

BEML LIMITED, BANGALORE COMPLEX

RMM/TEN- /2020

Date: 18.04.2020

ISSUED TO:	Period of contract:	04 Months
	EMD :	Rs.

SCHEDULE 'A' - BILL OF QUANTITIES**Sub:- Tender for Proposed Construction of BEML site Office and stores building at Charkop Depot, Mumbai under MRS1 project**

Item No	Description	Unit	Qty.	Rate/unit in figures & in words Rs.	Amount Rs.
A	CIVIL WORKS				
1	Earth work in surface excavation not exceeding 30 cm in depth but exceeding 1.5 m in width as well as 10 sqm on plan including getting out and disposal of excavated earth upto 50 m and lift upto 1.5 m, as directed by Engineer-in- Charge:	Sq.M	200		
2	Earth work in excavation by mechanical means (Hydraulic excavator)/manual in foundations for columns, plinth, beams steps ramps, pits, trenches (not exceeding 1.5M in width or 10Sq.M on plan) including shoring, bailing out or pumping out of ground water or rain water, dressing of sides and ramming of bottom, lift up to 1.5M including getting out the excavated soil and disposal of surplus excavated soil within a lead of 50Mtrs as directed by Engineer-in-charge. (Measurement of excavation shall be up to the PCC line only)				
a)	Depth up to 1.50Mtrs	Cu.M	233		
b)	Depth from 1.5Mtrs to 3.0 Mtrs.	Cu.M	75		
3	Returning, refilling available excavated earth (excluding rock) in trenches, pits, foundations or around plinth etc in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, etc complete all as specified and as directed by Enginner- in - charge.	Cu.M	140		
4	Providing Anti Termite Treatement conforming to IS all as detailed below:				
a)	Supplying chemical emulsion (chorpyrihos/ Lindane E.C 20% with 1% concentration) in sealed containers including delivery as specified (Note: the make/brand of chemical would be approved by BEML / Consultant appointed by BEML for the work)	Ltre	50		
b)	Diluting and injecting chemical emulsion for POST-CONSTRUCTIONAL anti-termite treatment along external wall where the apron is not provided using chemical emulsion Chlorpyriphos/ Lindane E.C. 20% with 1% concentration @ 7.5 litres / sqm of the vertical surface of the substructure to a depth of 300 mm including excavation of channel along the wall & rodding etc. complete:	RM	60		
c)	Diluting and injecting chemical emulsion for POST-CONSTRUCTIONAL anti-termite treatment along the external wall below concrete or masonry apron using chemical emulsion Chlorpyriphos/ Lindane E.C. 20% with 1% concentration @ 2.25 litres per linear metre including drilling and plugging holes etc. complete all as specified and directed by Engineer-in - charge.	RM	60		

Item No	Description	Unit	Qty.	Rate/unit in figures & in words Rs.	Amount Rs.
d)	Diluting and injecting chemical emulsion for POST-CONSTRUCTIONAL anti-termite treatment of soil under existing floors using chemical emulsion Chlorpyriphos/ Lindane E.C. 20% with 1% concentration @ one litre per hole, 300 mm apart including drilling 12 mm diameter holes and plugging with cement mortar 1 :2 (1 cement : 2 Coarse sand) to match the existing floor etc. all as specified and directed.	Sq.M	200		
5	Disposal of moorum/building rubbish/ malba/ similar unserviceable, dismantled or waste material by mechanical transport including loading, transporting, unloading to approved municipal dumping grounds for a lead upto 10 km for all lifts, complete as per directions of Engineer-in-charge.	Cu.M	160		
6	Providing & Laying 230mm thick soling for dry rubble packing under floors & ramps with hard stones including transporation, breaking laying in regular lines and level, filling in the interstices with stone chips/ gravel and spalls, well rammed, watered and consolidation etc complete all as directed by Engineer- in- charge	Sq.M	220		
7	Providing and laying in position plain cement concrete (1:3:6) of Grade M10 using 20mm graded granite aggregate in foundation for columns, plinth beams, ramps, trenches,etc and below floors including consolidation curing etc and excluding the cost of steel and shuttering etc complete. all as specified and directed by Engineer- in- charge.	Cu.M	33		
8	Providing and laying in position machine batched, machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix & 20mm graded granite aggregates, including pumping of concrete at site & laying but excluding the cost of centering, shuttering, finishing and reinforcement but including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per site conditions and as per directions of Engineer-in-charge. Note:- Cement content considered is 330kg/Cu.M				
a)	Substructure M25 grade Reinforced cement concrete (up to plinth level) for foundation, footings, plinth beams, columns, pedestals, water storage tanks, etc of all sizes and shapes	Cu.M	42		
b)	M25 grade Reinforced Cement concrete for columns, beams, lintles, cantiliver projections, suspended slabs, walls, pillar, facias, staircases, chajjas etc of any size and shapes, sloped or inclined etc complete all as specified and as directed.	Cu.M	118		
9	Providing form work /shuttering for all concrete work including providing and fixing well supported, leak proof form work to required sizes, level etc., keeping the same in position during concrete and removal of the same after specified period etc complete all as specified and directed by Engineer-in-charge				
a)	RCC Footings, foundations & bases of columns, etc for mass concrete.	Sq.M	66		
b)	Suspended floors, roofs, landings, balconies etc	Sq.M	360		
c)	RCC Lintels, beams, plinth beams, and cantilevers	Sq.M	375		
d)	RCC Columns, Pillars, Piers, Abutments, Posts and Struts	Sq.M	265		
e)	Stairs (excluding landings) except spiral staircases	Sq.M	40		
f)	Small lintels not exceeding 1.5 m clear span, moulding as in cornices, window cills, string courses, bands, copings, bed plates, anchor blocks and the like etc.	Sq.M	20		
10	Providing plaster drip course/ groove in plastered surface or moulding to R.C.C. projections in cement mortar 1:4, finishing the top surface smooth and even etc complete all as specified and directed.	RM	240		

