

TENDER SPECIFICATION

BHEL: PSSR: SCT: 1423

FOR

**Civil work – Modification Works of EVR Building in
various floors**

at

BHEL, PSSR, Nandanam, Chennai

CORRIGENDUM



BHARAT HEAVY ELECTRICALS LIMITED

(A Government of India Undertaking)

Power Sector – Southern Region

690, Anna Salai, Nandanam, Chennai – 600 035.

BHEL: PSSR: SCT: 1423 - CORRIGENDUM

DUE DATE EXTENDED AS FOLLOWS

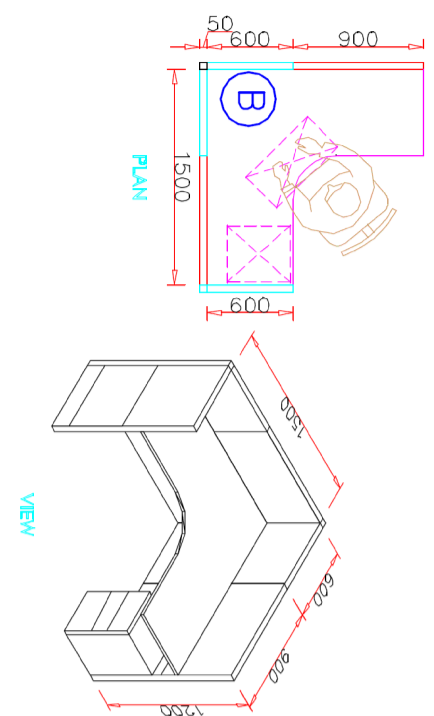
The due date & time of offer submission: 10-02-2011 , 15.00 hrs.

The time of bid opening : 10-02-2011 , 15.30 hrs.

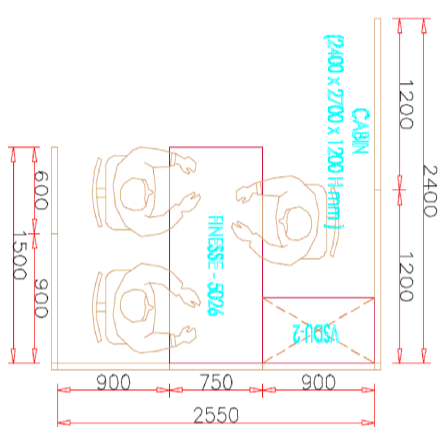
BHEL: PSSR: SCT: 1423 - CORRIGENDUM

TECHNICAL CLARIFICATIONS

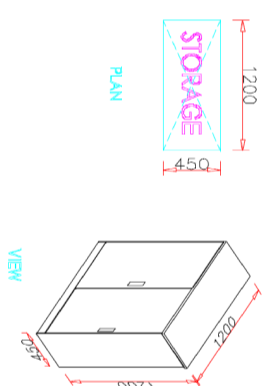
1	2	5	Providing, fabricating & placing in position, the name board as "BHARAT HEAVY ELECTRICALS LIMITED" in Hindi, Tamil and English made of brass or aluminium moulded letters, SS / Acrylic/MDF cut letters, having a total height of around 1.5m , using metallic sheets coated with lustrus paints and with proper exterior protection as per specification. Shall be designed with elegance and as per the instructions of Engineer-in-charge.	Providing, fabricating & placing in position, the name board as "BHARAT HEAVY ELECTRICALS LIMITED" in Hindi, Tamil and English made of self coloured Acrylic cut letters of height (English & Tamil-1 feet, hindi-1/2 feet) having a total height of around 1.5m , using metallic sheets coated with lustrus paints and with proper exterior protection as per specification. Shall be designed with elegance and as per the instructions of Engineer-incharge.
2	6	35	Providing and fixing colour glazed vitreous china European type water closet with atomatic flushing cistern etc., all complete	Providing and fixing colour glazed vitreous china European type water closet with atomatic flushing cistern(DC type) etc., all complete
3	11	71	Paneling to the framework to be cladded with 9mm thick prelaminated (both sides) particle board and cladded with approved veneer (BEM (Birds Eye Maple)-DYED) and finished with Paneling to have 3mm grooves at regular intervals with 3mm thick Stainless Steel inlay.	Paneling to the framework to be cladded with 9mm thick prelaminated (both sides) particle board finished with Paneling to have 3mm grooves at regular intervals with 3mm thick Stainless Steel inlay.
4	12	75	Modular work station	Modular work station (Reference Drawing - BHEL:PSSR:PMX:EVR:009)
5	12	75a	Providing and fixing of 76 mm modular partition made of aluminium extrusion duly powder coated tile based system ...	Providing and fixing of (52 to 76 mm) modular partition made of aluminium extrusion duly powder coated tile based system ...
6	12	75b	Staff, Securities & visitors, model Yuva energy	Providing full fabric chairs for Staff & conference hall with tilt mechanism, pneumatic seat height adjustment, fixed T-arms with polyurethane pads etc., as per drawing and instruction of engineer-in-charge.
7	12	75c	For AGM - Yuva pro (hi-back) in leather finish	Providing full fabric chairs for AGM with tilt mechanism, pneumatic seat height adjustment, fixed T-arms with polyurethane pads etc., as per drawing and instruction of engineer-in-charge.
8	12	75d	AGM visitor and conference, model Yuva pro (mid-back) in leather finish	Providing full fabric chairs for visitors fixed arm rest made of polyurethane pads as per drawing and instruction of engineer-in-charge.
9	13	79	Providing cabinets for files in steel of various sizes with proper locking arrangement as per requirement.(front elevation will be taken for measurement)	Providing cabinets for files of push-pull type in steel including channels for smooth mounting, end stoppers, label holder, proper locking arrangement etc as per drawing and instruction of engineer in charge.(front elevation will be taken for measurement)
10	13	79a	Table for printer/scanner etc., as per requirement	Table for printer/scanner etc., (of size 3'x1'6") as per requirement



