtr	4923.00	49,230.00
93	R2-ME-2-3a-aa	3.5C x 120 Sq.mm	10.00	Mtr	6309.00	63,090.00
94	R2-ME-2-3a-ab	3.5C x 150 Sq.mm	10.00	Mtr	7624.00	76,240.00
95	R2-ME-2-3a-ac	3.5C x 185 Sq.mm	10.00	Mtr	9510.00	95,100.00
96	R2-ME-2-3a-ad	3.5C x 240 Sq.mm	300.00	Mtr	12215.00	36,64,500.00
97	R2-ME-2-3a-ae	3.5C x 300 Sq.mm	50.00	Mtr	15216.00	7,60,800.00
98	R2-ME-2-3a-af	3.5C x 400 Sq.mm	10.00	Mtr	19796.00	1,97,960.00
99		LV Cables of following sizes to be laid buried in ground/ laid in cable trays in ready made trenches, cables shall be fitted on wall / ceiling by the means of saddle & spacers. Miscellaneous items such as cable dressing accessories like nylon tie, Aluminium clamps, GI cleats, cable tags etc. are included in the scope. Removal of empty drums, cartoons and making the site normal as instructed by Purchaser client is included in scope. 1.1 kV grade stranded Cu conductor, PVC insulated, extruded PVC inner and outer sheathed, with Flexible Submersible flat cables (SP-ME-TS- 6)				
100	R2-ME-2-5-a	3C x 1.5 Sq.mm	50.00	Mtr	66.00	3,300.00
101	R2-ME-2-5-b	4C x 1.5 Sq.mm	50.00	Mtr	144.00	7,200.00
102	R2-ME-2-5-e	4C x 2.5 Sq.mm	50.00	Mtr	203.00	10,150.00
103	R2-ME-2-5-h	4C x 4 Sq.mm	250.00	Mtr	278.00	69,500.00

SR.NO	REF. CODE	DESCRIPTION	QTY	UNIT	S/I/T/C RATE	S/I/T/C TOTAL AMOUNT
104	BAH-FF-FA-02	<p>Fabrication, supply, Insallation testing &amp; commissioning of <b>Fire Power &amp; Control Booster Electrical control panel with Remote Start Stop Button</b> 11 Nos of Terminals of cubical construction, floor mounted type, fabricated out of 2mm thick CRCA sheet, compartmentalised with hinged lockable doors, dust and vermin proof, powder coated of approved shade after 7 tank treatment process, cable alley, interconnection with suitable size copper conductor cable/solid copper strip, having switchgears and accessories, mountings and internal wiring, earth terminals, numbering etc. complete in all respect, suitable for main fire pump, pressurisation pump &amp; diesel pump set complete as per CPWD specification with following in coming and Outgoings, suitable for operation on 415V, 3 phase, 50Hz Ac Supply with enclosure protection class IP 54 With Canopy as required :</p> <p>Incomings 1 Nos 63A, 15kA 4 Pole MCCB, Ics=100% Icu rating Digital Voltmeter 0-500V with selector switch Ammeter (0-630 A) with selector swtich &amp; CTs etc. LED type RYB phase indicating lamps, ON, OFF, trip indicating lamps Set of Copper Bus Bar 100 Amps</p>	1.00	Nos	192500.00	1,92,500.00
		<p><b>Outgoings</b> ( Note : All outgoing feeders for pumps should have digital Ammeter with selector switches, and LED type ON, OFF, trip indicating lamps)</p> <p><b>2 nos Booster Pump</b> 40 A, 15kA TPN MCCB, Ics=100% Icu, with fully automatic Star/Delta starter suitable for 15 hp pump with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation.</p>				
105	BAH-FF-FA-03	Supplying, installing, testing and commissioning push button station complete as per EIC & specification Electric spring return enclosed push button NO,NC, polycobonate Red/Green I/O IP66	18.00	Nos	12500.00	2,25,000.00