Item No	Description	Unit	Qty.	Rate/unit in figures & in words Rs.	Amount Rs.
11	Supplying and straightening Thermo-Mechanically treated (TMT) bars of grade Fe-500D of various dia including bending, cutting, hooking, placing and binding in position (as per drawing and details) including the cost of binding wire, welding if required etc complete for all heights & works such as columns, beams, lintels, tanks, slabs, facias, etc, complete all as specified and directed by Engineer-in-charge. Note: Payment will be made on the length basis and converted into weight by using standard co-efficient (rolling margins, laps, chairs, spacer bars and wastages will not be paid)	KG	15300		
12	Providing and constructing brick masonry 230mm thick or more with first class burnt clay table mounted bricks in foundation and plinth in Cement mortar 1:6 (1 Cement : 6 coarse sand) including raking of joints, curing etc complete all as specified and directed by Engineer-in-charge	Cu.M	9		
13	Providing and constructing brick masonry 230mm thick or more with first class burnt clay table moulded in superstructure above plinth level up to 2nd floor level in all shapes and sizes in CM 1:6 (1 Cement : 6 coarse sand) including racking of joints, scaffolding curing etc complete all as specified and as directed crackig scaffolding etc complete all as directed.	Cu.M	120		
14	Providing and constructing half brick masonry work with first class burnt clay table moulded bricks in superstructure above plinth level up to 2nd floor level for partition walls in Cement mortar 1:4 including 115mmX75mm. horizontal band (partly) cement concrete at very 1.0 c/c, reinforced with 2 to be provided at very fourth course in brick work (Reinforced stee shall be measured separately rate shall include cost of patly) including scaffolding etc complete all as specified and directed.	Sq.M	120		
15	Providing and fixing approved galvanized chicken wire mesh (24 gauge 12 mm size) to junction of concrete and masonry work and other locations where called for at all the heights with necessary scaffolding etc. including cutting to required sizes, side laps of minimum 75 mm and fixing in position with galvanized wire nails as directed by the Engineer in charge	Sq.M	200		
16	Providing and fixing granite stone of Telephonic black shade/approved colour, shade & texture of 18mm thick gnag saw cut, mirror polished, premoulded and prepolished, machine cut for pantry counters, platforms, vanity counters, window sills, coping, facias and similar locations of required size, laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, & providing opening of required size & shape for wash handbasin, holes for pillar taps etc, including rubbing, curing, moulding and polishing to edges to give high glossy finish etc. complete at all levels.	SqM	3		
17	Providing and fixing sal wood frames for doors, framed and fixed in position with hold fast lugs or with dash fasteners of required dia & length (hold fast lugs or dash fastener shall be paid for separately under relevant item) etc., complete all as specified and directed by Engineer- in -charge.	Cu.M	0.25		
18	Supplying and fixing 35mm thick ISI marked flush door shutters conforming to relevant IS, non decorative type, core of block board construction with frame of 1st class hard wood and well matched teak 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters .35 mm thick including ISI marked Stainless Steel butt hinges(Heavy weight) with necessary screws etc complete all as specified and diredet.	Sq.M	13		
a)	Supplying and fixing 25mm thick teak wood lipping on all edges of flush door shutter etc complete all as specified and directed by Engineer-in-charge	RM	37		

