Tender for Award of Interior Works (Civil, Electrical, Furniture & AC etc.) for Project Review Room and Conference cum Training Room at Ground Floor in BHEL House, Siri Fort, New Delhi

Bharat Heavy Electricals Limited

BHEL House, Siri Fort, New Delhi-110049

Tel:011-66337403, Fax:011-66337428

Corporate Office, BHEL House, Sirifort, Asiad, New Delhi
Tele No. 011- 66337403 (Phone), 011-66337428 (Fax)

No. AA: CORP: GAX: RENO: PRR & CONF. ROOM: 2011 -12/GF
Dt. 31.03.2011

Submission of tender enquiry on 15.04.2011 by 02.00 PM
Due date for opening of bid on 15.04.2011 at 02.30 PM

SUB**: Creation of Project Review Room and Conference cum Training Room at BHEL House, Siri Fort, New Delhi**

Dear Sirs,

We are pleased to invite your tenders, in sealed covers for the subject work. The terms & conditions of the tender are mentioned below:-

1.0 TERMS & CONDITIONS OF TENDER:

1.1 Tender Enquiry No. & due date must be legibly superscribed on all the envelopes.

1.2 Tenders shall be received and opened on the due date and time as mentioned above in the presence of tenderers or their authorized representatives who may like to be present.

1.3 Tenders shall be strictly in accordance with the tender specifications. Any deviations shall be listed out separately.

1.4 Offers shall remain valid for 60 days period from the due date of submission of tenders.

1.5 BHEL shall be under no obligation to accept the lowest or any other tender and shall be entitled to accept or reject any tender in part or full without assigning any reason whatsoever.

1.6 Tenders received after due date & time are liable to be rejected.

1.7 BHEL reserves the right to increase or decrease the quantity ± 15% of contract value at the same rates and terms and conditions of this contract.

1.8 Tender should be submitted along with covering letter of the tenderer and duly signed on each & every page of the tender document, technical specifications and price bid.

1.9 Each tenderer has to deposit **EMD of ₹ 1,50,000/- (One lakhs fifty thousand only)** for the above job and the same will be in the form of Pay Order or Demand Draft only in favour of BHEL, payable at New Delhi. EMD submitted by tenderer will be forfeited if tenderer revokes his tender within validity period or increases his rates.

1.10 Each tender shall be accompanied by separate envelope carrying EMD as mentioned above failing which the tender will be rejected.

1.11 Upon acceptance of tender, the successful tenderer must submit the security deposit of **₹ 4 Lakhs + 5% of the amount exceeding Rs. 50 lakhs** in any of the following forms.

i) Cash (as permissible in the income tax act)

ii) Pay Order, Demand Draft in favour of BHEL

iii) Local cheques of scheduled bank, subject to realization

iv) Securities available from Post Offices such as National Saving Certificates, Kisan Vikas Patras etc. (certificates should be held in the name of Contractor furnishing the security and duly pledged in favour of BHEL and discharged on the back).

v) Bank Guarantee from Scheduled Banks/ Public Financial Institutions as defined in the Companies Act. The Bank Guarantee format should have the approval of BHEL.

vi) Fixed Deposit Receipt issued by Scheduled Banks/ Public Financial Institutions as defined in the Companies Act. The FDR should be in the name of the contractor, A/C BHEL, duly discharged on the back.

vii) Security deposit can also be recovered at the rate of 10% from the running bills. However in such cases at least 50% of the Security Deposit should be collected before start of the work and the balance 50% may be recovered from the running bills.

(Note: In case of small value contracts not exceeding Rs. 10 lakhs and all SAS jobs, work can be started before Security Deposit is collected. However, payment can be released only after collection/ recovery of initial 50% Security Deposit).

viii) EMD of the successful tenderer can be converted and adjusted against the security deposit.

ix) The security deposit shall not carry any interest.

(Note: Acceptance of Security Deposit against Sl. No. (iv) and (vi) above will be subject to hypothecation or endorsement on the documents in favour of BHEL. However, BHEL will not be liable or responsible in any manner for the collection of interest or renewal of the documents or in any other matter connected herewith).

x) Security deposit shall not be refunded to the contractor except in accordance with the terms of the contract.

1.12 EMD of successful tenderer will be converted into security deposit and balance amount of security deposit will have to be deposited as per clause No. 1.11.

1.13 Prices quoted by the tenderers will be firm and no escalation on account of labour or material or taxes or any reason whatsoever will be paid to the successful tenderer for execution of the above job.

1.14 Prices quoted by the tenderers should be inclusive of all taxes etc. as prevailing on Works Contract, but excluding service tax as applicable, for which the successful tenderer has to submit the tax deposit receipt proof for release of payment along with the bill submitted for the payment.

1.15 Evaluation of the tenderers will be done on the basis of net Amount as quoted at Item No. (IV.) of the price bid format. For the purpose of ordering, the percentage variation between the Estimated amount at (I.) of the price bid format and the offered amount at (II.) of the price bid format would be calculated. And then this percentage would be applicable over and above the Estimated amount at (I.) of the price bid format . In the event of Reverse Auction, the bidders would be required to quote the Net Amount as at (IV) of the price bid format as their initial price bid. The successful L1 bidder would then be required to give the break-up of the closing price in the price bid format. For the purpose of ordering, the percentage variation between the Estimated amount at (I) of the price bid format and the offered amount at (II) of the price break-up format would be calculated. And then this percentage would be applicable over the Estimated amount at (I) of the price bid format. The entire job will be awarded to only one tenderer.

1.16 **Completion Time & LD:** Entire work has to be completed within 90 days from the date of award of work failing which liquidated damages will be imposed @ 1/2 % of the Gross Value for per day of delay, subject to a maximum of 10% of the Gross Value. LD will be calculated on the total value of Work Order.

1.17 **Payment terms:** One running bill will be paid at the intervening time for those items which have been completed in all respect and found satisfactory by EIC. Rest payment will be made through Final Bill at the end of work.

1.18 The successful tenderer will carry out the work as per specifications. In case of any doubt regarding the specification and its quality of work, Engineer in Charge's clarification and decision will be final and binding on him.