106	BAH-FF-FA-04	Supply & Installation of 120 minutes Fire rated Clauss Markisen Fire Curtain with top box (203mm x 250mm minimum dimensions) Guide rail with rod guiding (120mm x 55mm minimum dimensions) ,Gravity fail safe system to be designed to ensure that even with a total power failure the curtain will still close down into a protection mode. Fire Curtain Codes: - Compliance of DIN 4102-2 1100 degree C / 120 min, smoke density / leakage as per EN 12101-1 Fire Curtain Fabric: Stainless steel-reinforced glass fiber fabric with a fire-retardant. Aluminium – filled polyurethane coating fabric from glass filament with stainless steel, non- flammable conforming to DIN 4102-2/A2/Z-56.429-931 for 2 Hour fire protection. <b>Size : 6700mm x 3500mm (5 curtains)</b>	117.00	Sqm	67499.00	78,97,383.00

SR.NO	REF. CODE	DESCRIPTION	QTY	UNIT	S/I/T/C RATE	S/I/T/C TOTAL AMOUNT
107	BAH-FF-FA-05	Supply & Installation of 120 minutes Fire rated Clauss Markisen Fire Curtain with top box (203mm x 250mm minimum dimensions) Guide rail with rod guiding (120mm x 55mm minimum dimensions) ,Gravity fail safe system to be designed to ensure that even with a total power failure the curtain will still close down into a protection mode. Fire Curtain Codes: - Compliance of DIN 4102-2 1100 degree C / 120 min, smoke density / leakage as per EN 12101-1 Fire Curtain Fabric: Stainless steel-reinforced glass fiber fabric with a fire-retardant. Aluminium – filled polyurethane coating fabric from glass filament with stainless steel, non- flammable conforming to DIN 4102-2/A2/ Z-56.429-931 for 2 Hour fire protection. <b>Size: 3500mm x 3500mm (2 curtains)</b>	25.00	Sqm	67499.00	16,87,475.00
108	R2-ME-15-27-a	<b>FIRE SEALANT SYSTEM</b> Supplying and erecting Fire resistant Mortar (20 kg) with fire resistance class S90 as per National Electrical Code (NEC) SP30-2011 suitable to seal the openings with all kinds of cables, pipes and cable support system in steel and aluminium and plastic profiles (Except hollow core conductors). The residual openings shall be closed with filler, as per specification	200.00	Sq.ft	2035.00	4,07,000.00
109	RSG18-FF-FA-23	Supplying & fixing Drancher Heads of 15mm dia	300.00	Nos.	416.50	1,24,950.00
110	RSG18-FF-FA-24	Supplying & fixing 100mm dia Deluge valve with necessary nuts, bolts, rubber gaskets etc. complete	4.00	Nos.	26775.00	1,07,100.00
111	RSG18-FF-FA-34	Supplying fixing testing abd commissioning control Panel for actuating motorised vlve, having zonal signals from Fire alarm system through BMS and divert signals of the sprinkler activation to the valves to open allow water to creat a curtain. (Having 4 incoming signals and 7 outgoing controls) including cabling from BMS room to Panel and from panel to all 4 deluge valve (for drencher system)	1.00	Nos.	416500.00	4,16,500.00
<b>TOTAL AMOUNT FIRE FIGHTING SYSTEM (In Rs)</b>						<b>6,42,40,122.00</b>

**MUNICIPAL CORPORATION OF GREATER MUMBAI**

**PROPOSED BMC GENERAL HOSPITAL & STAFF QUARTERS  
On Plot bearing CTS No. 11A/4,Chandivali, Sangharsha Nagar, Kurla 400072**

**BILL OF QUANTITIES - FIRE FIGHTING WORK (RESIDENTIAL BUILDING)**

SR.NO	REF. CODE	DESCRIPTION	QTY	UNIT	S/I/T/C RATE	S/I/T/C TOTAL AMOUNT
	R2-ME-15-15	Providing and fixing in position G.I. Heavy grade 'C' class pipes (I.S. 1239 part I) with necessary clamping to wall beams and ceilings with hangers and clamps anchor fasteners wherever required to firmly support piping,				
1	RBH18-PWD 16-5-1	Supplying and erecting G.I.pipe 15 mm dia. „C" class at position with accessories. As per specification No. CW-PLB/GP	20.00	Mtr	165.00	3,300.00
2	R2-ME-15-15-h	25 mm	1600.00	Mtr	479.00	7,66,400.00
3	R2-ME-15-15-g	32 mm	600.00	Mtr	545.00	3,27,000.00
4	R2-ME-15-15-f	40 mm	350.00	Mtr	640.00	2,24,000.00