Item No	Description	Unit	Qty.	Rate/unit in figures & in words Rs.	Amount Rs.
19	Supplying and fixing the following hard ware/ fittings for doors as per details below:				
a)	Providing and fixing M.S heavy but hinges of size 125x65x2.12mm ISI marked, IS : 1341, for doors with necessary screws etc. complete all as directed.	Nos.	19		
b)	Providing and fixing M.S sliding door bolts of size 300x16mm ISI marked oxidised fixed to the doors with nuts and screws etc. complete all as specified & directed by Engineer-in-charge	Nos.	4		
c)	Providing and fixing MS pull bolt lock of 85x42mm ISI marked oxidised conforming to IS : 7534 with necessary screws bolts, nut and washers etc. complete all as specified & directed by Engineer-in-charge	Nos.	3		
d)	Providing and fixing M.S door handles of 125mm long conforming to relevant IS with necessary screws etc. complete	Nos.	6		
e)	supplying and fixing Stainless steel dash fastener of 8 mm dia and 75 mm long bolt etc complete all as specified & directed by Engineer-in-charge	Nos.	20		
f)	Supplying and fixing MS Hold fast Iron 300x40x5mm for door frames etc complete all as specified and directed by Engineer-in-charge	Nos.	6		
20	Supplying and fixing MS grill frame made up of MS flat of required size & square rods/round bars of required dia fixed to the window/ventilator openings firmly. The grills to be painted with one shop coat of zinc chromate primer and two finished coats of enamel paint in approved shade etc., complete as directed, Note: The rate shall include fixing the grill to the wall etc complete all as specified and directed. The MS grill design wouldl be provided by BEML or consultant approved by BEML	KG	457		
21	Providing and fixing Toilet cubicals with door, pilaster and divider of 12mm thick board both side decorative compact laminate of required colour, shade and sizes as manufactured by Besco or Merino (Titan std) or Greenlam Sturdo Classique Grandeur or Solace (SS series) by SPCMS or T Line including stainless steel accessories (SS-304 grade) like square top rail, legs, knob, thumb turn and indicator, twin coat hook, door stopper, adjustable legs, gravity hinges, and locking arrangement, SS chanel etc as desired. all complete as per drawing and direction of Engineer in charge. Note: The Surface area for wall including shutter shall be measured for payment	Sq.M	8		
22	Providing and fixing Urinal Partitions of approximate size 450 mm x 900 mm height and manufactured by Besco by Merino (Titan std) or Greenlam Sturdo Classique Grandeur or Solace (SS series) by SPCMS or T Line or approved equivalent including stainless steel accessories (SS-304 grade) and 12 mm thick etc complete all as per design & working drawing and as per direction of Engineer-in-charge or Consultant approved by BEML. Note: The urinal partitions shall be of min. Basic cost of Rs. 3800/no / MRP	Sq.M	1		
23	Supplying and fixing rolling shutters of approved make, made of 80x1.25mm M.S. laths, interlocked together through their entire length and jointed together at the end by end locks, mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5 cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS: 4454 - part 1 including 1.25mm thick M.S. top cover for rolling shutters and all surface painted with 2 coats of synthetic enamel paint of approved colour over a coat of primer, all fitted and fixed complete all as specified & directed by Engineer in charge Note: Clear area of shutter shall be measured for payment.	Sq.M	10		

Item No	Description	Unit	Qty.	Rate/unit in figures & in words Rs.	Amount Rs.
a)	Supplying and fixing ball bearing for rolling shutters dia and size as required etc., complete all as specified and directed by Engineer-in-charge	Nos.	2		
24	Providing and fixing circular/ Hexagonal cast iron or M.S. sheet box for ceiling fan clamp, of internal dia 140 mm, 73 mm height, top lid of 1.5 mm thick M.S. sheet with its top surface hacked for proper bonding, top lid shall be screwed into the cast iron/ M.S. sheet box by means of 3.3 mm dia round headed screws, one lock at the corners. Clamp shall be made of 12 mm dia M.S. bar bent to shape as per standard drawing etc., complete all as specified & directed by Engineer-in-charge	Nos.	5		
25	Providing and fixing hand rail made up M.S tube of approved size by welding etc. to steel ladder railing, balcony railing, staircase railing and similar works, including hand railing to be painted with one coat of zinc chromate primer and two finished coats of enamel paint in approved shade etc., complete all as specified & directed by Engineer-in-charge. Note: The rate shall include fixing handrailing to staire case or concrete memebbers firmly. (The MS grill design shall be provided by the BEML or consultant appointed by BEML)	Kg	360		
26	Providing and laying 62 mm thick cement concrete flooring with concrete hardener topping, under layer 50 mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) and top layer 12mm thick cement hardener consisting of mix 1:2 (1 cement hardener mix : 2 graded stone aggregate, 6mm nominal size) by volume, hardening compound mixed @ 2 litre per 50 kg of cement or as per manufacture's specifications. This includes cost of cement slurry etc complete all as directed and specified by Engineer-in-charge	Sq.M	137		
27	Providing & fixing skirting up to 30 cm height, 18mm thick with cement mortar 1:3 (1 cement : 3 coarse sand), finished with a floating coat of neat cement. etc., complete all as specified & directed by Engineer-in-charge	Sq.M	6		
28	Providing and laying vitrified floor tiles of size 600x600mm (thickness to be specified by the manufacturer) with water absorption less than 0.08% and conforming to IS: 15622, of approved make, in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand), jointing with grey cement slurry @ 3.3 kg/ sqm including grouting the joints with white cement and matching pigments etc., complete. Note:- 1) Make :- Kajaria- Eternity series, Johnson's - Sandex series, somany : Durastone (geostone series) AGL - Grestel series, RAK - Urano series. 2) The make would be approved by BEML or counsultant appointed by BEML.	Sq.M	133		
29	Providing and laying Vitrified tiles in different sizes (thickness to be specified by Manufacturer), with water absorption less than 0.08 % and conforming to I.S. 15622, of approved make, in all colours & shade, in skirting, riser of steps, over 12 mm thick bed of cement mortar 1:3 (1cement: 3 coarse sand), jointing with grey cement slurry @ 3.3 kg/ sqm including grouting the joint with white cement & matching pigments etc. complete. Note:- Make: - Kajaria - Eternity series , Johnson's - Sandex series, Somany : Durastone (geostone series) AGL - grestek series, RAK - Urbano series. 2) The make would be approved by BEML or counsultant appointed by BEML.	Sq.M	6		