1.19 The sourcing of equipment of Air conditioning system should be from OEM or their authorized dealer only. Installation of these equipments shall also be through their authorized party. After completion of the successful installation, party has to submit the proof of sourcing of the equipment from the OEM and installation certificate of the same through their authorized representative so that warranty of the equipment shall remain valid for the warranty period and also, the AMC shall remain trouble free for the future through the OEM or their authorized parties. Air conditioning system should of **Mitsubishi / Fujitsu / Toshiba / Daikin / Hitachi** makes only. Tenderers should fill the **Annexure-C** in regard to make & model offered.

1.20 The successful tenderer has to carry out the work day and night also keep in mind that the existing offices of senior officers are functioning at the vicinity of site. Extra effort and manpower have to be put to carryout the work in the operational office. No time extension will be allowed whatsoever be the reason.

1.21 Tenderers are requested to go through the scope of work, visit the site location etc. and get fully acquainted with the work place and prevailing working conditions to get all their doubts clarified regarding the above work before submitting the offer. Engineer-in-charge's decision will be full and final in the event of any doubt.

1.22 The successful tenderer must comply to all statutory labour law regulations applicable to this contract like minimum wages act, timely payment of wages etc.

including taking of insurance cover etc. for workers employed for this contract. Any obligation on account of the above will be the liability of the successful tenderer.

1.23 In case of any objection from any statutory / local authority, the successful tenderer has to liaison with them for smooth progress of work.

1.24 The successful tenderer will be responsible for the quality of the work and it is to be guaranteed for a period of one year from the date of completion of job.

1.25 Period of maintenance shall mean the period of one year which will be calculated from the date of completion of the works certified by the Engineer in accordance with conditions of the contract. The period of maintenance shall always be reckoned from the date of completion of the whole of the works as accepted / taken over by Engineer-in-charge.

1.26 The Tenderers are required to quote for the complete scope of work. Tenders for part of the work or incomplete in any respect are liable to be rejected. Tenderers shall certify in the Techno- commercial bid that rates for all the items have been quoted.

1.27 Work order will be placed on lowest bidder for the complete scope of work i.e. Creation of Project Review Room and Conference cum Training Room at Ground Floor in BHEL House, Siri Fort, New Delhi for which the bidder has qualified in the Techno-commercial Bid and subsequently has emerged as lowest bidder in the evaluation of price bid.

1.28 Penalty will be levied by BHEL as per relevant clauses of the Tender on account of delay, violation of contract conditions and non-performance of the Contractor.

1.29 All documents submitted by the Tenderer in his tender shall be accompanied with a covering letter giving index interlinking all the documents.

1.30 BHEL reserves the right to accept or reject any of the bid / all bids with or without deviation or cancel / withdraw the invitation for bid without assigning any reason whatsoever and in such case no tenderer shall have any claim arising out of such action by BHEL.

2.0 QUALIFYING CRITERIA FOR THE TENDERERS:

2.1 Average Annual financial turnover during the last 3 years, ending on 31st March' 2010, should be at least **Rs. 25.00 Lacs**.

2.2 Contractors / System integrators having experience of successfully completion of similar works during last 7 years ending on 31.12.2010 should be either of the following : -

a. Three similar completed works each costing not less than the amount equal to 40% of the estimated cost i.e. **Rs. 34.00 Lacs.**

OR

b. Two similar completed works each costing not less than the amount equal to 50%of the estimated cost i.e. **Rs. 42.00 Lacs**.

OR

c. One similar completed work costing not less than the amount equal to 80% of the estimated cost i.e. **Rs. 67.00 Lacs.**

2.3 Tenderers must have valid registration no. of **PAN No. , VAT / TIN No. , Service Tax No.** , **PF & ESI No.** at the time of submission of offer.

Note: **'Similar works'** mentioned in Para 2.2 above shall necessarily include " Execution and Renovation of office space of approximately 3000 Sqft. area with any Central Govt. / State Govt. / PSUs / Public Limited Company and similar work necessarily include work in regard to Civil & Electrical Work."

3.0 DOCUMENTS REQUIRED:

3.1 The Tenderers should submit documents in support of possessing Qualifying requirements as under, duly certified and stamped by their authorized signatory:

a) Copy of income tax return of previous three years and work orders alongwith BOQ and completion certificates in support of the qualifying criteria mentioned at clause no. 2.0 above with covering letter / indexing of the same. Tenderer shall also submit covering letter with calculation of average financial turnover of previous three years and description of successfully completed work in support of 2.1 and 2.2 respectively.

b) Tenderer has to submit a copy of registration certificate of **PAN No. , VAT/TIN No.** , **Service Tax No. , PF & ESI No.**

c) Un-priced price bid format duly signed by the tenderer shall be submitted along with technical bid by mentioning 'Q' in the column where quote is to be offered by the bidder. The tenderers has to give their quote at three places in the BOQ format - first at Sl. No. II, i.e. the quoted amount against estimated cost indicated at Sl. No. I, second at Sl. No. III i.e. the Buy-back amount & third at Sl. No. IV i.e. the Net Amount as the difference between Sl. No. II & III.

d) A copy of tender enquiry duly signed on each and every page shall be submitted along with technical bid.

e) Tenderer has to submit the **No Deviation Certificate** duly signed in the format mentioned in **Annexure – A.**

f) Tender has to be submitted with contact address and e-mail ID etc. duly filled and signed as placed in **Annexure-B.**

g) Tenderer has to submit the **Air Conditioning System detail as quoted** duly filled and signed in the format mentioned in **Annexure – C.**

4.0 PROCEDURE FOR SUBMISSION OF TENDERS:

4.1 The tender is to be submitted as required in two parts in separate sealed covers **prominently superscribed as Part-1 "Techno-commercial Bid"** & **Part-2 "Price Bid"** and also indicating on each of the covers the tender specification number and due date and time as mentioned in the tender enquiry. Envelope of Part-1"Techno-commercial Bid" shall contain documents required in Para 3.0 above and Part-2 "Price Bid" shall contain price bid duly quoted in the BOQ format. A third sealed cover shall contain required amount of EMD and shall be super scribed as EMD. These three separate covers 1, 2 and 3 shall together be enclosed in fourth envelope and this sealed cover shall be superscribed with tender specification

number / numbers and due date. Tenders submitted without EMD are liable to be rejected. Checklist (enclosed) shall be placed inside the fourth envelope.