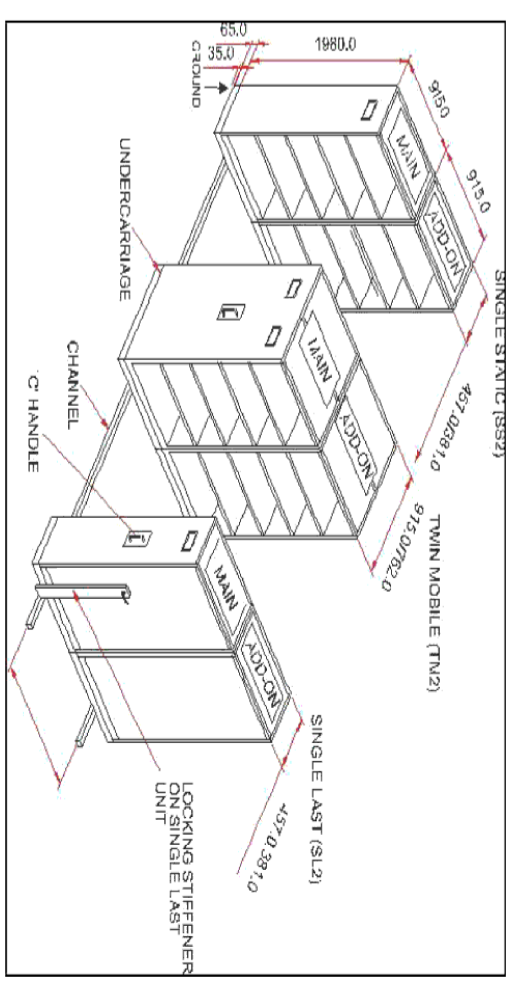
MODULAR WORKSTATION -
1500X1500X1200 Ht. MM



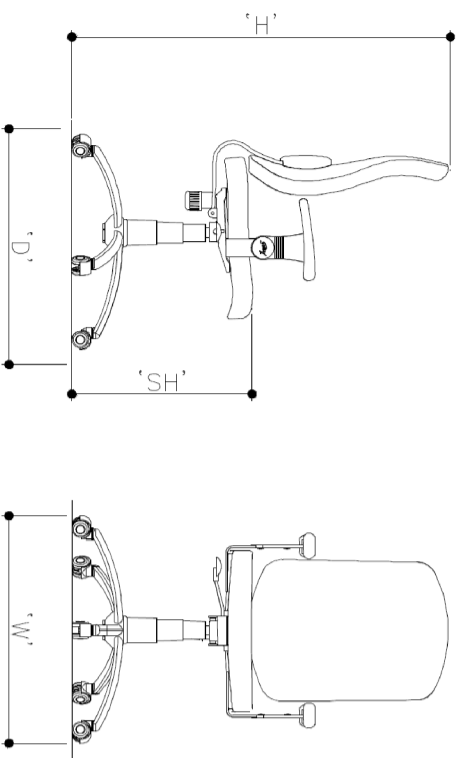
MODULAR CABIN -
1650X1500X1200Ht. MM



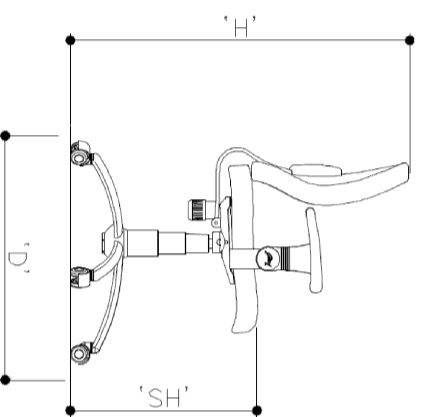
VERTICAL SLIDING DOOR UNIT -
1200X1200X450 Ht. MM



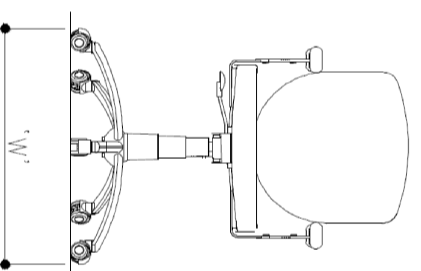
PULL - PUSH TYPE OPTIMIZER



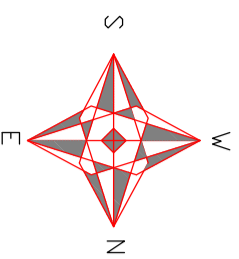
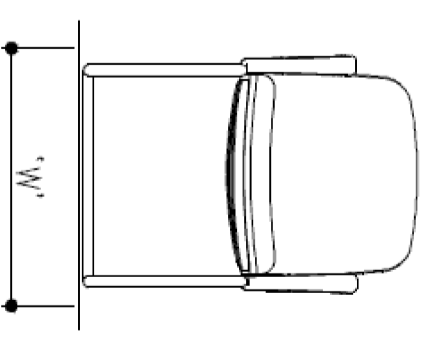
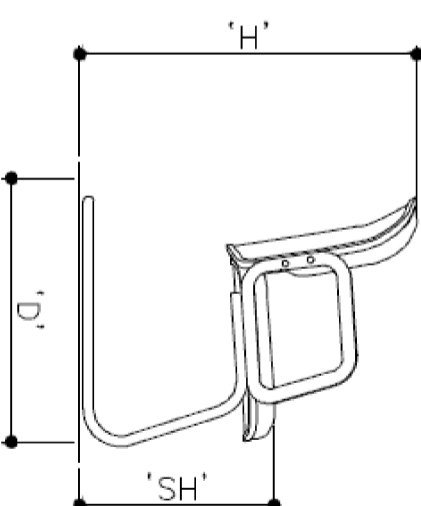
Chair for AGM:
W-70cm,
D-70cm,
H-102 to 115cm,
SH-44 to 56.5cm
Tolerance- ±0.5cm