Item No	Description	Unit	Qty.	Rate/unit in figures & in words Rs.	Amount Rs.
30	Providing and fixing 1st quality ceramic glazed wall tiles of size 300 mmx450 mm or more conforming to IS: 15622 (thickness to be specified by the manufacturer), of approved make, in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge, in skirting, risers of steps and dados, over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm, including pointing in white cement mixed with pigment of matching shade complete. Note:- Make: -Kajaria - Eternity series , Johnson's - Sandex series, Somany : Durastone (geostone series) AGL - grestek series, RAK - Urbano series .2) The make would be approved by BEML or consultant appointed by BEML.	Sq.M	70		
31	Providing and laying Ceramic glazed floor tiles of size 300x300 mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS : 15622 of approved make in colours such as White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick cement mortar 1:4 (1 Cement : 4 Coarse sand), jointing with grey cement slurry @ 3.3kg/sqm including pointing the joints with white cement and matching pigment etc., complete. Note:- Make: -Kajaria - Eternity series , Johnson's - Sandex series, Somany : Durastone (geostone series) AGL - grestek series, RAK - Urbano series. 2) The make would be approved by BEML or consultant appointed by BEML.	Sq.M	15		
32	Providing and laying Polished Granite stone flooring for stair case landing, treads, risers, skirtings in required design and patterns, in linear as well as curvilinear portions of the building etc., complete as per the architectural drawings with 18 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with cement slurry and pointing with white cement slurry admixed with pigment of matching shade including rubbing, curing and polishing etc. all complete as specified and as directed by the Engineer-in-Charge	Sq.M	42		
33	Supplying and fixing granite sote, over and above corresponding basic item, in facia and drops of width up to 150mm with epoxy resin based adhesive, including cleaning etc complete.	RM	9		
34	Providing and making khurras 45x45 cm with average minimum thickness of 5 cm cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm nominal size) over P.V.C. sheet 1 m x1 m x 400 micron, finished with 12 mm cement plaster 1:3 (1 cement : 3 coarse sand) and a coat of neat cement, rounding the edges and making and finishing the outlet complete.	Nos.	5		
35	Providing and fixing on wall face unplasticised Rigid PVC rain water pipes, conforming to relevant IS including jointing with seal ring leaving 10 mm gap for thermal expansion, fixed with necessary MS Clamps of approved quality etc., complete all as specified & directed by Engineer-in-charge				
a)	75 mm diameter	RM	20		
b)	110 mm diameter	RM	20		
36	Providing and fixing on wall face unplasticised - PVC moulded fittings/ accessories for unplasticised Rigid PVC rain water pipes conforming to relevant IS including jointing with seal ring leaving 10 mm gap for thermal expansion.				
a)	Coupler				
	75 mm	Nos.	1		
	110 mm	Nos.	1		
b)	Single tee without door				
	75 mm X 75 mm X 75 mm	Nos.	1		
	110 mm X 110 mm X 110 mm	Nos.	1		
c)	Shoe (Plain)				