4.2 Envelope No. 3 containing EMD will be opened first and after due verification of EMD as per clause No. 1.9, the Part - 1 of the tender will be opened next and evaluated afterwards. Tenderers who qualify in Technical Bid (Part – 1) will only be considered while opening of Price Bid (Part – 2). The unsuccessful tenderers will be intimated through email for rejection in the technical bid. BHEL may finalize successful tenderer by **opening of sealed price bid or by conducting online Reverse Auction**. Date of opening of sealed Price Bid / conducting of online Reverse Auction will be intimated separately to the Tenderers who qualify in the Techno-Commercial bid.

4.3 Tenders should strictly be in accordance with the tender specifications & General Instructions to the Tenderer enclosed herewith.

4.4 The Tenderer should accept all terms & conditions of the tender unconditionally. In case the Tenderer wants to deviate from the tender conditions, such deviations shall be clearly specified in his tender. If no deviations are given in tender submitted, it will be assumed that the Tenderer accepts all terms and conditions of the tender.

4.5 Tenders with deviations from terms and conditions are likely to be rejected.

4.6 Clarifications, if any, of Technical / Commercial nature, can be obtained from the officer to whom the tender is to be submitted or from New Delhi office at the address given up to one week before the tender due date.

5.0 GENERAL & SPECIAL TECHNICAL SPECIFICATION OF THE TENDER ENQUIRY:

5.1 The Tenderers should go through the General & Technical Specifications of the tender Enquiry of **Annexure - II** and submit the same duly signed and stamped in support of compliance.

6.0 SCOPE OF WORK:

Sl. No.	Description of work	Unit	Qty	Rate (Rs.)	Amount (Rs.)

6.1 As per Bill of Quantity enclosed at **Annexure-I** & Price bid format at **Annexure-III**

The tender(s) should reach the under mentioned on or before the due date mentioned above. BHEL will not be responsible for delay in receipt of tender(s), sent by post / courier. The same shall be opened on scheduled date and time. Tenderers may provide their e-mail ID for faster communication in respect of the above.

V. K. Singh
Sr. Manager (HR-GAX)
Bharat Heavy Electricals Limited
BHEL House, Siri Fort, New Delhi – 110049.
Phone No.: 011 - 66337403, Mobile No.: 9818673036
Fax: 011 - 66337428 , E-mail: vksingh@bhel.in

For & on behalf of
Bharat Heavy Electricals Ltd.

(V. K. Singh)
Sr. Manager (HR-GAX)

Enclosures: As above

Annexure-A

NO DEVIATION CERTIFICATE

"No deviation from tender conditions of tender enquiry and scope of services mentioned in BOQ".

Signature and Seal of the Bidder

Annexure-B

Sl. No.	Description	Details
1	**Name of the Bidder**	
2	**Address of the bidder**	
3	**Contact Person's Name**	
4	**Cell No. of Contact Person**	
5	**Land Line No.**	
6	**FAX No.**	
7	**E-mail ID of the Bidder**	

Sign and seal of Bidder

Annexure-C

AIR CONDITIONING SYSTEM

Sl. No.	Item Description	Make of the item required	Make of the item offered	Model of the item offered
1.	Air Conditioning System	**Mitsubishi / Fujitsu / Toshiba / Daikin / Hitachi**		

Note: Technical brochure of the model offered to be enclosed.

Annexure - II

GENERAL TECHNICAL SPECIFICATIONS

1.0 GENERAL

1.0 Wherever the specifications are not definitive the latest I.S. specifications shall hold good.

1.1 Wherever reference has been made to Indian standard or any other specifications the same shall mean to refer to the latest specifications irrespective of any particular edition of such specification being mentioned.

2.0 WORKMANSHIP:

The workmanship shall be the best of its kind and shall conform to the specification given. In case nothing is specified in these specifications, the Indian standard specifications shall apply in every respect and where I.S.I is also silent, the latest trade practices shall prevail subject to approval.

3.0 MATERIALS:

All materials shall be best of its kind and shall conform to the latest Indian standard. All materials shall be of approved quality as per samples and from origins approved.

3.1 TIMBER:

Timber shall be of good quality and well seasoned. It shall have uniform colour, reasonably straight grain and shall be free from dead knots, cracks, shakes and sapwood. The moisture contents shall be within the limits prescribed.

a. TEAK WOOD:

(Tectona Grandis) Teakwood shall mean First class C.P. Teakwood (Sagwan type) adequately seasoned with moisture content within permissible limits. Individual hard and sound knot shall not be more than 12 mm. in diameter and the aggregate area of all the knots shall not exceed one-half percent of the area of the piece. It shall be close grained.

b. STEAM BEECH:

Steam Beech wood shall mean natural First class Steam Beech wood i.e. European White Beech wood steam treated at source with moisture content within permissible limits. Individual hard and sound knot shall not be more than 8 mm. in diameter and the aggregate area of all the knots shall not exceed one-half percent of the area of the piece. It shall be even grained and of even shade.

c. HOLLACK-HARDWOOD:

(Terminalia Myriocarpa) It shall be readily treated with wood preservatives and finished to a fairly good surface.

d. Maximum Moisture Content for Woodwork:
For sections thinner than 50 mm. the maximum moisture content shall not be more than 12%

e. **MEDIUM DENSITY FIBER BOARD (MDF)**

It shall conform to IS: 12406-1989, the Indian Standard specification for MDF Boards. The density should be between 700-850 kg/cum. It shall be made from small diameter wood/chips converted into fibre. These fibres shall than be bonded with the help of exterior grade resin. The internal bond shall be 8-10 Kg/sqcm. The modulus of elasticity shall be 30.000 Kg/sqcm. Water absorption shall be low i.e. 6% after soaking in water for 2 hours and 12% after a 24 hour soak. Screw holding capacity on the face shall be 150 kg and on the edge shall be 125 kg.