5	R2-ME-15-15-e	50 mm	300.00	Mtr	863.00	2,58,900.00
6	R2-ME-15-15-d	65 mm	150.00	Mtr	1077.00	1,61,550.00
7	R2-ME-15-15-c	80 mm	100.00	Mtr	1322.00	1,32,200.00
8	R2-ME-15-15-b	100 mm	100.00	Mtr	1836.00	1,83,600.00
9	R2-ME-15-15-a	150 mm	500.00	Mtr	2701.00	13,50,500.00
10	R2-ME-15-15-i	200 mm dia	50.00	Mtr	4002.00	2,00,100.00
11	RBH18-FF-FA- 01	Supplying and installing G.I.pipe above ground of „C" class ERW of size 300 mm dia with necessary fittings.	20.00	Mtr	7497.00	1,49,940.00
12	RBH18-FF-FA-02	Providing,fixing and jointing including testing heavy quality GI C Class Pipes conforming to IS:1239 including cutting, welded (all type) joints as per detailed specification & providing suitable flange wherever required, complete providing saddles cutting holes & chases in brick or RCC walls or floors and making good the same and giving suitable statement for corrosion as per IS: 10221 (4mm thick "PYPKOTE") wherever the pipe goes under groundwith necessary excavation, backfilling and carting away surplus earthcomplete. <b>80 mm dia</b>	20.00	Mtr	2142.00	42,840.00
13	RBH18-FF-FA-03	Providing,fixing and jointing including testing heavy quality GI C Class Pipes conforming to IS:1239 including cutting, welded (all type) joints as per detailed specification & providing suitable flange wherever required, complete providing saddles cutting holes & chases in brick or RCC walls or floors and making good the same and giving suitable statement for corrosion as per IS: 10221 (4mm thick "PYPKOTE") wherever the pipe goes under groundwith necessary excavation, backfilling and carting away surplus earthcomplete. <b>100 mm dia</b>	20.00	Mtr	2618.00	52,360.00

SR.NO	REF. CODE	DESCRIPTION	QTY	UNIT	S/I/T/C RATE	S/I/T/C TOTAL AMOUNT
14	RBH18-FF-FA-04	Providing,fixing and jointing including testing heavy quality GI C Class Pipes conforming to IS:1239 including cutting, welded (all type) joints as per detailed specification & providing suitable flange wherever required, complete providing saddles cutting holes & chases in brick or RCC walls or floors and making good the same and giving suitable statement for corrosion as per IS: 10221 (4mm thick "PYPKOTE") wherever the pipe goes under groundwith necessary excavation, backfilling and carting away surplus earthcomplete. <b>150 mm dia</b>	20.00	Mtr	3332.00	66,640.00
15	RBH18-FF-FA-05	Providing,fixing and jointing including testing heavy quality GI C Class Pipes conforming to IS:1239 including cutting, welded (all type) joints as per detailed specification & providing suitable flange wherever required, complete providing saddles cutting holes & chases in brick or RCC walls or floors and making good the same and giving suitable statement for corrosion as per IS: 10221 (4mm thick "PYPKOTE") wherever the pipe goes under groundwith necessary excavation, backfilling and carting away surplus earthcomplete. <b>200 mm dia</b>	20.00	Mtr	5355.00	1,07,100.00
16	RBH18-FF-FA-06	S/I/T/C OF Y strainer 100 mm dia	4.00	Nos	12546.00	50,184.00
17	RBH18-FF-FA-07	S/I/T/C OF Pot strainer 150 mm dia	2.00	Nos	22140.00	44,280.00
18	RBH18-FF-FA-08	S/I/T/C OF Pot strainer 200 mm dia	2.00	Nos	32473.00	64,946.00
19	R2-ME-15-6-a	Supplying & Installing cast iron double flange butterfly valve 80 mm	50.00	Nos	3644.00	1,82,200.00
20	R2-ME-15-6-b	Supplying & Installing cast iron double flange butterfly valve 100 mm	10.00	Nos	5019.00	50,190.00