Item No	Description	Unit	Qty.	Rate/unit in figures & in words Rs.	Amount Rs.
	75 mm	Nos.	1		
	110 mm	Nos.	1		
d)	Bend 87.5°				
	75 mm bend	Nos.	1		
	110 mm bend	Nos.	1		
37	Providing and placing on terrace of polyethylene water storage tank conforming to relevant IS, with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes with necessary fittings and including the base support for tank etc., complete all as specified & directed by Engineer-in-charge	litre	4000		
38	Providing and rendering plaster to internal brick/concrete surface, 12 mm thick cement plaster of mix :1:4 (1 cement: 4 fine sand) including scaffolding to the required heights, curing cleaning of stains on joinery finished to levels, right angles and plumb and fixing the 24 quage chicken wire ,mesh at all junctions of RCC members and brick mansonary including cutting fixing cutiing etc., complete all as specified & directed by Engineer-in-charge Note: The chicken mesh shall measured & paid separately under relevant item.	Sq.M	650		
39	Providing and rendering plaster to external brick/ concrete surface, 20 mm thick in cement plaster of mix 1:4 (1 cement: 4 coarse sand) including scaffolding to the required heights, curing cleaning of stains on joinery finished to levels at right angles and plumb etc., complete all as specified & directed by Engineer-in-charge	Sq.M	730		
40	Providing plastering to ceiling surface for both internal and external concrete surface of 6 mm thick cement plaster of mix :1:3 (1 cement : 3 fine sand) including scaffolding, curing etc., complete all as specified & directed by Engineer-in-charge	Sq.M	400		
41	Punning walls :- Providing & applying Gypsum plaster using M/s Saint Gobain Expert punning material of minimum thickness 10mm etc, complete all as specified & directed by the Engineer in- charge Note:- The rate is deemed to include for providing & removal of scaffolding, cleaning of paint stains, materials, labour equipement and machinery loading and unloding traportation and all other incidental chagres etc., complete all as specified & directed by Engineer-in-charge	Sq.M	1050		
42	Providing & applying two coats wall painting with premium acrylic emulsion paint of interior grade, having VOC (Volatile Organic Compound) content less than 50 grams/ litre of approved brand and manufacture, including applying additional coats wherever required to achieve even shade and colour.including prepare the plastered surface, scaffolding etc., complete all as specified & directed by Engineer-in-charge. Note: The brand/make of paint would be approved by BEML or consultant appointed by BEML	Sq.M	1050		
43	Applying priming coats with primer of approved brand and manufacture, having low VOC (Volatile Organic Compound) content.With water thinnable cement primer on wall surface having VOC content less than 50 grams/litre etc., complete all as specified & directed by Engineer-in-charge Note: The brand/make of priming paint would be approved by BEML or consultant appointed by BEML	Sq.M	1050		

Item No	Description	Unit	Qty.	Rate/unit in figures & in words Rs.	Amount Rs.
44	Providing and applying two or more coats of Acrylic Smooth exterior paint for external wall surface of required shade :New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/10 sqm) including prepare the surface, scaffolding etc., complete all as specified & directed by Engineer-in-charge.Note: The brand/make of paint would be approved by BEML or consultant appointed by BEML	Sq.M	730		
45	Providing and applying Melamine polish Asian paints Melamine gold or Timbertone Melamine of ICI dulux or Wudfin of Pidilite Industries Limited on natural wood & natural veneer works (Two or more coats) including staining to the approved colour and shade as per the manufacturers specification and the directions of the Engineer-in-charge. Note: The brand/make of polish would be approved by BEML or consultant appointed by BEML	Sq.M	18		
46	Supplying and fixing 600x450 mm beveled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers etc., complete all as specified & directed by Engineer-in-charge	Nos.	2		
47	Providing and fixing white vitreous china pedestal type water closet (European type WC pan-white) with solid plastic seat & lid 10litre low level white PVC flushing cistern with flush pipe and manually controlled device (handle lever) with all fittings & fixtures like P trap/S trap etc., including cutting and making good the walls & floors wherever required etc., complete all as specified & directed by Engineer-in-charge Note: The brand/make would be approved by BEML or consultant appointed by BEML	Nos.	2		
48	Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350 mm and 340x410x265 mm sizes respectively with automatic flushing cistern of (5 litre white PVC automaticflushing cistern) standard flush pipe and C.P. brass spreaders with brass unions and G.I clamps complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required etc., complete all as specified & directed by Engineer-in-charge. Note: The brand/make would be approved by BEML or consultant appointed by BEML	Nos.	3		
49	Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps, 32 mm C.P. brass waste of standard pattern, including painting of fittings and rackets, cutting and making good the walls wherever require etc., complete all as specified & directed by Engineer-in-charge	Nos.	3		
50	Providing and fixing 100mm C.I. Nahani Trap including C.I. grating bend and piece of C.I. pipe upto the outside face of the wall etc., complete all as specified & directed by Engineer-in-charge	Nos.	6		
51	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, 25mm nominal outer dia pips for internal work of exposed on wall having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints etc., complete all as specified & directed by Engineer-in-charge	RM	20		