f. **PLYWOOD & VENEERS**

Plywood shall be formed by three or more layers of veneer glued and hot pressed together with the grain of adjacent veneers running at right angles to each other. The veneers for all grades shall be either rotary cut or sliced. The thickness of all veneers shall be uniform within a tolerance of +/- 5%. Corresponding veneers on either side of the centre one shall be of the same thickness and species. In a 3 ply-board upto 6 mm. thick the combined thickness of the face veneers shall not exceed twice the thickness of center ply. In a multiply board, the thickness of any veneer shall not be more than thrice the thickness of any other veneer.

g. **BLOCK BOARD**

Block boards shall have a solid core made of uniform strips of wood each not exceeding 25 mm. In width laid separately between two or more outer veneers, with the direction of the grain of the core block running at right angles to that of the adjacent veneers. In any one block board, the core strips shall be of the species of pre treated timber only. Face veneers may be decorative or commercial as mentioned in the detailed item specifications. The adhesives used for bonding shall be synthetic resin conforming to IS: 848 - 1974. Tolerance in thickness shall be +/- 5% only. Each board shall be of uniform thickness.

h. **SURFACE TREATMENT**

Wherever mentioned in the specifications, decorative Italian veneer or plastic laminate shall be bonded under pressure to the surface to be finished. The adhesive used shall be of approved brand and brought to site in sealed container.

i. **FINISH**

All carpentry works after finishing shall be sand papered smooth. A priming coat shall be applied to all surfaces other than those, which shall be subsequently polished or covered with Italian veneer or plastic laminate.

3.2 **PAINTING**

a. Surfaces to be painted shall be dry, free from dust and dirt and rubbed by means of sand paper. The paint shall be ready mixed synthetic enamel paint of approved make. The primary coat of approve make shall be applied and perfectly dried, all holes, cracks etc. shall be filled with putty and the surface sand papered even. Then a second coat of approved shade shall be evenly applied and allowed to dry. The third and final coat shall be carefully applied as and when required.

b. SPIRIT POLISH

The surface shall be first cleaned and scrapped thoroughly with sandpaper. It shall then be painted with a Filler compound of whiting and Methylated spirit and sand papered. Subsequent coat of spirit polish shall be applied till proper Finishing is achieved. A Final coat of melamine shall be applied to form a hard & shining crust.

c. ALKYD AMINO PAINT

All alkyd amino paint for sheet steels in Filing cabinets, book stacks etc. should be painted with an anti corrosion element added to it baked at a uniformly high temperature (135 deg. C to 165 deg C) done by using airless electrostatic automatic painting equipment and the dry Film the thickness should be 30 microns.

3.3 **PRODUCT MAKES & DESCRIPTION**

S. NO.	DESCRIPTION	MAKE / BRAND	REMARKS
1.	Teakwood (Tectonia Grandis)		Teakwood shall mean first class C.P. teakwood (sagwan type). Individual hard and sound knot shall not be more than 12mm. In diameter and the aggregate area of all the knots shall not exceed one-half percent of the area of the piece. It shall be close grained.
2.	Kailwood (Pinus Walli Chiana)		No individual hard and sound knot shall be more than 25mm. Diameter and the aggregate area of all the live knots shall not exceed 1% of the area of the piece.
3	Hollack – Hardwood (Terminalia Myriocarpa)	Duro / Century / Green	Plywood shall be formed by three or more layers of veneer glued and hot pressed together with the grain of adjacent veneers running at right angles to each other. The veneers for center shall be of the same thickness and species. In a 3 ply-board upto 6mm. Thick, the combined thickness of the face veneers shall not exceed twice the thickness of center ply. Ina multi-ply board, the thickness of any veneer shall not be more than thrice the thickness of any other veneer. all grades shall be either rotary cut or sliced. The thickness of all veneers shall be uniform within a tolerance of +5%. Corresponding veneers on

S. NO.	DESCRIPTION	MAKE / BRAND	REMARKS
			either side of the
5	MDF Board	Nuwud / Duratuff	
6.	Plastic Laminate	Formica	
7.	Natural Veneer	Century / Duro (Sharda Plywood Industries)/green	
8.	Adhesive	Fevicol	
9.	Fibre Board	Cellotex	
10.	Gypsum Board / GI Ceiling frame	India Gypsum	
11.	Perforated Gypsum Board	India Gypsum	
12.	Glasswood	Punj Lloyd	
13.	Fabric	Floor & Furnishing / Fabindia	
14.	Latex Rubber Form	MM Foam	
15.	Synthetic Carpet	Mohawk / Salisbury/mannington	
16.	Ceramic Tiles	Kajaria	
17.	Vinyl Flooring	Royal Cushion House	
18.	Plastic Emulsion Paint	Dulux / Berger	
19.	Wood Polish	Dark / Light natural spirit polish/melamine finish	
20.	Powder Coating Paint	Berger	
21.	Waterproofing compound	CICO	
22.	Anti Termite Chemical	Aldrin / Lethal	
23.	Vertical Blinds	Vista Levelor / Mac Blinds	
24.	Venetian Blinds	Vista Levelor / Mac Blinds	
25.	Glass	Modi Float Glass / TATA Ashai / St. Goabin	

S. NO.	DESCRIPTION	MAKE / BRAND	REMARKS
26.	Drawer Channels	Elbco / Flyrail	
27.	Cup Off Hinges	Elbco	
28.	Solid wood flooring	Ego floor	
29.	Locks	Godrej / Icra	
30.	Door closer / floor spring	Doorking / Everite	
31.	Aluminum Section	Hindalco	

Note: Incase of unavailability of any material of specific make, an equivalent make can be used only after a written approval of the Architect.

3.5 **List of important relevant applicable codes**

i. IS:204 Specifications for Tower Bolts
ii. IS:287 Recommendations for max. permissible moisture content of timber
iii. IS:303 Specification for plywood for general purposes
iv. IS:451 Technical supply condition for wood screws
V. IS:513 Specifications for Sheet steel components
vi. IS:729 Specifications for drawer locks, cupboard locks & box locks
vii. IS:848 Specifications for Synthetic resin, adhesive for plywood (phenolic and amino plastics)
viii. IS: 1200 (P14) method of measurement of building and civil engineering works
ix. IS: 1200 (P21) Wood work and Joinery
x. IS: 1328 Specifications for veneered decorative plywood
xi. IS: 1659 Specifications for block board
xii. IS:1734 Determination of density and moisture contents
xiii. IS:2338 Code of Practice for finishing of wood and wood based materials (Part – 1)
xiv. IS:2932 Specifications for enamel, synthetic, type-1 (a) undercoating, (b) finishing, colour as required
xv. IS:3087 Specifications for wood particle boards
xvi. IS:3097 Specifications for veneered particle boards
xvii. IS:3618 Phosphate treatment for anti rust treatment
xviii. IS:5807 Method of tests for clear finishes for wooden furniture
xix. IS:6005 Degreasing, Pickling and Passivation for anti rust treatment
xx. IS:8756 Specifications for mortise ball catches

Note: Only latest editions of above referred codes shall be followed.