Chair for staff:
W-70cm,
D-70cm,
H-90 to 102.5cm,
SH-44 to 56.5cm
Tolerance- ±0.5cm



Chair for visitor:
W-55cm,
D-61cm,
H-80.5cm,
SH-44cm,
Tolerance- ±0.5cm



MODULAR FURNITURE



M/S BHEL
Power Sector Southern Region

Drawing No

BHEL:PSSR:PMX:EVR:009

Date

25th Jan 2011

BHEL: PSSR: SCT: 1423 - CORRIGENDUM

GENERAL QUERIES

Tender Ref Clause	Bidder's query	BHEL Clarification
General Points	Steel structural fabrication done at site or away from site	Pre-fabricated material to be brought to site and installation as per the instruction of engineer-in-charge.
	BHEL provide stores for re-usable item	Within the building premises as directed by engineer-in-charge.
	Dispose frequency for debris	To be disposed as and when necessary. Site should be kept clean.
	Timing of work. (throughout the day or only office hours)	Only in office hours and can be extended after getting due approval from BHEL.
	Payment terms	As per Tender Specification.
	Water / Electricity	As per Tender Specification.
	Provision of identity card for workers at site.	Discussed and it is mandatory to the workers at site.

BHEL: PSSR: SCT: 1423 - CORRIGENDUM

PRICE BID REVISED



PROPOSED INTERIOR WORKS AT EVR BUILDING NANDANAM

REVISED SCHEDULE OF QUANTITIES

SNO	ITEM	QTY	UNIT	RATE (₹)	AMOUNT (₹)
PART A: GROUND FLOOR : Entrance lobby, Reception, Doctor's room and Pharmacy Reference Drawing : BHEL:PSSR:PMX:EVR:001 to 005					
1	Dismantling / Chipping / Scraping of Brick work, Wood work, Tiles, Concrete, Mortar, Structural items, Glass, Electrical conduits, Marble over the columns, clearing them & making the surface to receive finishing works and disposing the same for all lead & lifts as per instructions of Engineer In-charge.		LS		
2	<u>Grilled rolling shutters in the front entrance</u> : Replacing of existing grilled rolling shutters and top cover, Bottom locking base etc with new shutter of same material type with proper welding, finish painting with corrosion resistant lustrous aluminium paint all complete as per instruction of the Engineer in-charge.	4	Each		
3	<u>Removing Electrical conduits, fittings, Switches etc</u>		LS		
4	Aluminium Composite panelling to drop-fin and front column, etc: Supply & fixing of Aluminium Composite Panel (ACP), 3 mm thick in required colours for interiors/exteriors consisting of two layers of aluminium skins of 0.25 mm thick sandwiching a thermo plastic core in continuous lamination process with PVDF coating for interior/exterior grades ensuring long colour and no fungal attacks. Base frame work with aluminium sections shall be fixed over the brick work and the above aluminium panels shall be fixed to the frame work as cladding. It includes cost of labour, materials, accessories, adhesives, scaffolding, wastages, transport, taxes, fixing into a neat finish in aesthetic point of view, without any undulations in facias all complete as per drawing and instruction of engineer in-charge.	380	Sft		

5	Providing, fabricating & placing in position, the name board as "BHARAT HEAVY ELECTRICALS LIMITED" in Hindi, Tamil and English made of self coloured Acrylic cut letters of height (English & Tamil-1 feet, hindi-1/2 feet) having a total height of around 1.5m , using metallic sheets coated with lustrus paints and with proper exterior protection as per specification. Shall be designed with elegance and as per the instructions of Engineer-incharge.		LS		
6	Supply and fixing of Flooring in Polished Granite , 18 mm thick including cutting, fixing and edge polishing. Rate includes cost of all materials, labour, conveyance complete.				
a	Entrance corridor	429	Sft		
b	Entrance Steps-treads& raisers	210	Sft		
7	Providing and fixing of 2'x2' anti-skid Vitrified Tiles of Premium Quality in ramp top over the existing stone floor with Approved make Tile Adhesive, laid to a neat and Uniform level with 3mm Groove between Tiles by providing Spacers and filling the Joints with matching Shade Epoxy tile Grout. Rate including Cost of all materials, Conveyance, Labour and cleaning. (Basic Cost - Rs 75)	90	Sft		
8	Supply and fixing of 2'x2' Vitrified Tiles of Premium Quality, and Specified Make for Internal Floorings, to be laid over the existing stone floor (including necessary surface preparation) with Approved make Tile Adhesive, laid to a neat and Uniform level with 3mm Groove between Tiles by providing Spacers and filling the Joints with matching Shade Epoxy tile Grout. Rate including Cost of all materials, Conveyance, Labour and cleaning, Covering the finished flooring with Plastic sheets and 8mm th. POP layer and subsequent Cleaning and Acid wash after completion of all works. Consider Basic rate of Tile Rs. 85 to 90/- per SFT.	1500	Sft		
9	Supply & fixing of fixed glass windows at front entrance with 10mm Toughened Smoke Glass fixed with Aluminium 'U' Channels, 1.50 mm thick and glasses shall be sealed with Silicone Sealant.	480	Sft		

