

	Period of contract:	Four Months (04 Months)
ISSUED TO:	EMD :	Rs. 2,54,000/-

Sub: Providing Vitrified flooring, false ceiling, wall panelling, Painting works & associated civil works for Corridor area (Ground & First floor) of admin block, in Bangalore Complex, BEML Ltd, Bangalore.

SCHEDULE 'A' - BILL OF QUANTITIES

Sl. No	Description	Unit	Qty	Rate/unit in fig. & in words Rs.	Amount (Rs)
1	<p>Preparation & submission of design detail & interiors drawing as hard copy(03 copies A2 or A3 size, colour drawings) and soft copy (both in Autocad & PDF) viz Plan,sections,elevations, interiors of Corridors at ground floor & first floor. The L-1 Contractor shall submit the detailed architectural & interior designs and drawings (plans, interior layout, elevations) of Civil, Electrical, in 3D view format along with a walk through. And incorporate any further suggestions and changes suggested by BEML. Note: Contractor should submit 2 options of Architectural & interior drawings, out of which BEML will select either 1 option to go for further process.</p> <p>Note: 1) The approximate (tentative) area considered under the scope of work is: a).Ground floor corridor: Approx Size : 200m Length x 2.0m width. b).First floor corridor: Approx Size : 60.0m Length x 2.0m width. 2) If any other additional item operates other than the items specified in BOQ, the same will be operated as Non-Tendered items & the bill is prepared based on actual worked and submission of invoice.</p>	JOB	1.0		
2	<p>Dismantling the existing wall panelling consisting of wooden framework, plywood, laminate/veneer sheets of any description including beading, nails, screws etc., complete carefully without damaging the adjacent walls / panelling / surfaces including segregating and stacking separately the serviceable materials and unserviceable materials. The serviceable materials shall be handed over to M/s BEML Ltd in good condition and the unserviceable materials shall be disposed away from the site upto a distance not exceeding 5.0KM and not objected by local civic/ BEML authorities etc., complete all as specified and as directed by Engineer in Charge. Note: The rate quoted is deemed to include for making good for any damaged adjacent surfaces during dismantling.</p>	Sq.M	230.00		

Sl. No	Description	Unit	Qty	Rate/unit in fig. & in words Rs.	Amount (Rs)
3	Dismantling the existing old mosaic flooring & skirting tiles including cement mortar bedding but not backing coat and removing debris from the premises exceeding 1.5km but not exceeding 5km not objected by local civil authorities etc., complete all as specified and directed by Engineer-in-charge. Note: The dismantled materials should be removed immediately from the premises without disturbing the regular office atmosphere.	Sq.M	90.00		
4	Providing and laying in Position Plain Cement screed Concrete of mix proportion 1:2:4 in floors and other similar works using 20mm down graded granite aggregate, laid in layers and well compacted,mechanical/manual mixing laid to required thickness & gradient as per site condition and finishing the surface smooth & even including curing etc.,complete all as specified and directed by Engineer in charge.	Cu.M	5.0		
5	VITRIFIED TILES FLOORING OVER EXISTING MOSAIC FLOOR INCLUDING SKIRTING & BOARDER TILE : Hacking the existing flooring and Providing and laying premium quality glazed Vitrified tiles over existing mosaic flooring with roff adhesive of size approximately (2'x4') (thickness to be specified by manufacturer), manufactured by M/s NITCO/RAK/Johnson/Kajaria tile adhesive to be made up of M/s BAL ENDURA/ROFF/FOSROC/PIDILITE/LATICRETE 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, jointing with grey cement slurry @ 3.3kg/sqm including grouting the joint with white cement & matching pigments etc. complete.as per instructions of architect. (Basic price of tiles shall not be less than Rs.130/Sft). The clear dimension of floor and skirting in Sq. m will be taken for measurement. (Thickness of tiles to be 10 mm as per the instructions of Engineer in charge). The tiles laid after placing electrical conduit over the existing floor etc., complete all as specified & as per instructions of Engineer - in charge.	Sq.M	700.00		
6	Rendering/Plastering 15mm thick in Cement Mortar 1:4 on fair faces of brick or concrete surfaces including finishing the surfaces even & smooth, curing,tools & tackles etc., complete all as specified and directed by Engineer in charge. Note: The rate quoted is deemed to include for providing and removal of scaffolding/staging wherever necessary.	Sq.M	100.00		