4.0 Aluminium Work

4.1 Aluminum anodized used in the manufacture of extruded doors, windows, ventilators or glazing shall be as per Indian Standards and of designation HE 9-wp or IS-733-1967. All coupling sections shall also be based upon the above mentioned standards. Any approved metal used for erection brazing or gas welding or other means shall be of modem techniques and shall be got approved from the Architect.

The Tube, overall sizes, side opening and position of doors, windows and ventilators shall be as indicated on drawings.

Both the fixed and opening frames shall be constructed of sections, which have been

cut to length and mitred. The comers of fixed and openable frames shall be electrically flash butt welded to form a solid and true right angle and all frames shall be square and flat.
Where sub-dividing members come, they shall be tennoned and riveted into the frame. No face welding shall be done which shall spoil the outlook. The joints shall be made with hydraulic pressure. Only where necessary welding shall be done. The sizes of doors, windows and ventilators frame shall not vary by more than + 1.5mm.

The hinges shall be cast or extruded aluminum alloy hinges and shall be of 50mm projecting type. Non projecting type hinges may also be used, refer drawings and get confirmation from the Engineer in Charge. The handles and suitable type of lock for door openable either from outside or inside shall be provided.

In double door shutter the first closing shutter shall have a concealed aluminum alloy bolt at top and bottom. It shall be so constructed as not to work loose or drop by its own weight. Single and double shutter may be provided with a three-way holding device. Where this is provided, in case of double door shutter concealed aluminum bolts may not be necessary.

The kick panel in case of aluminum anodized shutters shall be of 1.25mm aluminum alloy sheet conforming to IS designation NS 3-1/2 H of IS:737-1964.

Aluminum alloy sheets and strip (for general engineering purposes) shall be screwed to glazing bar. For fixing aluminum alloy hinges, slots shall be cut in the fixed frame and the hinges inserted inside and may be rivetted to the frame. Only suitable type pin of an aluminum alloy shall be used.

Friction hinges maybe provided for side hung shutter windows or aluminum in which case peg stay may not be required. In case on non-friction type hinges, peg stay which shall be either cast aluminum, conforming to IS designation A-5M of IS: 6127-1959 or folded from IS designation NS4 Aluminum alloy sheet conforming to IS: 735-55 shall be used. It shall be 300 mm long complete with peg and locking bracket. It shall have holes for keeping the shutter open bracket. It shall have holes for keeping the shutter open in three different positions. The peg and locking bracket shall be rivetted or welded to the fixed frame.

The handles or side hung window shutters shall be cast aluminum conforming to IS designation A-5-M of IS: 617-1959 and mounted on a handle plate or welded or riveted to the opening frame in such a way that it could be fixed before the shutter is glazed the handle should have anodized finish with aluminum anodized film thickness of .015 m. The handle shall have a two-point nose, which shall engage with an aluminum striking plate on the fixed frame in a slightly open as well as in a fast position.

In case of ventilators the aluminum hinges for top hung shall be either cast or fabricated out of extruded sections and shall be rivetted to the fixed rail after cutting a slot in it. The aluminum alloy for cast hinges shall conform to IS designation AA.M of IS: 617-1959 and for the extruded section of hinges to IS designation HE 10 WP of IS: 733-1967. The peg stay shall be 3000 mm long inside hung shutter. The locking bracket shall either be fitted to the fixed frame or to the ventilator.

In case of centre hung ventilators two pairs of cup pivots of aluminum alloy of IS designation NS-A of IS :737-1955 and IS designation A-5-M of IS : 617-1959 and rivetted to the inner and outer frames of the ventilator to permit the ventilator to swing, through an angle of approximately 85 degrees shall be provided.

The opening portion of ventilator shall be so balanced that it remains open at any desired angle under normal weather conditions.

Cast aluminum conforming to IS designation A-5-M of IS: 617-1959, spring catch shall be fitted in the centre of the top bar of the ventilator. Aluminum cord pulley wheel in an aluminum bracket shall be fitted at the sill of the ventilator with aluminum or screws or alternatively welded together with an aluminum cord eye rivetted or welded to the bottom inner frame bar of the ventilator in a position corresponding to that of the pulley.

Outer frames shall be provided with fixing holes centrally in the web of the section in the position indicated in Figure3l of IS: 1948-1961.

Aluminum doors windows and ventilators may be supplied in either matt scratch brush or polished finish. They may additionally also be anodized.

A thick layer of clear transparent lacquer based on methacrystales or cellulose butyrate shall be applied on aluminum doors, windows and ventilators to protect the surface from wet cement during installation. This lacquer coating shall be removed after installation is completed.

4.2 **Precaution**

All aluminum doors, windows, ventilators, glazing shall not be used for centering etc. Scaffolding shall not be rested on the frames or glazing bars.

All fittings and hinges shall be covered with Hessian cloth etc. so that these may not be damaged during construction.

4.3 **Submit shop Drawings and Samples for Approval**

(i) All sizes and shapes shall be verified at site by the Agencies before fabrication.

(ii) Glass for glazing for all items will be supplied by the Agencies in thickness and quality specified in the item.

4.4 **Measurements**

The unit of measurement shall be square meter correct to two decimals. All work shall be measured on the basis of finished dimension net. A composite unit of various designations shall be first measured overall as a unit of pre-dominant designations and measurements and for the remaining designations, deducted from the overall measurements in the composite unit in order to arrive
at quantities for various designations.

4.5 **Rates**

The rates for various items shall include the cost of all materials, labour, erection hoisting. scaffolding, protective measures required for proper completion of the item of work as given in the respective nomenclature in accordance with the specification given above.