10	Supply & fixing of automatic sliding main entrance door with bio-sensor operation (two leaves) full set with clear toughened glass complete with installation, testing and commissioning as per manufacturer's specifications.	1	Each		
11	Supply, Providing and fixing suspended false ceiling consisting of 12.5mm thick Gypsum plaster board suspended on GI frame work with staggered joints. GI framework to consist of GI perimeter channels 0.55mm thick 20mm x 30mm along perimeter of false ceiling. Screw fixed to wall/partition with nylon sleeves and screws @ 600mm C/C. Suspending G 1 intermediate channels of size 0.9mm thick 45mm x 15mm from the soffit at max dist 1220mm c/c with ceiling angle 0.55mm thick 25mm x 10mm fixed to soffit using proprietary supplied G1 cleats and steel expansion fastners. Ceiling section 0.55mm thick web size 51.5mm and flanges 26mm each and 10.5mm lips are fixed to perpendicular to intermediate channel @457mm c/c using connecting clips. Boards are to be joined and finished so as to have a flush look which includes finishing the tapered and square edges of the gypsum board with joining compound paper tape and 2 coats of primer suitable for gypsum board. (As per the recommendations/practice)	960	Sft		
a	Extra over item no-11 for providing suspended false ceiling at entrance reception with Lighting Fins in POP. Contractor shall submit the architectural design/photo and work shall be excuted after prior approval from BHEL.	470	Sft		
12	Finishing walls with Premium Acrylic Smooth exterior paint with silicone additives @ 1.67 ltr/10 sqm.of required shade including base coat of water proofing cement paint @2.20kg/10 sqm. Cost includes scarping,surface preparation,workmanship and materials.	50	Sft		
13	Paneling to the framework to be cladded with 9mm thick prelaminated (both sides) particle board and cladded with approved veneer (BEM (Birds Eye Maple)-DYED) and finished with Paneling to have 3mm grooves at regular intervals with 3mm thick Stainless Steel inlay.	1350	Sft		

14	<p>RECEPTION DESK Providing, fabricating & placing in position reception desk made out of 8 mm thick clear toughened glass top supported over 'L' shaped 50mm thick polyboxed supports connected through 2 rows of 20mm dia SS pipes as detailed. The glass top shall have 25mm wide beveling and seated over 4 nos. of vacuum rubbers. All the exposed faces of ply boxed support shall be finished with 4mm thick approved veneer, stained to approved colour and melamine polished all complete as per drawing and instruction of Engineer-in-charge.</p>	1	Each		
15	P/f 18 mm thick pinup board of cellotex with 6 mm commercial plywood backing with steam beach 1.5" x 0.5" moulding all around with approved quality and shade of cloth complete.	24	Sft		
16	Providing and placing signages of various size for individual and group displays with etching plates made of S.S, aluminium or copper etc.Shall be designed with better asthetics all complete as per specification and instruction of Engineer-in-charge.	200	Sft		
17	Dismantling of existing Structural awning, Translucent sheet doom roof and providing roof top for the entrance as shown in the drawing.Shall be of Preconstraint Translucide material, tension fabric structured, engineered and fabricated to withstand flame, weather and natural forces. Work shall also be carried out with the help of approved agency after getting prior approval from BHEL.	300	Sft		
18	Providing and fixing railing made of 2" hollow stainless steel posters of about 1m height at every 1.5m spacing vertical posts with horizontal runners , finishing the connections with appropriate treaded joints, providing approved primer coat and finish coat, and all complete as per drawing, specification and instruction of engineer in-charge.	25	RM		
19	Providing landscaping in the entrance. Edging with bricks laid dry length wise including excavation, refilling, consolidating with hand packing,turfing and spreading neatly surplus earth as per the instruction of engineer-in-charge.	600	Sft		

a	Providing & fixing in position 12 gauge galvanized iron chain link fencing (around landscaping) of size - 50mm x 50 mm size opening, about 600mm high fixed in M.S. angle framing of 65 x 65 x 6mm with 2 coats of zinc chromate primer and 2 coats of approved synthetic paint. Framing shall be embedded in PCC coping, etc. complete as per instruction of engineer in charge.	10	RM		
20	Supply & fixing Split Airconditioners of following indoor and required outdoor units with complete installation, testing and commissioning as per manufacturers guidelines and specification.				
i	Indoor units				
a	2.03TR Cassette	2	Each		
b	Providing suitable outdoor units including necessary ancillary works (ie. PVC pipes for condensate drain with insulation, refrigerant piping, transmission cable etc.) metal clad socket, SPN box, controlling SP MCB, testing and commissioning of system.		LS		
21	Providing, fixing and commissioning of electrical works including wiring, light fittings, data cabling, plug points, distribution boards, metal clad socket for A/C etc., with proper earthing system as per drawing and instruction of engineer in charge.		LS		
TOTAL (A)					
PART B: 8th FLOOR : ED-Secretariat Room, ED-Annexe, Director Room & Lobby					
Reference Drawing : BHEL:PSSR:PMX:EVR:006					
22	Dismantling of wall paneling (including glass louvers)	3500	Sft		
23	Dismantling of false ceiling	1450	Sft		
24	Supply & installation of polymeric wall paneling	2200	Sft		
25	Supply & installation of polymeric false ceiling	1940	Sft		
26	Removal of electrical fittings and appliances		LS		

27	Supplying and fixing of recessed mounted down light/ ceiling mounted light (including all wirings required)	56	Each		
28	Supply & installation of anodised aluminium sections of size 21/2 "x1 1/2 , including glazing clip, rubber gaskets and 9mm thickness both sides laminated particle board etc including louvers at the top for ventilation all complete	1300	Sft		
29	Supply and fixing of 2'x2' Vitrified Tiles of Premium Quality, and Specified Make for Internal Floorings, to be laid over the existing stone floor (including necessary surface preparation) with Approved make Tile Adhesive, laid to a neat and Uniform level with 3mm Groove between Tiles by providing Spacers and filling the Joints with matching Shade Epoxy tile Grout. Consider Basic rate of Tile Rs. 85 to 90/- per SFT.				
a	Lobby	490	Sft		
b	ED room	470	Sft		
c	ED Secretariat	470	Sft		
d	ED Annexe	470	Sft		
e	Director room	580	Sft		
ED-Toilet					
30	Dismantling existing tiles	110	Sft		
31	Removal of old water closet, urinal, wash basin along with flushing cistern	4	Each		
32	Dismantling of wooden door	3	Each		
33	Dismantling of false ceiling	20	Sft		
34	Dismantling existing partition brickwork	33	Sft		
35	Providing and fixing colour glazed vitreous china European type water closet with automatic flushing cistern(DC type) etc., all complete	1	Each		