Sl. No	Description	Unit	Qty	Rate/unit in fig. & in words Rs.	Amount (Rs)
7	Preparing and complete removal of the existing surface of internal walls by scrapping, sandpapering, removing dust & including providing necessary repairs to cracks and filling the cracks with suitable crack filling compound and applying 2 or more coats of Premium Plastic emulsion paint of approved colour/shade manufactured by M/s. Asian Paints-(Royal Shyne)/Berger Paints-(Silk Glamour Matt or Sheen) over a coat of royal primer and 3mm thick full putty etc., complete all as specified and as directed by Engineer in Charge. Note: The rate is deemed to include for Providing & removal of scaffolding wherever necessary b) Wastages. 3) Removing all splashes, dirt, etc. and leaving premises in a clean state.	Sq.M	1500.00		
8	Preparing the existing old wooden surfaces of doors, windows,etc., by scrapping, cleaning & applying two or more coats of Melamine polish with wood filler of matching color pigment/powder, manufactured by M/s.Asian paints / M/s. Berger Paints etc., to achieve matt finish complete all as specified and directed by Engineer in Charge. Note: The rate is deemed to include for 1) Wastages. 2) Scaffolding. 3) Removing all splashes, dirt, etc. and leaving premises in a clean state.	Sq.M	460.00		
9	Dismantling the existing Brick masonry wall in any thickness and disposal of unusable materials/ debris outside the site premises to a distance not exceeding 5.0 KM not objected by local civic authorities including lead ,lift etc,complete all as specified and directed by Engineer in charge. Note: 1) The dismantled materials shall be removed immediately from the premises without disturbing the regular production activities . 2) The rate quoted for the item shall deemed to include for providing and removal of scaffolding/staging wherever necessary.	Cu.M	6.00		
10	Providing & constructing Burnt brick masonry of required thickness in Cement Mortar 1:6 using first class table moulded bricks including necessary curing etc., complete all as specified and directed by Engineer in charge. Note: The rate quoted is deemed to include for providing and removal of scaffolding/staging wherever necessary.	Cu.M	3.00		

Sl. No	Description	Unit	Qty	Rate/unit in fig. & in words Rs.	Amount (Rs)
11	<p>UPVC SLIDING WINDOWS: Removing the existing old MS Windows and handing over the same to M/s BEML Ltd & providing patch plastering for jambs in Cement Mortar 1:4 and Supplying and fixing factory made uPVC 3-track glazed sliding windows with SS flymesh shutter, ventilators colour, manufactured by M/s. Prominance / NCL VEKA with profile made out uPVC sections (profile colour-white) fitted with 6.00 mm thick clear toughened glass including arrangements like weather sealed beading, gaskets, suitable coupling parts, sliding pop up handle, locking system and all standard hardware like screws, nails, protected section etc complete to suit the overall size of openings as specified and directed by manufacturers instruction. Note:-1) Rate quoted for the item deemed to include for providing and removal of scaffolding wherever necessary. 2) After fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of required size and of approved quality, all complete as per approved drawing & direction of Engineer-in-Charge.</p>	Sq.M	90.00		
12	<p>Modification of doors, Windows by removing the existing glass and putting the wooden/plywood composite panel with all round teakwood beading for doors & new glass for windows of different sizes as per site condition, including necessary hardware if any require to replace to achieve good condition including repolishing the door / window with wood guard, including replacing all the hardware fittings of doors with new fittings viz., tower bolts, hinges, aldrop, doorstopper, mortice lock, door closure etc., complete all as specified & directed by Engineer-in-charge . Note: 1) Removing the old glasses of door & window approx 4 nos of glass per door & 4 nos of glass per window of different sizes is considered as complete one (01) door/window modification. 2) The Contractor's quoted rate is deemed to include for all wastages etc.,3) Contractor to make a sample and take approval from Engineer in charge.</p>	Nos	90.00		
13	<p>Supplying and fixing of 19 mm thick black granite up to 300 mm width having outer slope to drain off rain water and both side edge polished for sill, jambs and soffit at the periferial of UPVC window etc., complete all as specified & directed by Engineer-in-charge.</p>	RMT	90.00		
14	<p>Dismantling and removing the existing cement/concrete grill in any thickness without damaging the adjacent walls etc.,and finishing the surface in cement mortar 1:4 to fix uPVC window including disposal of debris away from the site upto a distance not exceeding 5.0KM and not objected by local Civic/ BEML authorities all as specified and as directed by Engineer in Charge. Note: The rate quoted is deemed to include for making good any damaged adjacent surfaces during dismantling.</p>	Sq.M	45.00		