5.0 FLUSH DOOR SHUTTERS

5.1 General: These Shutters shall be of two grades namely exterior grade and interior grade, as per design and of the thickness as specified by the Engineer in Charge. These shall consist of a solid (fully filled) core covered on each face with cross bands and face veneers and lipped on all the edges. The specifications in general shall conform to Indian Standard Specifications IS : 2202-1962.

The shutters shall be of approved quality and as directed by the Engineer in Charge. The Agencies shall be required to bring a full size sample door and fittings and get these approved in writing by the Engineer in Charge. He shall then arrange the supply m

accordance with the approved sample.

5.2 **Core:** The core shall be of the one of the following types: -

a) **Block Board Core:** The block board core shall conform to the requirements specified in Indian Standard Specification IS: 1659-1960. The wooden strips for the core shall not exceed 25 mm in width. The length of the majority of strips shall extend to the full length of the board but end joints are permissible provided the jointed strips are distributed between full-length strips; and the joints are staggered. In any one-block board, the core strips shall be of one species of timber only.

A wooden frame prepared from stiles and rails of well-seasoned and treated good quality wood shall be provided for holding the core. The width of the members shall be not less than 50 mm and not more than 100 mm.

Alternatively, the core shall be of solid board with slots extending for about two third depth and at approximately 20 mm spacing. The slots shall be made alternatively on two faces of the board.

b) **Particle board and Block Board core:** The core shall be a combination of block board and particle board. The block board and the frame shall be as specified. The particleboard shall be either of flat platen pressed type or extrusion type conforming to the relevant Indian Standards.

c) **Particle board core:** The particle board core shall be either of flat plate pressed type or extrusion type as specified in (b) above. The frame for holding the core shall be as specified in (a) above.

d) **Laminated core:** It shall be constructed by gluing together under pressure plywood strips in a limited way. The frame for holding the core shall be as specified in (a) above.

5.3 **Lipping:** If so specified, edges of the core shall be lipped with 1st class teakwood battens of 25mm minimum depth or of any other matching hardwood of class I, specified in Appendix

"A" of IS: 1659-1960 glued under pressure and the lipping shall be internal. In the case of the double shutter doors, the depth of the lipping at the meeting of styles shall not be less than 30 mm and the meeting of the styles shall be rebated 20 mm. the rebating shall be of either splayed or square type.

5.4 **Face Panels:** The face panels shall be formed by gluing under pressure on both faces of the core with plywood or cross bands and face veneers. The thickness of the cross bands on each face shall be between 1 mm and 3 mm. The thickness of the face veneers on each face shall be between 0.5 mm and 1.0 mm. The combined thickness of cross bands and face veneers on each face shall not be less than 2.5 mm. The cross bands shall be laid with their grains at right angles to those of the core. Face veneers shall then be laid with their grains at right angles to those of the cross bands. The cross bands shall be of good quality, durable and well seasoned wood, conforming to IS Specification is : 303/1960 and shall not be inferior to those specified for grade BWR plywood exterior grade and shall not be inferior to those specified for grade WWR plywood for interior grade. The class teak wood or other decorative wood conforming to Grade I decorative plywood as per Indian Standard Specifications IS:1955.

All cross bands and face veneers shall be treated in accordance with Indian Standard Specification IS: 303-1960 before assembly. Trimmed and cut ends shall be given a protective treatment.

5.5.1 **Tolerances:** Tolerance on width and height shall be + 3 mm, tolerance on thickness shall be + 1.2 mm. The thickness of shutter shall be uniform throughout with a variation not exceeding 0.8 mm, when measured at any two points.

5.6 **Opening for Vision Panel:** Where specified or otherwise shown in the drawing, opening for glazing shall be provided. The opening shall be 25 cm in height and 20 cm in width unless directed otherwise. The bottom of the opening shall .be at a height of 150 cm from the bottom of the shutter. Opening for shutter shall be lipped internally with solid timber.

5.7 **Adhesives:** only synthetic resin adhesives conforming to Indian Standard Specification IS: 851- 1964 shall be used for bonding core members to one another, including core frame and for lipping, vision panel and other exposed parts. The adhesive used for bonding cross band to core and face veneers to cross band shall conform to Indian Standard Specifications IS: 848-1957 (Phenolic and Amino plastic).

5.8 **Fittings:** Details of fittings to be provided shall be as per the schedule of fittings supplied by the Engineer in Charge in each case. The cost of providing and fixing shutters shall include the cost of hinges and necessary screws for fixing the same.

5.9 **Measurements:** Shutters shall be measured in Sqm. nearest to two places of decimal in closed position covering the rebates of the frame. Overlap of two shutters shall not be measured. The width and the height of shutters shall be measured correct to a cm. All work shall be measured net as fixed that is no except in the following case.

Circular of segmental portions of doors, windows and ventilators shall be measured net and kept separate.

5.10 **Rate:** It includes the cost of materials and labour involved in all the operations described above.

6.0 FINISHING

6.1 Dry and Oil Bound Distempering

6. 1.1 **Materials:**

Oil bound washable distemper of approved brand and manufacture shall be used. The primer where used as on new work shall be cement primer or distemper primer as described in the item.
These shall be of the same manufacturer as oil bound distemper.

The distemper and primer shall be brought by the Agencies in sealed tins in sufficient quantities at a time to suffice for a fortnight's work and the same shall be kept in the joint custody of the Agencies and the Engineer in Charge. The empty tins shall not be removed from the site of work, till this item of work has been completed and passed by the Engineer in Charge.

6.1.2 **Application**

6.1.2.1 **Primer Coat:**

The primer coat shall be with distemper primer or cement primer, as required in the description of the item. The application of the distemper primer shall be in the same

manner as described below:

Note: If the wall surface plaster has not dried completely cement primer shall be applied before distempering the walls. But if the distempering is done after the wall surface is dried completely, distemper primer shall be applied.

However, oil bound distemper is not recommended to be applied within six months of the completion of wall plaster. For old work no primer coat is necessary. Distemper primer or cement primer shall be applied as required in the description of item.

The cement primer shall be applied with a brush on the clean dry and smooth surface. Horizontal strokes shall be given first and vertical strokes shall be applied immediately afterwards. This entire operation will constitute one coat. The surface shall be finished as uniformly as possible leaving no brush marks. It shall be allowed to dry for at least 48 hours, before oil bound distemper or paint is applied.