36	Providing and fixing colour glazed vitreous china urinals with automatic flushing system etc., all complete	1	Each		
37	Supply and fixing colour glazed Wash Basin with all accessories complete	1	Each		
38	Providing and laying Non skid Tile Flooring & wall cladding	110	Sft		
39	Removing and refixing of new mirror	1	Each		
40	Dismantling of waterline and concealing of new pipes		LS		
41	Supply & installation of gypsum plaster board false ceiling including GI framework	20	Sft		
42	Construction of two new beam(ISMB-100) support for water tank	6	RM		
43	Providing and installing glass shower cubical including all accessories and fixtures complete as per manufacturers specification	1	Each		
44	Providing and fixing auto perfumer	1	Each		
45	Providing and fixing hand dryer	1	Each		
46	Providing and fixing Tissue stand	1	Each		
47	Providing and fixing 20mm dia chromium plated M.S. pipes wall mounted towel rod with C.P. Brackets etc all complete.	1	Each		
48	P/f new doors at ED room entrance by using 32 mm flush door and laminate with both sides complete with providing necessary hardware such as hinges, handles, door stopper and door closure complete. All sides of the door are to be fixed with margin of hard wood, 1/3 of area is to be glazed as vision panel and anchored with melamine polished steam beach wood mouldings.(SIZE - 3 ' 0" X 7 ' 0" H)	1	Each		
TOTAL (B)					

PART C: 5th,8th and 9th FLOOR : Painting works					
49	CEILING				
	Painting one coat of wall primer and 2 coats of super Acrylic distemper (White) for ceilings in the lobby area in 5th,8th and 9th floors.	2400	Sft		
50	WALL SURFACES				
	Smoothing the wall surface with 2 coats of complete putty, 2 coats of wall primer and 2 coats of painting finish with high quality acrylic emulsion paint equivalent or comparable to Berger Luxol Pearl Lustre for walls in the lobby in 5th,8th and 9th floors. New painting should match the colour of wall already available in 6th/7th floors premises.	2670	Sft		
51	JOLLY WALL				
	Painting one coat of wall primer and 2 coats of paint finish with high quality acrylic emulsion paint equivalent or comparable to Berger Luxol Pearl Lustre for the jolly walls in 5th,8th and 9th floor. New painting should match the jolly wall already available in 6th and 7th floors premises.	1000	Sft		
52	POLISHING MAIN DOORS				
	Applying two coats of varnish and two coats of polyurethane for main doors in the 5th floor B wing side and 8th and 9th floors(both A& B Wings) and staircase hand rails from 5th to 9th floor.	950	Sft		
53	Scraping or sand papering of walls, ceiling, doors and handrails etc., all complete as per the instruction of engineer-in-charge.	6970	Sft		
54	Applying Melamine polish on staircase handrail(one or more coat)	550	Sft		
55	Renovation of the existing main doors at 8th and 9th floor including removal of old lamination, providing and fixing teak veneering on one side of it and making good the surface with all necessary finishing works as per the instruction of engineer in-charge.	170	Sft		
TOTAL (C)					

PART D: 9th FLOOR : CANTEEN & AUDITORIUM					
56	Dismantling of wall paneling (including glass louvers)				
a.	Canteen	1200	Sft		
b.	PICC lab	660	Sft		
c.	Auditorium	350	Sft		
57	Supply & installation of anodised aluminium sections wall partitions of size 21/2"x11/2" , including glazing clip, rubber gaskets and 9mm thickness both sides laminated particle board etc including louvers at the top for ventilation all complete				
a.	Canteen entrance passage	130	Sft		
b.	Canteen	1500	Sft		
c.	PICC lab	660	Sft		
d.	Auditorium	350	Sft		
58	Supply & installation of false ceiling in VIP entrance passage as per item-11	110	Sft		
59	Supply and fixing of 2'x2' Vitrified Tiles of Premium Quality, and Specified Make for Internal Floorings, to be laid over the existing stone floor (including necessary surface preparation) with Approved make Tile Adhesive, laid to a neat and Uniform level with 3mm Groove between Tiles by providing Spacers and filling the Joints with matching Shade Epoxy tile Grout. Rate including Cost of all materials, Conveyance, Labour and cleaning, Covering the finished flooring with Plastic sheets and 8mm th. POP layer and subsequent Cleaning and Acid wash after completion of all works. Consider Basic rate of Tile Rs. 85 to 90/- per SFT.				
a.	Flooring in canteen	2500	Sft		
b.	Dado/Skirting/Wall cladding in canteen	340	Sft		

60	CEILING-CANTEEN				
a.	Painting one coat of wall primer and 2 coats of super Acrylic distemper (White) for ceiling.	2500	Sft		
61	WALL SURFACES-CANTEEN				
a.	Smoothing the wall surface with 2 coats of complete putty, 2 coats of wall primer and 2 coats of painting finish with high quality acrylic emulsion paint equivalent or comparable to Berger Luxol Pearl Lustre for walls.	2300	Sft		
62	Scraping or sand papering of walls, ceiling, and doors etc., all complete as per the instruction of engineer-in-charge.	2300	Sft		
63	Providing and placing new hand wash basin three(3)nos placed in granite slab platform along with all fixtures and accessories including its drainage system etc., all complete in canteen.		LS		
TOTAL (D)					
E: 7th FLOOR : A & B WING - Interior Works					
Reference Drawing : BHEL:PSSR:PMX:EVR:007 and 008					
64	Dismantling / Chipping / Scraping of Brick work, Wood work, Tiles, Concrete, Mortar, Structural items, Glass, Electrical conduits, Marble over the columns, clearing them & making the surface to receive finishing works and disposing the same for all lead & lifts as per instructions of Engineer In-charge.		LS		
65	Shifting of furniture/racks and other re-usable items note by BHEL to 9th floor auditorium safely and arranging the same as per the instruction of engineer incharge.		LS		
66	Renovation of existing windows by removing window shutter frame , repairing and replacing if necessary with new aluminium extruded sections, scraping sun control film, replacing with new suncontrol film, replacing glass if necessary all complete as per the instruction of engineer in-charge.	12	Each		
67	Removing Electrical conduits, fittings, Switches etc		LS		