21	R2-ME-15-6-c	Supplying & Installing cast iron double flange butterfly valve150 mm	2.00	Nos	7933.00	15,866.00
22	R2-ME-15-6-d	Supplying & Installing cast iron double flange butterfly valve 200 mm	2.00	Nos	10846.00	21,692.00
23	R2-ME-15-7-b	Supplying and installing double flange NRV 100 mm	2.00	Nos	12335.00	24,670.00
24	R2-ME-15-7-c	Supplying and installing double flange NRV 150 mm	2.00	Nos	20349.00	40,698.00
25	R2-ME-15-7-d	Supplying and installing double flange NRV 200 mm	2.00	Nos	33060.00	66,120.00
26	R2-ME-15-8-a	Supplying and installing gun metal <b>single outlet hydrant valve</b> fitted with necessary accessories	60.00	Nos	9527.00	5,71,620.00
27	R2-ME-15-8-b	Supplying and installing gun metal Double outlet hydrant valve fitted with necessary accessories	1.00	Nos	19457.00	19,457.00
28	R2-ME-15-18	Supplying and installing wall mounting swinging <b>Hose reel drum</b> fitted with 19 mm dia. 30m high pressure polypropylene (Polyhose) long fitted with necessary accessories complete as per specification	57.00	Nos	11531.00	6,57,267.00
29	RBH18-FF-FA-09	Providing & fixing Standard short size <b>SS branch pipe</b> with SS nozzle 16 mm dia outlet with standard instantaneous type 63 mm dia coupling.	57.00	Nos	6010.00	3,42,570.00

SR.NO	REF. CODE	DESCRIPTION	QTY	UNIT	S/I/T/C RATE	S/I/T/C TOTAL AMOUNT
30	R2-ME-15-11-a	Providing and fixing in position 2 lengths of 15 M long flexible canvas rubber lined <b>hose reels</b> 63 dia with adapter, branch pipe and nozzle and storing them in metal cabinets with lockable glass shutters and fixing the metal cabinet at ground level in a location where it can be easily spotted including painting etc	57.00	Nos	12061.00	6,87,477.00
31	R2-ME-15-22	Supplying and erecting 20/25mm Ø G.M.air release cock, with necessary G.I. coupling to be fitted on top of Air vessel or on wet riser as per specification	6.00	Nos	1424.00	8,544.00
32	R2-ME-15-13-a	Supplying and installing <b>pressure gauge</b> of 100 mm Ø., 0-300 PSI or 0- 14 kg per cm square fitted with 12/15 mm Ø. pad cock valve, and G.I. pipe, elbow etc	57.00	Nos	3483.00	1,98,531.00
33	R2-ME-15-23	Supplying and installing <b>pressure switch</b> with 12/15 mm Ø isolation valve, G.I. nipple, elbow etc. in an approved manner as per specification	1.00	Nos	7936.00	7,936.00
34	R2-ME-15-14-a	Supplying and erecting one no. Brass <b>orifice plate</b> having 6 mm. thickness, 140 mm outer dia of 140 mm at every single outlet hydrant valve	60.00	Nos	1536.00	92,160.00
35	R2-ME-15-14-b	Supplying and erecting one no. Brass <b>orifice plate</b> having 6 mm. thickness, 160 mm outer dia of 160 mm at every single outlet hydrant valve	1.00	Nos	2182.00	2,182.00
36	R2-ME-15-24-a	Supplying and erecting M.S./CRCA <b>cabinet for housing single hydrant</b> valve (size 400 x 400 x 400mm.) made from 16 SWG sheet and angle iron 25 mm. x 25 mm. x 4 mm. having front doors with viewing glass (8"x6") and locking arrangement with necessary fixing material such as rubber bidding etc. duly painted in post box red colour	2.00	Kgs	18992.00	37,984.00
37	R2-ME-15-24-b	Supplying and erecting M.S./CRCA cabinet for housing Fire Brigade / SIEMESE connections (size 1250 x 400 x 300 mm.) made from 16 SWG sheet and angle iron 25 mm. X 25 mm. x 4 mm. having front doors with viewing glass (8" x 6") and locking arrangement with necessary fixing material such as rubber bidding etc. duly painted in post box red colour. (External)	1.00	Nos	24419.00	24,419.00