Sl. No	Description	Unit	Qty	Rate/unit in fig. & in words Rs.	Amount (Rs)
15	Supplying & Fixing wooden Wall Cladding By using powder coated aluminium strips for frame of size 50 mm x 25 mm directly fitted on wall with required spacing and level to have grooved formed of 4 mm to get the 6 mm thick Composit panel Code no Ex 11205 fixed over it by using self tapping ESD screws as per the requirement / View . Top of the cladding to be finish with similar wooden composit panel in with formation at the front face and other face touched on the wall, color to be selected and approved by BEML . Rate to include all materials , labour and wastages . Brand - EURO Contractor to make a Mock up and take approval from Engineer in charge before executing etc., complete all as specified & directed by Engineer-in-charge.	Sq.M	700.00		
16	PLANTER BOX: Providing planter boxes of size 530mmx530mmx450mm height fabricated using 19mm thick MR grade com plywood/FRP Based. All the external and internal surfaces shall be finished with 1mm thick laminate and the exposed edges shall be provided with 19mm wide,6mm thick Teak Wood beading and neatly polished. The planter box shall be provided with a GI tray using 22- gauge GI metal etc., complete all as specified and as directed by Engineer In Charge.	Nos	10.0		
17	FALSE CEILING - Supplying and fixing gypsum board false ceiling (L shape with true line) in G.I. frame in 24 to 26 guage main frame bottom to bottom distance at 600mm, with cross patties at 450mm centre to centre with 24 to 26 guage angle cleats size 25mm X 25mm supported at 750 mm centre to center with 12 mm gypsum ceiling board of first quality, conforming relevant IS, manufactured by M/s Knauf / India Gypsum with sheet metal screws. The rate shall be inclusive of cutouts for lights. The ceiling shall be in perfect level and smooth in finish etc. all complete and as specified and directed by Engineer in charge. Note : Rate quoted for the item deemed to include all wastages Note: The rate is deemed to include for Providing & removal of scaffolding wherever necessary b) Wastages. 3) Removing all splashes, dirt, etc. and leaving premises in a clean state. The cost to include scaffolding at site .	Sq.M	500.0		

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18	<p>LAY IN TYPE STANDARD PERFORATED METAL TILES WITH ACOUSTIC FLEECE OF MAKE KNAUF OR LD2 EXPOSED SHILOUTE GRID SYSTEM WOTH FULL TILES</p> <p>Providing & Fixing horizontal level suspended ceiling comprising of Knauf GI Microlook Lay-in Standard Perforated metal ceiling consisting of 600x600mm (Nominal Size) Lay-in tiles of 120 gsm galvanized steel as per IS 277 (2003) suitable for architectural finishes in 0.5 mm thickness as per IS:513 (1994) in Global white color with Square Tegular/Microlook 90° edge having 8mm drop and 5.5mm flange. Tile shall have perforation having hole diameter 2.5mm and open area 16% with linear and diagonal pitch of 5.5mm and 7.7mm respectively and a border of 10mm. The difference between the 2 diagonal dimensions of the tile to be less than 1mm. Tiles shall be flattened by precision leveller to minimize sag to less than 1/400mm. The tile shall be electrostatically polyester powder coated using RoHS compliant powder having coating thickness ranging from 60-80 microns. The powder coating shall pass Salt Spray Test for 750 Hours as per ASTM B117, QUV –A Test for 1000 hours as per ASTM G-154 – (Cycle – 1) and Humidity test for 1000 hours as per DIN 50017. The powder coating shall have an adhesion of GT0 as per EN ISO 2409. <u>The shade variation across batches shall be</u></p> <p>The metal tiles shall have the following parameters: a) Base material: 120 GSM Galvanised steel in 0.5mm thick conforming to relevant IS:277. b) Panel Dimension: 600mmx600mm/595mmx595mm. c) Panel Thickness: 0.5mm thick conforming to IS 513 (1994). d) Perforation details: Hole diameter 2.5mm & open area 16% with linear and diagonal pitch of 5.5mm and 7.7mm & a border of 10mm. e) Panel finish: Electrostatically polyester powder coated using RoHS compliant powder having coating thickness ranging from 60-80 microns. Salt Spray Tested for 750 Hrs/ QUV –A Test for 1000hours/ Humidity test for 1000hours. Adhesion of GT0 as per EN ISO 2409. The shade variation within a manufacturing batch shall be delta E<1 using Excite/BYK Gardner instrument and gloss level 25±5% at 60°, conforming to relevant IS: ASTM B117 (Salt Spray Test) / ASTM G-154 – (Cycle – 1) (QUV-A Test) / DIN 50017 (Humidity Test) EN ISO 2409 (Adhesion) ASTM D523 (Gloss). f) Noise reduction coefficient: up to 0.7, conforming to relevant : ASTM C-423 (Average value of Absorption Co-efficient readings taken at 250 Hz, 500 Hz, 1000 Hz and 2000 Hz). g) Fire properties: class 0/1, conforming to BS:476 PART 6&7. H) Light Reflectance: 63%, conforming to: ASTM:1477-98. I) Dimensional tolerance: +_2mm.</p>	Sq.M	800		