68	<p>Supply, Providing and fixing suspended false ceiling consisting of 12.5mm thick Gypsum plaster board suspended on GI frame work with staggered joints. GI framework to consist of GI perimeter channels 0.55mm thick 20mm x 30mm along perimeter of false ceiling of ceiling. Screw fixed to wall/partition with nylon sleeves and screws @ 600mm C/C. Suspending G 1 intermediate channels of size 0.9mm thick 45mm x 15mm from the soffit at max dist 1220mm c/c with ceiling angle 0.55mm thick 25mm x 10mm fixed to soffit using proprietary supplied GI cleats and steel expansion fasteners.</p> <p>Ceiling section 0.55mm thick web size 51.5mm and flanges 26mm each and 10.5mm lips are fixed to perpendicular to intermediate channel @457mm c/c using connecting clips.</p> <p>Boards are to be joined and finished so as to have a flush look which includes finishing the tapered and square edges of the gypsum board with joining compound paper tape and 2 coats of primer suitable for gypsum board. (As per the recommendations/practice)</p>	11000	Sft		
69	<p>Finishing walls with Premium Acrylic Smooth exterior paint with silicone additives @ 1.67 ltr/10 sqm. of required shade including base coat of water proofing cement paint @2.20kg/10 sqm. Cost includes scarping, surface preparation, workmanship and materials.</p>	1000	Sft		
70	<p>Supply and fixing of 2'x2' Vitrified Tiles of Premium Quality, and Specified Make for Internal Floorings, to be laid over the existing stone floor (including necessary surface preparation) with Approved make Tile Adhesive, laid to a neat and Uniform level with 3mm Groove between Tiles by providing Spacers and filling the Joints with matching Shade Epoxy tile Grout. Rate including Cost of all materials, Conveyance, Labour and cleaning, Covering the finished flooring with Plastic sheets and 8mm th. POP layer and subsequent Cleaning and Acid wash after completion of all works. Consider Basic rate of Tile Rs. 85 to 90/- per SFT.</p>	11000	Sft		
71	<p>Paneling to the framework to be cladded with 9mm thick prelaminated (both sides) particle board finished with Paneling to have 3mm grooves at regular intervals with 3mm thick Stainless Steel inlay.</p>	3600	Sft		

72	P/f new doors by using 32 mm flush door and laminate with both sides complete with providing necessary hardwares such as hinges, handles, door stopper and door closure complete. All sides of the door are to be fixed with margin of hard wood, 1/3 of area is to be glazed as vision panel and anchored with melamine polished steam beach wood mouldings.(SIZE - 3 ' 0" X 7 ' 0" H)	18	Each		
73	P/f 18 mm thick pinup board of cellotex with 6 mm commercial plywood backing with steam beach 1.5" x 0.5" moulding all around with approved quality and shade of cloth complete.	45	Sft		
74	Providing & Fixing vertical blinds of approved make having provision for Windows with HEAD RAIL of Aluminium extruded Section, 45mm high x 32mm wide X 1.3mm thick should have proper END CONTROL UNIT & have BOTTOM WEIGHT, BOTTOM CHAIN & LOUVERS all complete.	1350	Sft		
75	Modular work station (Reference Drawing - BHEL:PSSR:PMX:EVR:009)				
a	Providing and fixing of (52 to 76 mm) modular partition made of aluminium extrusion duly powder coated tile based system covering both side with 9 mm pre-laminated particle board (notice board marker board, magnetic board) and provision for electrical and networking (half height - 4'). Table top contains 25 mm novapon top with 2 mm edge band finish with necessary hinges for support.Accessories such as metal pedestal, metal keyboard tray and CPU trolley etc., shall be provided as per instruction of engineer in charge.	1800	Sft		
b	Providing full fabric chairs for Staff & conference hall with tilt mechanism,pneumatic seat height adjustment, fixed T-arms with polyurethane pads etc., as per drawing and instruction of engineer-in-charge.	106	Each		
c	Providing full fabric chairs for AGM with tilt mechanism,pneumatic seat height adjustment, fixed T-arms with polyurethane pads etc., as per drawing and instruction of engineer-in-charge.	15	Each		

d	Providing full fabric chairs for visitors fixed arm rest made of polyurethane pads as per drawing and instruction of engineer-in-charge.	26	Each		
76	Providing and fixing HOD TABLE as per the design made out of pre laminate 25 mm thick plain particle board, Grade-I marked with IS-3087 bonded with phenol formaldehyde synthetic resin of approved brand. Providing and fixing key board tray of approved size with telescopic/nylon roller, slides and made of 18 mm thick particle board with post formed finish. Providing and fixing CPU trolley of standard size with lockable castors and made of 1.6 mm CRCA sheet duly powder coated. Providing and fixing of pedestal drawer unit having an overall size of 900 x 450 x 685 mm having two top drawers and one filing drawer made of 18mm thick pre laminated particle board and having proper central locking arrangement and drawer sliding on nylon roller channels. The table is to be supported on metal embossed modesty panels and I shape Legs.	2	Each		
77	Providing and fixing PART CABIN TABLE as per the design made out of pre laminate 25 mm thick plain particle board, Grade-I marked with IS-3087 bonded with phenol formaldehyde synthetic resin of approved brand. Providing and fixing key board tray of approved size with telescopic/nylon roller, slides and made of 18 mm thick particle board with post formed finish. Providing and fixing CPU trolley of standard size with lockable castors and made of 1.6 mm CRCA sheet duly powder coated. Providing and fixing of pedestal drawer unit having an overall size of 900 x 450 x 685 mm having two top drawers and one filing drawer made of 18mm thick pre laminated particle board and having proper central locking arrangement and drawer sliding on nylon roller channels. The table is to be supported on metal embossed modesty panels and I shape Legs.	870	Sft		
78	1200mm x 1200mm x 450mm for storage with vertical sliding door unit, locking arrangement in steel.	40	Each		