38	RBH18-FF-FA-12	Providing & Fixing Fire doorwith frame for all internal fire hydrants fabricated from 20x20x3 mm and 40x40x3 mm M.S. anodized butt hinge on M.S. angle frame of 45x45x5 mm size with holdfasts fixed to wall with PCC (1:2:4) blocks 100x100x100 mm including 3 nos. allen key lock for fire red finish with "fire hose" written on front suitable to house 15 meter long two lengths of canvas hose with coupling, one no. of branch pipe one fire mans axe, two numbers of portable extinguishers, first aid hose and support for hosses, branch pipes Axe and reels, size 450 x 600x 250 mm complete as design including necessary fixing arrangements for hose & axe & branch pipe.	57.00	Nos	28322.00	16,14,354.00

SR.NO	REF. CODE	DESCRIPTION	QTY	UNIT	S/I/T/C RATE	S/I/T/C TOTAL AMOUNT
39	R2-ME-15-26-a	Supplying and erecting 15 mm (1/2") dia. NBCM Body chrome finished quartzoid bulb <b>sprinkler having 68° C</b> fixed temperature rating with deflector disc of conventional construction and quality conforming to international standards and listed by LPC (formally FOC U.K.) U.L.F.M. of USA or approved and listed by Tariff Advisory Committee (TAC) OF India <b>Pendent type</b>	300.00	Nos	372.00	1,11,600.00
40	RBH18-FF-FA-13	Providing and fixing 15mm gunmetal sprinkler head with quartzoid bulb and set to operate at specified temperature pendent/ upright/ side wall as per the location indicated on the drawings. sprinklers 68 degree C FOC/UL/FM approved complete with socket nipple, adaptor etc. Sprinkler shall be pendant type. Temperature of operation 68 deg.C A. <b>Side wall type</b> in brass chrome finish	440.00	Nos	952.00	4,18,880.00
41	R2-ME-15-26-a	Supplying and erecting 15 mm (1/2") dia. NBCM Body chrome finished quartzoid bulb sprinkler having 68° C fixed temperature rating with deflector disc of conventional construction and quality conforming to international standards and listed by LPC (formally FOC U.K.) U.L.F.M. of USA or approved and listed by Tariff Advisory Committee (TAC) OF India <b>Upright type</b>	40.00	Nos	372.00	14,880.00
42	RBH18-FF-FA-22	Providing & fixing of Stainless steel corrugated <b>flexible pipe (hose)</b> for dropping sprinklers below false ceiling, pipe shall be 16 bar pressure rating and 1000 mm long 25 mm dia with union / reducer collar, clamps etc. as required.	150.00	Nos	1899.00	2,84,850.00
43	RBH18-FF-FA-17	Providing and fixing 150mm installation <b>control valve assembly</b> with turbine type automatic alarm to be connected with control valve, drainvalve, test valve and piping as per manufacturer's specifications complete in all respects.	6.00	Nos	111265.00	6,67,590.00
44	RBH18-FF-FA-16	Providing and fixing electrically operated <b>flow indicating switches</b> model system sensor in sprinkler branch line on each floor with necessary junction box installed in accessible place (Wiring from switches to panel and staircase pressurization not included)	57.00	Nos	11186.00	6,37,602.00
45	RBH18-FF-FA-18	Providing and fixing 15 mm (1/2") dia. <b>Ball valves</b>	5.00	Nos	2215.00	11,075.00
46	RBH18-FF-FA-19	Providing and fixing 25 mm (1") dia.	57.00	Nos	2952.00	1,68,264.00
47	RBH18-FF-FA-20	Providing & Fixing 32 mm (1 1/4") dia. SITC of 32 mm (1 1/4") dia. Used for flow control in fire fighting water supply lines	5.00	Nos	1131.00	5,655.00
48	RBH18-FF-FA-21	Providing & Fixing 32 mm (1 1/4") dia. SITC of 40 mm (1 1/2") dia.	5.00	Nos	3689.00	18,445.00