6.1.2.2 **Distemper Coat:**

For new work after the primer coat has dried for at least 48 hours, the surface shall be lightly sand papered, taking care not to rub out the priming coat. All loose particles shall be dusted off after rubbing. One coat of distemper properly diluted with thinner (water or other liquid as stipulated by the manufacturer) shall be applied with brushes in horizontal strokes followed immediately by vertical ones, which together constitute one coat. The subsequent coats shall be applied in the same way. Two or more coats of distemper as are found necessary shall be applied over the primer coat to obtain an even shade. A time interval of at least 24 hours shall be allowed between consecutive coats to permit of the proper drying of the proceeding coat.

For old work the distemper shall be applied over the prepared surface in the same manner as in new work. One or more coats of distemper as are found necessary shall be applied to obtain an even and uniform shade.

15 cm double bristled distemper brushes shall be used. After each day's work, brushes shall be thoroughly washed in hot water with soap solution and hung down to dry. Old brushes which are dirty and caked with distemper shall not be used on the work.

6.2 **Wall Painting with Plastic Emulsion Paint:**

6.2.1. **General:** Plastic emulsion paints are not suitable for application on external wood and iron surfaces and surfaces which are liable to heavy condensation and are to be used generally on masonry or plastered surfaces. No priming coat is required for the latter.

6.2.2. **Paint:** Plastic Emulsion paint of approved brand and manufacture and of the required shade shall be used.

6.2.3 **Preparation of surface:** The surface shall be thoroughly cleaned of dust, old white or colour wash by washing and scrubbing. The surface shall then be allowed to dry for at least 48 hours. It shall then be sand papered to give a smooth and even surface. Any unevenness shall be made good by applying putty, made of Plaster of Paris mixed with water on the entire surface including filling up the undulation and then sand papering the same after it is dry.

62.4 **Application:** The number of coats shall be as stipulated in the item. The paint will be

applied in the usual manner with brush or roller.

The paint dries by evaporation of the water content and as soon as the water has evaporated the Film gets hard and the next coat can be applied. The time of drying varies from one ft hour on absorbent surfaces to 2 to 3 hours on non-absorbent surfaces.

The thinning of emulsion is to be done with water and not with turpentine. Thinning with water will be particularly required for the undercoat, which is applied on the absorbent surface. The quality of thinner to be added shall be as per manufacturer's instructions.

The surface on Finishing shall present a flat velvety smooth Finish. If necessary more coats will be applied till the surface presents a uniform appearance.

6.2.5 **Precautions:**

a) Old brushes if they are to be used with emulsion paints should be completely dried of turpentine or oil paints by washing in warm soap water.

Brushes should be quickly washed in water immediately after use and kept immersed in water during break period to prevent the paint from hardening on the brush.

b) In the preparation of walls for plastic emulsion painting, no oil base putties shall be used in filling cracks, holes etc.

c) Splashes on floors etc. shall be cleaned out without delay, as they will be difficult to remove after hardening.

d) Washing of surfaces treated with emulsion paints shall not be done with 3 to 4 weeks of applications.

6.3 **Painting with Synthetic Enamel Paint:**

6.3.1 **Paint:** Synthetic enamel paint of approved brand and manufacture and of the required shade shall be used for the top coat and an undercoat of shade to match the top coat as recommended by the manufacturer shall be used.

6.3.2 **Preparation of Surface:**

a) **Wood Work:** The surface shall be cleaned and all unevenness removed. Knots if visible shall be covered with preparation of red lead. Holes and indentations on the surface shall be filled in with glazier's putty or wood putty and rubbed smooth before painting is done. The surface should be thoroughly dry before painting.

b) **Iron and Steel Work:** The priming coat shall have dried up completely before painting is started. Rust and scaling shall be carefully removed by scraping or by brushing with steel wire brushes. All dust and dirt shall be carefully and thoroughly wiped away.

c) **Plastered Surface:** The priming coat shall have dried up completely before painting is started. All dust or dirt that has settled on the priming coat shall be thoroughly wiped away before painting is started.

6.3.3 **Application:** The number of coats including the undercoat shall be as stipulated in the item.

a) **Under Coat:** One coat of the specified paint of shade suited to the shade of the top coat shall be applied and allowed to dry overnight. It shall be rubbed next day with the finest grade of wet abrasive paper to ensure a smooth and even surface, free from brush marks and all loose particles dusted off.

b) **Top Coat:** Topcoats of specified paint of the desired shade shall be applied after the under coat is thoroughly dry. Additional finishing coats shall be applied if found necessary to ensure properly uniform glossy surface.

6.3.4 **Commencing:** Painting shall not be started until the Engineer in charge has inspected the items of work to be painted, satisfied himself about their proper quality and given his approval to commence the painting work. Painting, except the priming coat, shall generally be taken in hand after all other builders work is practically finished.

The rooms should be thoroughly swept out and the entire building cleaned up, at least one day in advance of the paintwork being started.

6.3.5 **Measurement:** All painting work shall be measured in Sqm, Length and Breadth should be measured to a nearest cm.

6.3.6 **Rates:** Rate and shall include cost of material, labours, scaffolding, etc. and other equipments etc.

6.4 **Plaster of Paris punning**

3 mm thick P.O.P. punning (calcium Sulphate semi-hydrate variety) over old and new wall surface shall include rounding, chamfering of corners, angles, junctions etc. M.S. angle heading shall be provided at corners wherever required giving a smooth surface in true line and level.

7.0 ELECTRICAL WORK

7.1 The materials, equipment and workmanship shall conform to the following Indian standards, unless otherwise called for:

Switchgear

IS:375	Markings and arrangements for switchgear bus-bars, main connections and Auxiliary wirings.