Item No	Description	Unit	Qty.	Rate/unit in figures & in words Rs.	Amount Rs.
52	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings This includes jointing of pipes & fittings with one step CPVC solvent cement ,trenching ,refilling & testing of joints complete as per direction of Engineer in Charge				
a)	20 mm nominal outer dia Pipes	RM	5		
b)	25 mm nominal outer dia Pipes	RM	5		
53	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :etc., complete all as specified & directed by Engineer-in-charge				
a)	20 mm nominal bore	Nos.	2		
b)	25 mm nominal bore	Nos.	2		
54	Providing and fixing uplasticised PVC connection pipe of 45 cm length & 15mm nominal bore fixed with brass unions etc., complete all as specified & directed by Engineer-in-charge	Nos.	5		
55	Providing & Constructing masonry Chamber With common burnt clay F.P.S.(non modular) bricks of class designation 5.0 and of size 60x60x75 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for valve, with C.I. surface box 100mm top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size), i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design.	Nos.	1		
56	Providing & Fixing 80mm dia. C I dirt box strainer for bulk type water meter with nuts 80mm dia. Y Strainer (screwed / flanged) with stainless steel fine wire mesh perforated sheet basket with necessary flange / unions nuts, bolts and washers, rubber insertions etc., complete all as specified & directed by Engineer-in-charge	Nos.	2		
57	Providing laying & jointing 100mm dia glazed stoneware pipes with stiff mixture of cement mortar in the proportion of 1:1 (1cement:1 fine sand) including testing of joints etc., complete all as specified & directed by Engineer-in-charge	RM	10		
58	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) for bed of S.W. pipes including bed concrete as per standard design etc., complete all as specified & directed by Engineer-in-charge	RM	10		
59	Making connection of drain or sewer line with existing manhole for pipes 100 to 250mm dia. including breaking into and making good the walls, floors with cement concrete 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) cement plastered on both sides with cement mortar 1:3 (1 cement : 3 coarse sand), finished with a floating coat of neat cement and making necessary channels for the drain etc., complete all as specified & directed by Engineer-in-charge	Nos.	1		
60	Constructing brick masonry road gully chamber 45 x 45 x 77.5 cm with With common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in cement mortar 1:4 (1 cement : 4 coarse sand) with pre-cast R.C.C. vertical grating etc., complete all as specified & directed by Engineer-in-charge	Nos.	1		
61	Providing and fixing in position C.I. cover with frame (light duty) 455x610 mm internal dimensions total weight of cover and frame to be not less than 38 kg etc., complete all as specified & directed by Engineer-in-charge	Nos.	2		

Item No	Description	Unit	Qty.	Rate/unit in figures & in words Rs.	Amount Rs.
62	Providing and fixing aluminium work for doors, windows, ventilators, fix louvers/ sun breaker and partitions with extruded built up standard tubular sections/appropriate Z sections, wedge, oval / eye shaped, fish shaped and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass/ stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners would be paid for separately).				
a)	For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (Fittings shall be paid for separately)				
b)	Anodised aluminium (anodised transparent or dyed to required shade according to relevant IS, Minimum anodic coating of grade AC 15)	Kg	227		
63	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. With float glass panes of 5 mm thickness fixed with EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of Engineer-in-charge . (Cost of aluminium snap beading shall be paid in basic item):	Sq.M	44		
64	Providing and fixing 12 mm thick frameless toughened glass door shutter of approved brand and manufacture, including providing and fixing top & bottom pivot & double action hydraulic floor spring type fixing arrangement and making necessary holes etc. for fixing required door fittings, all complete as per direction of Engineer-in-charge (Door handle, lock and stopper etc. shall be paid separately).	Sq.M	3		
65	Providing and fixing Single point locking handles with Key of approved make & approved powder coated to required colour or shade including the cost of screw and other incidental charges complete as per manufacturers specification & directions of Engineer in charge	Nos.	2		
66	Providing and fixing 100 mm concealed aluminium lock of Ebco or equivalent mm with necessary screws etc. complete and of approved shade and sample as approved by architect etc. complete at all floors.	Nos.	32		
67	Providing and fixing fixed Anodised Aluminium louvers clip in windows as per direction of Engineer incharge. Payments of glass shall be paid separately.	Pair	8		
68	Providing & laying Waterproofing treatment in sunken portion of WCs, bathroom etc., by applying cement slurry mixed with water proofing cement compound consisting of applying : a) first layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm. This layer will be allowed to air cure for 4 hours. b) Second layer of slurry of cement @ 0.242 kg/sqm mixed with water proofing cement compound @ 0.126 kg/sqm. This layer will be allowed to air cure for 4 hours followed with water curing for 48 hours. The rates includes preparation of surface, treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry.	Sq.M	20		
69	Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc. consisting of following operations:				

Item No	Description	Unit	Qty.	Rate/unit in figures & in words Rs.	Amount Rs.
a)	Applying a slurry coat of neat cement using 2.75 kg/sqm of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls up to 300 mm height including cleaning the surface before treatment.				
b)	Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115 mm size with 50% of cement mortar 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to relevant IS and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement :5 coarse sand) admixed with water proofing compound conforming to relevant IS and approved by Engineer-in-charge, laid to required slope and treating similarly the adjoining walls up to 300 mm height including rounding of junctions of walls and slabs.				
c)	After two days of proper curing applying a second coat of cement slurry using 2.75 kg/ sqm of cement admixed with water proofing compound conforming to relevant IS and approved by Engineer in-charge.				
d)	Finishing the surface with 20 mm thick joint less cement mortar of mix 1:4 (1 cement :4 coarse sand) admixed with water proofing compound conforming to relevant IS and approved by Engineer in-charge including laying glass fiber cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3 mm deep.				
e)	The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. All above operations to be done in order and as directed and specified by the Engineer-in-Charge.				
f)	With average thickness of 120 mm and minimum thickness at khurra as 65 mm.	Sq.M	187		
70	Providing and laying machine mixed brickbat cement concrete in volumetric proportion 1:3:6 (1 cement : 3 coarse sand : 6 brickbats aggregates 40mm and down) for specified thickness, for sunk floor, Balcony, terraces at any height above plinth level etc. including centering and shuttering if required, laying spreading, ramming, consolidating as per requirement and curing etc. complete with water proofing compound as per manufacturers specification as directed.	Cu.M	2		
	Note: The brand/water proofing chemicals to be used would be approved by BEML or Architect/Consultant appointed by BEML				
	TOTAL COST OF CIVIL WORKS EXCLUDING GST			Rs.	
	GST AMOUNT			Rs.	
	TOTAL COST OF CIVIL WORKS INCLUDING GST			Rs.	
B	ELECTRICAL WORKS				
1	Providing wiring for light point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required all as specified and directed by Engineer -in- charge.	Point	57		