79	Providing cabinets for files of push-pull type in steel including channels for smooth mounting, end stoppers, label holder, proper locking arrangement etc as per drawing and instruction of engineer in charge.(front elevation will be taken for measurement)	500	Sft		
a	Table for printer/scanner etc., (of size 3'x1'6") as per requirement	10	Sft		
80	Providing and fixing in position conference table for conference room of innovative modular design to suit varying needs with wire management facility at centre neat under table spaces.MDF top shall be with 25mm thick membrane foil coated with layer of polyurethane with better scratch and wear resistance. Edges shall be enhanced with Waterfall edge for better aesthetics. all complete as per drawing and instruction of engineer in charge.(size-8'x4')	2	Each		
ELECTRICAL WORKS					
81	Wiring for light point/fanpoint/exhaust fan point/ call bell point with 1.5 sq mm FR PVC insulated copper conductor single core cable in recessed PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq mm FR PVC				
a	1 light controlled by one switch	100	Points		
b	2 light controlled by one switch	10	Points		
c	6 light controlled by one switch	10	Points		
d	Exhaust fan point	4	Points		
e	5A switch and socket in the switch board itself	20	Points		
82	Wiring for circuit/submain wiring using the following sizes of FR PVC insulated copper conductor single core in recessed PVC conduit along with earth PVC insulated copper conductor single core cable for earthing as required for lighting / power etc,				
a	Supply and laying of 2x2.5 + 1x1.5 sqmm circuit for lighting	300	RM		
b	Supply and laying of 3x2.5 sqmm circuit for UPS circuit	850	RM		

c	Supply and laying of 2x4 sqmm + 1x2.5 sqmm circuit for A/C's	650	RM		
d	Supply and laying of 3x4 sqmm for Raw power	500	RM		
e	Supply and laying of 5x10 sqmm for PDB,	40	RM		
f	Supply and laying of 5x16 sqmm for UPS	60	RM		
83	Supply and fixing of following plug points to be connected to PDB, LDB wires with required 5 sided metal boxes of suitable size recessed / wall mount etc.				
a	6A switched socket	30	Set		
b	3 x 6A switched socket for work stations	115	Set		
c	16A /6A switched socket	90	Set		
d	16A DP switch for master control	90	Set		
	Airconditioning				
84	Supply & fixing Split Airconditioners of following indoor and outdoor units with complete installation including ancillary works, testing and commissioning as per manufacturers guidelines and specification.				
a	4.0TR Cassette	4	Each		
b	3.2TR Cassette	2	Each		
c	2.86TR Cassette	1	Each		
d	2.5TR Cassette	4	Each		
e	2.03TR Cassette	3	Each		
f	.8TR Cassette	10	Each		
g	Providing suitable outdoor units including necessary ancillary works (ie. PVC pipes for condensate drain with insulation, refrigerant piping, transmission cable etc.,) metal clad socket, SPN box, controlling SP MCB, testing and commissioning of system.		LS		

	Cables and terminations				
85	Supply and laying of Aluminium armoured cable through trough, raceways along with wall, etc, with required supporting clamp, anchor fasteners etc as per the site condition				
a	Supply and laying of 3.5x50 sqmm ALUG cable	60	RM		
b	Supply and laying of 3.5x120 sqmm ALUG cable	60	RM		
c	Supply and laying of 3.5x185	20	RM		
	Termination of cable				
86	Termination using gland and copper sockets for the following cable sizes				
a	3.5x50 sqmm ALUG cable	10	Set		
b	3.5x120 sqmm ALUG cable	4	Set		
c	3.5x185 sqmm ALUG cable	4	Set		
	Distribution Boards				
87	Supply and fixing of 6 way TPN MCB DB double door DB for power DB	4	Each		
i	Incomer 63A 4P MCB 10 KA				
ii	10/16A SP MCB-18 Nos as outgoing				
88	Supply and fixing of 4 way TPN MCB DB double door DB for lighting	2	Each		
i	Incomer 32A 4P MCB 10 KA				
	i) 32A DP EL MCB 30 MA - 3 nos.				
ii	6A SP MCB-12 Nos as outgoing				
89	Supply and fixing of 6 way TPN MCB DB double door DB for UPS circuits with D" curve MCB	5	Each		
i	Incomer 63A 4P MCB 10 KA				
ii	i) 32A DP MCB 10 KA - 3 nos.				