49	R2-ME-15-31-a	Providing Round bottom <b>FIRE Bucket</b> of 9 Litres capacity as per IS : 2546 made out of 24 gauge G.I. sheet with extra handle at bottom duly painted white inside and red outside with FIRE Mark, on provided stand/ wall hook.	4.00	Nos	814.00	3,256.00

SR.NO	REF. CODE	DESCRIPTION	QTY	UNIT	S/I/T/C RATE	S/I/T/C TOTAL AMOUNT
50	RBH18-FF-FA-25	<b>Mechanical Foam Trolley</b> (AFFF) Cap:50 Ltrs. Fire engine Mounted on solidrubber wheel Trolley, with brass.MT Discharge hose pipe, Nozzeland Foam (AFFF) Refills with CO2 type Fire Extinguishers fitted In outer body Complete as per: 1204/13386 (ISI)	1.00	Nos	148750.00	1,48,750.00
51	R2-ME-15-30-d	Supplying and erecting <b>ABC powder type</b> fire extinguisher as per IS : 13849 /15683 of 9 kg capacity with necessary clamp for erection on Wall.	60.00	Nos	4002.00	2,40,120.00
52	R2-ME-15-30-e	Supplying and erecting <b>D.C.P. type Fire Extinguisher 6 kg</b> capacity cartridge type with Gun Metal cap 150 gram CO2 gas cartridge, powder and brackets conforming to IS 2171- 1985/ IS 15683 and complete erected with necessary clamps made from 50x6 mm M.S. flat with nuts & bolts grouted in wall complete.	30.00	Nos	2645.00	79,350.00
53	BAH-FF-FA-07	Supplying & erecting Carbon Dioxide (CO 2 ) fire extinguisher of 4.5 kg. capacity cartridge type conform to IS 2878 /15683 complete erected with necessary clamp made from 50 x 6 mm. M. S.flat with nut & bolts grouted in wall complete.	30.00	Nos	10096.00	3,02,880.00
54	RBH18-FF-FA-32	Supplying, Fixing testing & commissioning <b>Terrace Fire Booster pump</b> , horizontal centrifugal pump set capable of delivering 900 LPM at 35 M head due to all causes with TEFC squirrel cage induction motor of 2900 RPM, foundation bolts, etc. complete 10 HP	1.00	Nos	102816.00	1,02,816.00
55		LV Cables of following sizes to be laid buried in ground/laid in cable trays in ready made trenches, cables shall be fitted on wall / ceiling by the means of saddle & spacers. Miscellaneous items such as cable dressing accessories like nylon tie, Aluminium clamps, GI cleats,cable tags etc. are included in the scope. Removal of empty drums, cartoons and making the site normal as instructed by Purchaser client is included in scope.1.1 kV grade stranded Cu conductor, XLPE insulated, extruded PVC inner and outer sheathed FRLSHZ, galvanised steel round or strip armoured cables (SP-ME-TS- 6)				
56	R2-ME-2-3a-a	2C x 1.5 Sq.mm	100.00	Mtr	87.00	8,700.00
57	R2-ME-2-3a-b	3C x 1.5 Sq.mm	100.00	Mtr	106.00	10,600.00
58	R2-ME-2-3a-c	4C x 1.5 Sq.mm	100.00	Mtr	126.00	12,600.00
59	R2-ME-2-3a-g .	4C x 2.5 Sq.mm	100.00	Mtr	178.00	17,800.00
60	R2-ME-2-3a-k	4C x 4 Sq.mm	100.00	Mtr	273.00	27,300.00
61	R2-ME-2-3a-o	4C x 6 Sq.mm	500.00	Mtr	337.00	1,68,500.00
62	R2-ME-2-3a-s	4C x 10 Sq.mm	50.00	Mtr	597.00	29,850.00
63	R2-ME-2-3a-u	4C x 16 Sq.mm	20.00	Mtr	863.00	17,260.00
64	R2-ME-2-3a-v	4C x 25 Sq.mm	150.00	Mtr	1450.00	2,17,500.00
65	R2-ME-2-3a-w	3.5C x 35 Sq.mm	50.00	Mtr	1740.00	87,000.00
66	R2-ME-2-3a-x	3.5C x 50 Sq.mm	50.00	Mtr	2416.00	1,20,800.00
67	R2-ME-2-3a-y	3.5C x 70 Sq.mm	50.00	Mtr	3419.00	1,70,950.00
68	R2-ME-2-3a-z	3.5C x 95 Sq.mm	10.00	Mtr	4923.00	49,230.00

SR.NO	REF. CODE	DESCRIPTION	QTY	UNIT	S/I/T/C RATE	S/I/T/C TOTAL AMOUNT
69	R2-ME-2-3a-aa	3.5C x 120 Sq.mm	10.00	Mtr	6309.00	63,090.00
70	R2-ME-2-3a-ab	3.5C x 150 Sq.mm	10.00	Mtr	7624.00	76,240.00
71	R2-ME-2-3a-ac	3.5C x 185 Sq.mm	10.00	Mtr	9510.00	95,100.00