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	SUSPENSION: The tile shall be laid on Shiloute grid with black rebar suspended from true roof by using GI wire and Butterfly clamp. The rate is deemed to include for Providing & removal of scaffolding wherever necessary. b) Wastages. 3) Removing all splashes, dirt, etc. and leaving premises in a clean state.				
19	Demolition/ dismantling the existing cement concrete flooring/hardstanding concrete of any description and in any position not otherwise specifically provided etc and stacking of serviceable materials if any and disposal of unusable materials or debris outside the site premises to a distance not exceeding 5.0 KM not objected by local civic authorities including lead, lift etc., complete all as specified and directed by Engineer in charge. Note: The dismantled materials shall be removed immediately from the premises without disturbing the regular production activities.	Cum	5.0		
20	Supplying and fixing 20mm thick polished black Granite slab for staircase steps & risers, landing. Granite to be polished on one side, jointed neatly with cement mortar and pointed with black oxide or coloured cement compound to match the colour of granite including cutting to template and grinding the edges nosing half round to the slab etc., complete all as specified and directed by Engineer in charge. Note: The quoted rate is inclusive of a) Hacking of existing old tiles on staircase wherever necessary. b) wastages. c) The rate is deemed to include for providing a dubbing coat of 15mm thick in Cement Mortar 1:6	Sq.M	25.0		
21	Providing & laying bedding layer of 20mm thickness in Cement Mortar 1:6 in floor & skirtings, finished smooth & even to required gradient etc., complete all as specified and directed by Engineer in charge.	Sq.M	25.0		
22	STAINLESS STEEL FOR RAILING --Supplying, fabricating, erecting & fixing SS Framed work such as grills, Railings, handrail 1000 mm height Railing in combination of 304 grade SS pipe and 13.5 mm thick laminated toughen glass in combination of 6 mm + 6mm + 1 mm laminate sandwiched panel between both glass with spider SS fitting to hold glass and side wall of staircase as per instruction given. All glasses to be as per site requirement with template shape & printed with BEML Logo with all necessary accessories. The railing to have 75 mm dia SS grabe rail on top of glass. Contractor to generate 3D view and shop drawing for approval before execution etc., complete all as specified and directed by Engineer in charge.	RMT	25.0		

Sl. No	Description	Unit	Qty	Rate/unit in fig. & in words Rs.	Amount (Rs)
23	Supplying & fixing 75 mm thick SS railing of 304 grade grab bar railing on solid wall side with wall anchorage as per direction of engineer in charge. Contractor to generate shop drawing and 3D view for approval etc., complete all as specified and directed by Engineer in charge.	Sq.M	25.0		
24	Supplying & fixing 25mm antiskid tape for staircase threads of first quality, reputed manufacturer etc., complete all as specified and directed by Engineer in charge.	RMT	50.0		
25	Removing the existing wooden wall panelling and stacking at a place as shown and handing over the same to BEML Ltd and Supply and installation of exterior grade Everwood WPC cladd board Interio EWD 170x20Dx2440mm length fitted on aluminium channel 50x25x1.5mm thickness framework over a firm even surface with framework fitted on wall with aluminium L clamp intervals not exceeding 350mm center to center with Bosch / Fischer - N8/60 expansion screws and the fasteners intervals not exceeding 520mm. Composite planks fitted on joists with anti-corrossive SS304 grade start clip with anti-corrossive Corroshield 7x25CSK screws. Exposed section sides to be finished with EWD 57x10 end trims and finished all complete. Note: The rate to include supply of labour, tools and necessary materials to complete the supply and installation of Everwood cladding including preparation of shop drawings. The work shall be executed in the best trade practice by specialised tradesman to line and level as per the detailed drawings, all strictly in accordance with the manufacturer's instructions with a minimum guarantee of 10 years on product and installation. etc., complete all as specified and directed by Engineer in charge.	Sq.M	40.0		
	ELECTRICAL WORKS: WIRING , SWITCHES AND SOCKET OUTLETS;				
26	Supply, erection, testing and commissioning of factory-made metal clad totally enclosed with cast aluminium housing with industrial socket/interlocked combined rotary switch and socket with scrapping earth connection and plug top (all switches & sockets shall be housed in FRLS boxes). The erection rate shall include supply of angle iron frame work and fixing accessories such as grip bolts / grouting etc., complete all as specified and directed by Engineer-in-charge.	Each	2.0		
	Supply, erection, testing and commissioning of power points by providing following switches/sockets mounted flush on to the furniture partition wall or fixed to surface or recessed boxes with all fixing and wiring accessories.				