Item No	Description	Unit	Qty.	Rate/unit in figures & in words Rs.	Amount Rs.
2	Providing wiring for twin control light point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, 2 way modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as require all as specified and directed by Engineer- in chagre.	Point	16		
3	Providing wiring for twin control Fan point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, 2 way modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required all as specified and directed by Engineer-in changer	Point	10		
4	Providing wiring for exhaust fan point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required all as specified and directed.	Point	8		
5	Providing wiring for circuit/ submain wiring alongwith earth wire (3x2.5 sqm) with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required all as specified and directed by Enginner -in- charge.	Meter	50		
6	Supplying and drawing following pair 0.5 mm dia FRLS PVC insulated annealed copper conductor, unarmored telephone cable in the existing surface/ recessed steel/ PVC conduit as required all as specified and directed by Enginner- in charge.				
a)	4 pair	Meter	120		
7	Supplying and fixing 25mm dia of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required all as specified and directed by Enginner in charge.	Meter	120		
8	Providing Mains wires of 4x 6 sq mm and 2 x 2. 5 Sqmm copper conductor pvc insulated 650V grade FR wires drawn in concealed conduits of 25 & 32 mm dia MMS PVC pipe complete with all accessories thro ceiling/walls/ducts etc complete all as directed by Engineer in charge,	Meter	200		
9	Supplying and fixing 3 meter length, UTP patch cord of Cat 6 type in position as per specification	Each	12		
10	Providing wiring for light, fan point for online UPS system with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required all as specified and directed by Engineer in charge.	Point	60		
11	Supplying and fixing following size/ modules, GI box along with modular base & cover plate for modular switches in recess etc. as require all as specified and directed by Enginner in charge. Note: Brand/Make woulde be approved by BEML / Architect or consultant appointed by BEML				
a)	1 or 2 Module (75mmX75mm)	Each	2		
b)	3 Module (100mmX75mm)	Each	2		
c)	4 Module (125mmX75mm)	Each	5		
d)	6 Module (200mmX75mm)	Each	6		
e)	8 Module (125mmX125mm)	Each	5		
f)	12 Module (200mmX150mm)	Each	8		

Item No	Description	Unit	Qty.	Rate/unit in figures & in words Rs.	Amount Rs.
12	Supplying , Installation, testing and commissioning of ceiling fan, including wiring the down rods of standard length (upto 30 cm) with 1.5sq. mm FRLS PVC insulated, copper conductor, single core cable, including providing and fixing phenolic laminated sheet cover on the fan box etc. as required all as specified and directed by Enginner in charge. Note: Brand/Make woulde be approved by BEML / Architect or consultant appointed by BEML	Each	10		
13	Supplying & Installation of exhaust fan in the existing opening, including making good the damage, connection, testing, commissioning etc. as required all as specified and directed by Enginner in charge. Note: Brand/Make woulde be approved by BEML / Architect or consultant appointed by BEML				
a)	Upto 450 mm sweep	Each	8		
14	Supplying and fixing of following ways surface/ recess mounting, vertical type, 415 V, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 A tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCBs (but without MCBs and incomer) as required . (Note : Vertical type MCB TPDB is normally used where 3 phase outlets are required.) Brand/Make woulde be approved by BEML / Architect or consultant appointed by BEML				
a)	8 way (4 + 24), Double door	Each	2		
15	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required Note: Brand/Make woulde be approved by BEML / Architect or consultant appointed by BEML				
a)	5/6 A switch	Each	112		
b)	2 way 5/6 A switch	Each	42		
c)	15/16 A switch	Each	22		
d)	3 pin 5/6 A socket outlet	Each	27		
e)	Telephone socket outlet	Each	16		
16	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 3 pin 5/6 A modular socket outlet and 5/6 A modular switch, connections etc. as required. Note: Brand/Make woulde be approved by BEML / Architect or consultant appointed by BEML	Each	28		
17	Supplying ,Installation ,Testing & Commissioning of wall bracket /ceiling fittings of all sizes and shapes containing upto two GLS/CFL/LED lamps per fitting, complete with all accessories including connections etc. as required. Note: Brand/Make woulde be approved by BEML / Architect or consultant appointed by BEML	Each	83		
18	Supplying and erecting fresh air cum exhaust fan of light duty 250 V A.C. 50 cycles 225mm. 1400 RPM rust proof body & blades, wire mesh, duly erected in an approved manner, etc complete all as specified and directed by Enginner in charge.Note: Brand/Make woulde be approved by BEML / Architect or consultant appointed by BEML	Each	2		
19	Supplying and erecting exhaust fan heavy duty 230 V A.C. 50 cycles 375/380 mm. 1400 RPM complete erected in position as per specification for stores etc, completed all as specified and directed. Note: Brand/Make woulde be approved by BEML / Architect or consultant appointed by BEML	Each	6		
20	Supplying & erecting on line UPS pure sine wave of 5 kVA capacity complete with standard features, along with necessary SMF batteries for 30 mins battery backup, as per manufactures specification. Note: Brand/Make woulde be approved by BEML / Architect or consultant appointed by BEML	Each	1		