72	R2-ME-2-3a-ad	3.5C x 240 Sq.mm	250.00	Mtr	12215.00	30,53,750.00
73	R2-ME-2-3a-ae	3.5C x 300 Sq.mm	50.00	Mtr	15216.00	7,60,800.00
74	R2-ME-2-3a-af	3.5C x 400 Sq.mm	10.00	Mtr	19796.00	1,97,960.00
75		LV Cables of following sizes to be laid buried in ground/ laid in cable trays in ready made trenches, cables shall be fitted on wall / ceiling by the means of saddle & spacers. Miscellaneous items such as cable dressing accessories like nylon tie, Aluminium clamps, GI cleats, cable tags etc. are included in the scope. Removal of empty drums, cartoons and making the site normal as instructed by Purchaser client is included in scope. 1.1 kV grade stranded Cu conductor, PVC insulated, extruded PVC inner and outer sheathed, with Flexible Submersible flat cables (SP-ME-TS- 6)				
76	R2-ME-2-5-a	3C x 1.5 Sq.mm	50.00	Mtr	66.00	3,300.00
77	R2-ME-2-5-b	4C x 1.5 Sq.mm	50.00	Mtr	144.00	7,200.00
78	R2-ME-2-5-e	4C x 2.5 Sq.mm	50.00	Mtr	203.00	10,150.00
79	R2-ME-2-5-h	4C x 4 Sq.mm	250.00	Mtr	278.00	69,500.00
80	BAH-FF-FA-02	Fabrication, supply, Insallation testing & commissioning of <b>Fire Power &amp; Control Booster Electrical control panel with Remote Start Stop Button</b> 11 Nos of Terminals of cubical construction, floor mounted type, fabricated out of 2mm thick CRCA sheet, compartmentalised with hinged lockable doors, dust and vermin proof, powder coated of approved shade after 7 tank treatment process, cable alley, interconnection with suitable size copper conductor cable/solid copper strip, having switchgears and accessories, mountings and internal wiring, earth terminals, numbering etc. complete in all respect, suitable for main fire pump, pressurisation pump & diesel pump set complete as per CPWD specification with following in coming and Outgoings, suitable for operation on 415V, 3 phase, 50Hz Ac Supply with enclosure protection class IP 54 With Canopy as required : Incomings 1 Nos 63A, 15kA 4 Pole MCCB, Ics=100% Icu rating Digital Voltmeter 0-500V with selector switch Ammeter (0-630 A) with selector swtich & CTs etc. LED type RYB phase indicating lamps, ON, OFF, trip indicating lamps Set of Copper Bus Bar 100 Amps	1.00	Nos	192500.00	1,92,500.00

SR.NO	REF. CODE	DESCRIPTION	QTY	UNIT	S/I/T/C RATE	S/I/T/C TOTAL AMOUNT
		<p><b>Outgoings</b></p> <p>( Note : All outgoing feeders for pumps should have digital Ammeter with selector switches, and LED type ON, OFF, trip indicating lamps)</p> <p><b>2 nos Booster Pump</b></p> <p>40 A, 15kA TPN MCCB, Ics=100% Icu, with fully automatic Star/Delta starter suitable for 15 hp pump with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation.</p>				
81	BAH-FF-FA-03	Supplying, installing, testing and commissioning push button station complete as per EIC & specification Electric spring return enclosed push button NO,NC, polycarbonate Red/Green I/O IP66	19.00	Nos	12500.00	2,37,500.00
82	R2-ME-15-27-a	<p><b>FIRE SEALANT SYSTEM</b></p> <p>Supplying and erecting Fire resistant Mortar (20 kg) with fire resistance class S90 as per National Electrical Code (NEC) SP30-2011 suitable to seal the openings with all kinds of cables, pipes and cable support system in steel and aluminium and plastic profiles (Except hollow core conductors). The residual openings shall be closed with filler, as per specification</p>	20.00	Sq.ft	2035.00	40,700.00
		<b>TOTAL AMOUNT FIRE FIGHTING SYSTEM (In Rs)</b>				<b>₹ 1,78,13,670.00</b>