Sl. No	Description	Unit	Qty	Rate/unit in fig. & in words Rs.	Amount (Rs)
27	SITC with following items suitable for green building energy efficient standard. 1 x 20 Amps, 3-pin (250Volts) single phase universal socket with 20 Amps single pole MCB mounted plug and socket board with IP40 accordance with IS 13033, IS8123, IEC/EN 60439-3 configuration shall be round type. From the scope of supply (for AC power) etc., complete all as specified and directed by Engineer-in-charge.	Each	20.0		
28	SITC with following items suitable for green building energy efficient standard. Plated or powder coated steel/ PVC boxes for fixing the socket 1 x 16 amps 3 pin shuttered modular socket with 16 amps switch mounted on modular plate and box for raw power supply etc., complete all as specified and directed by Engineer-in-charge.	Each	20.0		
29	SITC with following items suitable for green building energy efficient standard. Plated or powder coated steel/ PVC boxes for fixing the socket 2 x 6 amps 3 pin shuttered modular socket with 2 x 6 amps switch mounted on 6 modular plate and box for UPS workstation power supply etc., complete all as specified and directed by Engineer-in-charge.	Each	100.0		
30	SITC with following items suitable for green building energy efficient standard. Plated or powder coated steel/ PVC boxes for fixing the socket 4 x 6 amps 3 pin shuttered modular socket with 2 x 6 amps switch mounted on 12 modular plate and box for UPS workstation power supply etc., complete all as specified and directed by Engineer-in-charge.	Each	5.0		
31	POINT WIRING; Light point controlled directly by switch in switch board shall be measured under the heading SUB-MAINS / CIRCUIT MAINS / POWER WIRING only. Point wiring area with flat / false ceiling: Wiring with 2x2.5 FRLS PVC insulated 1100V grade copper conductor wires and 1 x 1.5 FRLS PVC insulated earth wire in 2mm thick FRLS PVC conduit. Height of ceiling varies from 3.5 to 5.5 meters. A separate neutral shall be run for each circuit etc., complete all as specified and directed by Engineer-in-charge.				
a	Single light point not more than 7M length controlled by 6 Amps switch.	Each	20.0		
b	Two light point of not more than 13M length controlled by 6 Amps switch.	Each	25.0		
c	Two Way switch controlled by one light point	Each	4.0		
d	Three/4 light points of not more than 15M length controlled by 6 Amps switch.	Each	20.0		
e	5/6 light points of not more than 20M length controlled by 6 Amps switch.	Each	15.0		
f	8/10 light points of not more than 25M length controlled by 6 Amps switch.	Each	4.0		

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g	Exhaust fan point with wall-mounted 5A 3-pin socket near fan location and 10 Amps single pole controlling switch located independently. The rate shall also include supply of 5 Amps 3 pin plug top.	Each	4.0		
32	LIGHT FIXTURE: Supply, Store, Erection of Lighting Fixture: Supply, Erection and testing and commissioning the following light fixtures complete with all accessories.				
a	SITC 1X 36 W LED 2 X 2 SQUARE light recess mount suitable for false ceiling Alluminium diecast polycarbonate body 230 v i/p white fixtures of M/s (PHILIPS or WIPRO, makes/brands)	Each	125.0		
b	SITC 22 W LED SQUARE /round light recess mount suitable for false ceiling Alluminium diecast polycarbonate body 230 v i/p white fixtures of (PHILIPS or WIPRO, make/ brands)	Each	100.0		
c	SITC 1 X 18 W LED round light recess mount suitable for false ceiling Aluminum diecast polycarbonate body 230 v i/p white fixtures of M/s (PHILIPS, or WIPRO, make/brands)	Each	100.0		
Note:- 1) The rate quoted for the above items is deemed to include for providing and removal of scaffolding/staging wherever necessary. 2) The contractors/ prospective bidders shall visit the site and acquaint themselves with the site conditions before submission of bid/ quote. 3) The contractor to note that the dismantled materials should be removed and shifted immediately from the site premises without disturbing the regular office atmosphere in the area and the rate is deemed to include for the same. 4) L-1 Contractor to whom the contract is awarded is requested to submit the drawings, 3D Visualisation of proposed Upgradation work of corridors.					
	Total value of work excluding GST (Rs).				
	GST (Rs).				
	Total value of work inclusive of GST (Rs)				

(Total Amount in words Rupees.....
.....)

Authorised Signatory
(Purchase Dept.)

Signature of the Contractor with seal