	ii)6A SP MCB-12 Nos as outgoing				
90	Supply, erection, testing and commissioning of three phase 6 WAY, TPN MCCB DB double door vertical type, IP 42 powder coated with: 100A TPN MCCB - 1 No as INCOMER 63A TP MCB - 4 No. as OUTGOING Including all interconnections & accessories etc, for UPS	1	Set		
91	Supply, erection, testing and commissioning of three phase 4 WAY, TPN MCCB DB double door vertical type, IP 42 powder coated with: 100A 4 pole MCCB - 1 No as INCOMER 63A TP MCB - 2 No. and 32/25/20A SP MCB for single phase A/C'sas OUTGOING Including all interconnections & accessories etc, for A/C units	1	Set		
92	Supply, erection, testing and commissioning of three phase 6 WAY, TPN MCCB DB double door vertical type, IP 42 powder coated with: 125A 4 pole MCCB - 1 No as INCOMER ,63A TP MCB - 5 Nos D'curve MCB for UPS distribution. OUTGOING Including all interconnections & accessories etc,for A/C units	1	Set		
93	Supply&Installation of 250A 4Pole Change over switch with enclosure with adequate extra enclosure as required	2	Set		
	UPS				
94	Supply and fixing of 125A 3 pole MCCB for UPS Input	1	Each		
95	Supply and fixing of 125 A 3 pole MCCB for output to the UPS	1	Each		
96	Supply and fixing of 63 A 4 pole MCCB for A/C input switches	6	Set		
	Earthing				
97	Supplying and laying of 8 SWG copper wire along with cables	200	RM		
98	Supply and laying of 25 sqmm FR PVC wire from G/F earth toPDB location for dedicated earth	300	RM		
99	Formation of 600x600x3mm thick copper plate earthing with 2.4mtrs long, 40mm dia 'B' class GI pipe including necessary salt and charcoal with suitable size of masonry work with CI cover plate as per IS 3043-1986	4	Each		

	Fire alarm system				
100	Microprocessor based 1 loops analogue Intelligent type fire alarm control panel conforming fully to IS:2189 with 24 DC stand by battery, battery charger, fire / fault indicators etc., complete as required.	1	Each		
101	Supply and installation testing and commissioning of ionisation type smoke detectors to be mounted below false ceiling.	40	p/no		
102	Supply and installation testing and commissioning of ionisation type smoke detectors to be mounted above false ceiling.	30	p/no		
103	Supply, installation testing and commissioning of response indicator.	30	p/no		
104	Supply, installation testing and commissioning of manual call point with break glass arrangement.	12	p/no		
105	Supply, installation and termination of 2x1.5 sqmm FRLS armoured copper conductor cable approved by ETD/AC to be clamped neatly on ceiling wall partitions etc with GI clamps.	200	p/mtr		
106	Supply, installation, testing and commissioning of dual tone electronic hooter.	4	p/no		
107	Supply, installation, testing and commissioning of heat detector.	1	p/no		
	MAINS & DISTRIBUTION BOARDS				
108	Supply, Erection, Testing & Commissioning of wall mounting cubical type main Switch board (MSB) comprising as under Main bus bar rating : 400A TPN Cu. BUS 1-25 x 6mm AL FL/PH 1-25x6mm Cu. FL/PH 1-25x6mm Cu, FL/n ,1 Set multifunction meter with required CT, PT coils etc,(0-600V) 3-R, Y, B, indicating lamps 1-3 way &off ammeter selector switch 1-3 way &off Voltmeter selector switch 1-set of potential transformers 1set blank gland plate.	2	Set		
i	250A 4 Pole SFU As incomer- 1 Nos				
ii	125A TPN SFU - out going 3 Nos				
iii	63A TPN SFU for outgoing- 4 Nos				

iv	32A TPN SFU for outgoing- 2 Nos				
	Telephone				
109	Supply and laying of E - cat - 05 cable for voice	4000	RM		
110	Supply and laying of 20 pair un armoured telephone cable with PVC conduit from BSNL krone to Fifth floor Krone.	75	RM		
111	Supply and fixing of 200 pair Krone connector with enclosure	2	Each		
112	Supply and fixing of RJ45 - E CAT - 05 telephone socket	110	Each		
	Data Cabling				
113	Supply and providing of structured data cabling solution using AMP make cable, I/O, etc, or equivallant				
a	Supply and laying of Cat-06 data cable wires in PVC conduit	4500	RM		
b	Supply and fixing of RJ45 cat-06 I/O with face plate box etc.,	120	Each		
c	Supply and fixing of 42 U wall mounted rack	1	set		
d	Supply and fixing of 24 port jack panel, cat 06	6	Set		
e	Supply and fixing of 100/1000 mbps 24 port switch, HP procure or equivallant	6	Each		
f	Supply and fixing of 7 feet patch cord CAT-06	120	Each		
g	Supply and fixing of 3 feet patch cord CAT-06	120	Each		
h	Supply and laying of PVC conduit for DATA cable ,voice cabling and Public address system 20/25 mm	2000	RM		
	Light fittings				
114	Supply and erecting of following crompton make or equivallant make light fitting with electronic ballast, lamp, fixing accessories and supporting from ceiling etc				
a	Supplying and fixing of 2 X 36 watts recessed mounted direct softline mirror optical luminaire with PL lamp of make crompton/Philips/raymold catlog No CRFQN 3x36w EB/P5	85	Each		

b	Supplying and fixing of 2 x 18 watts recessed mounted down light luminaire with PL lamp crompton catlog No DDLH218/G/B6	24	Each		
c	Supplying and fixing of 1 x 10 watts ceiling mounted recessed ceiling mounted fitting crompton catalogue No. DDLU 10EB/N3	80	Each		
d	Supply and fixing of 1x36 w boxtube tube light fitting with 26W T5 lamp, crompton catalogue T5GP28EB	40	p/no		
e	Supply and fixing of 12,volt, 50w hologen with required transformer etc, crompton make calalog No. MR150DD / or equivallant	20	Each		
TOTAL (E)					
TOTAL(A+B+C+D+E)					

NOTE:

1. Agency shall visit the site before submitting the offer and any clarifications required, same will be clarified by Project Civil department.
2. Detailing to be in line with conceptual design & approval to be obtained from BHEL prior to the execution of work.
3. Bidders while quoting the rate for individual item are requested to take care of the brands of the item as mentioned in the technical specification.However, for evaluation of bid based on the rates quoted for the items, the overall amount only will be considered.
4. For tiles,wooden items,electrical fixtures, furniture and sanitary items prior approval has to obtained from BHEL for size,make,color, model, shape and design before execution.