Item No	Description	Unit	Qty.	Rate/unit in figures & in words Rs.	Amount Rs.
21	Supplying and erecting 12 V/42Ah SMF battery with battery terminal wire, duly charged complete with 24 months warranty complete Note: Brand/Make would be approved by BEML / Architect or consultant appointed by BEML	Each	3		
22	Providing earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required all as specified and directed by Engineer in charge.	set	1		
23	Supplying, installation, testing & commissioning of smoke detector with builtin LED and mounting base complete with all connections etc. as required.Note: Brand/Make would be approved by BEML / Architect or consultant appointed by BEML	Each	10		
24	Supply and fixing of following light fixtures complete with mounting ,connections, shifting as required.				
a)	Providing & fixing power point for A.C. with metal clad socket and MCB as directed by Architect. Note: Brand/Make would be approved by BEML / Architect or consultant appointed by BEML	Nos.	8		
b)	Projector- Supplying & Erecting projector system & screen completely Note: Brand/Make would be approved by BEML / Architect or consultant appointed by BEML	Nos.	1		
c)	Supplying & fixing ceiling Mounted ISI LED panel Light 15/18 Watt. Note: Brand/Make would be approved by BEML / Architect or consultant appointed by BEML	Nos.	47		
25	Supplying & fixing wall Mounted ISI LED Light 15/18 Watt. Note: Brand/Make would be approved by BEML / Architect or consultant appointed by BEML	Nos.	23		
2.4	Supplying and installion of the following Air conditioner Note: Brand/Make would be approved by BEML / Architect or consultant appointed by BEML				
a)	1.0 tr Split Ac Unit 3 star	Nos.	3		
b)	1.5 tr Split Ac Unit 3 star	Nos.	2		
c)	2.0 tr Split Ac Unit 3 star	Nos.	3		
d)	Installation charges for split AC	Nos.	8		
e)	MS stand for Outdoor split unit	Nos.	8		
f)	Copper Piping with Insulation	Rft	120		
g)	Drain Piping	Rft	350		
26	Supplying and erecting regular/ standard model ceiling fan of 900 /1050 mm. sweep complete erected in position. Note: Brand/Make would be approved by BEML / Architect or consultant appointed by BEML	Nos.	10		
27	Supplying and erecting static energy meter 440 V 50 Hz. 100A ISI mark meter AC 3 phase 4 wires LCD/LED display complete erected on polished teak wood board duly wired with required size of weather proof PVC wires duly tested for class II accuracy by electric supply company. Note: Brand/Make would be approved by BEML / Architect or consultant appointed by BEML	Nos.	1		
	TOTAL COST OF ELECTRICAL WORKS EXCLUDING GST			Rs.	
	GST AMOUNT			Rs.	
	TOTAL COST OF ELECTRICAL WORKS INCLUDING GST			Rs.	

	TOTAL COST OF CIVIL+ELECTRICAL WORKS EXCLUDING GST (SECTIONS A+B)			Rs.	
	GST AMOUNT (SECTIONS A+B)			Rs.	
	TOTAL COST OF CIVIL+ELECTRICAL WORKS INCLUDING GST (SECTIONS A+B)			Rs.	

Item No	Description	Unit	Qty.	Rate/unit in figures & in words Rs.	Amount Rs.
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AMOUNT IN WORDS-

RUPEES.....

NOTE:

- (1) The rate quoted for all the above items is deemed to include for providing and removal of scaffolding/staging as required for the work under relevant item
- (2) The works have to be executed strictly as per the drawings and as per the directions given by the Consultant/Architect appointed by BEML
- (3) Time is the essence of the contract and the time schedule / completion period of the work mentioned has to be adhered to.

AUTHORIZED SIGNATORY-PURCHASE DEPT.

SIGNATURE OF CONTRACTOR WITH