Cables:

IS: 1554	Specification for PVC insulated (Heavy duty) electric cables part -1 for voltage upto 1100 volts.
IS: 694 II	Specification for PVC insulated cables (for voltage upto 1100 V) (Part -11) with aluminum conductors
IS: 1653	Specification Rigid Steel conduits for electrical wiring.
IS: 3837	Specification for accessories for rigid steel conduits for electrical wiring.
IS:5133	Boxes for the enclosure of electrical accessories (Part -1, Steel & C.I. Boxes).
IS: 1293	3 pin plugs & socket outlets
IS: 371	Ceiling roses
IS: 2448	Adhesive insulating tapes for Electrical purposes (Part I & 11)
IS: 191	General & safety requirements for electric lighting fitting.
IS: 374	Electric ceiling fans and regulators
IS: 2312	Propeller type AC ventilating fans
IS: 3043	Code of practice for Earthing.
IS: 1885	Glossary of terms for Electrical cables and conductors.

IS: 1646 Code of practice for safety of buildings (General) electrical installation.
IS: 2309 Protection of buildings & allied structures against lighting

List of approved makes of materials for Electrical Work

Sl. No.	Item Description	Make / Brand
1.	PVC insulated / copper wire 650 V grade conforming to IS:694/1977	Finolex, Skyline, Grandlay, National Rkabel
2.	PVC conduit pipe (ISI Marked)	BEC, Steel Krafts, AKG
3.	Switches and Sockets	North West, MK, LK
4.	MCB & DB	Standard, MDS, Schneider
5.	ELCB & MCCB	MDS, Schindler, Siemens, L&T
6.	Metal Clad Sockets	MDS, Schindler, MK
7.	Telephone outlet sockets / computers	CPL, Precision, North West, Anchor, Roma
8.	Telephone Wires	Finolex
9.	UTP Cable	Avaya (AT&T USA)
10.	GI pipe for earthing	TATA, Gujarat Steel Tube, Jindal
11.	Armoured Cable	Finolex, CCI, Fort Giloster
12.	Ceiling / wall / exhaust fan	GEC, Crompton, Khaitan
13.	FI fittings / CFL	Philips, Wipro, Crompton
14.	Incandescent Lights	Philips, Wipro, Decon

Note: Incase of unavailability of any material of specific make an equivalent make can be used only after a written approval of the Architect. Also the preference of make/ brand of the material listed above will be decided by the Architect. The make/ brand of any other item will be as mentioned in the drawings issued by the Architect.

LIST OF APPROVED MAKES OF AIR CONDITIONING SYSTEM:

The list of approved make of Air Conditioning System shall be of **Mitsubishi / Fujitsu / Toshiba / Daikin / Hitachi** makes only.

Bidder has to quote the specific make & model out of the above mentioned makes and attach the catalogue of the same along with the technical bid.

SPECIAL CONDITIONS OF THE CONTRACT

i) **CLAUSE/SPECIAL CONDITION:-** where by contractor has to ensure that the existing building is not damaged during course of contract execution or if so any damage caused to the building, the same has to be rectified to the direction/satisfaction of M/s BHEL at no extra cost.

ii) **CLAUSE SPECIAL CONDITION: -** Regarding instructions to the contractor. Instructions to the contractor from the architect / consultant appointed by the BHEL for this work shall become the instruction from Engineer-in-charge only after written approval to such instructions, clarifications etc is given by the Engineer-in-charge and shall be enforceable only after accord of such written approval by Engineer-in-charge.

iii) The Institute is a working institute. The contract needs to be executed to the convenience of BHEL administration.

Checklist

Sl. No.	Required Document	If Submitted then **Tick (√)**
1	Required amount of **EMD** (₹1.50 Lakhs)	
2	**Unpriced BOQ** for technical bid	
3	Duly signed and stamped complete set of tender documents for technical bid	
4	ITR for last 3 years (2007-08, 2008-09, 2009-10)	
5	**Work orders / Completion certificates** in support of clause No. 2.2 for technical bid	
6	Copy of **PAN No.** registration certificate	
7	Copy of **VAT/TIN no.** registration certificate	
8	Copy of **Service Tax** registration certificate	
9	**NO DEVIATION** certificate as per **Annexure-A** duly signed and stamped	
10	Duly filled and signed **Annexure-B** regarding information of the tenderers	
11	Duly filled and signed **Annexure-C** regarding Air Conditioning System offered by the tenderers	
12	Quoted **PRICE BID** in the price format at **Annexure-III** duly signed and stamped along with tender enquiry	

Annexure-I

BOQ for Creation of Project Review Room and Conference cum Training Room at Ground Floor in BHEL House, New Delhi

A.	CIVIL WORKS				
S N	**Description**	**Qty.**	**Unit**	**Rate (Rs.)**	**Amount (Rs.)**
1	Demolishing brick work manually/by mechanical means including stacking of serviceable materials and disposal of unserviceable material within 50 m lead as per direction of EIC. In cement mortar	0.5	Cum.	421.60	210.80
2	Demolishing RCC work manually/by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 m lead as per direction of EIC	0.25	Cum	731.07	182.77
3	a)Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking within 50 m lead: of area beyond 3 Sqm	25	Sqm.	102.48	2561.90
	b)Taking out of doors, windows and clerestory window shutters (steel or wood) including stacking within 50 m lead: of area beyond 3 Sqm	40	Sqm.	38.42	1536.80
	(c) Dismantling glass and wooden paneling carefully. The re-usable wood and the glass to be handed over to BHEL as desired in the BHEL premises.	10	Sqm.	120.00	1200.00
	(d) Dismantling existing ceiling including stacking within 50 m lead	305	Sqm	120.00	36600.00
	(e) Dismantling of existing ducting & 3 Nos. AC system including stacking within 50 m lead	L/S	L/S	1500.00	1500.00
4	Disposal of surplus malba from site by mechanical transportation outside to any unobjectionable place (minimum 5 cum. Per truck)	8	Nos.	1500.00	12000.00
5	Brick Work with FPS brick of class designation 75 in superstructure above plinth level up to floor V level in all shapes and size. Cement mortar 1:6 (1 cement: 6 coarse sand)	2	Cum.	3206.06	6412.13
6	Half brick masonry with FPS bricks of class designation 75 in superstructure, above plinth level up to floor V level. Cement mortar 1: 4 (1 cement : 4 coarse sand)	1	Sqm.	411.81	411.81
7	Extra for providing and placing in position 2 Nos 6 mm dia M.S. bars at every third course of half brick masonry (with FPS bricks) CM (1 cement: 4 coarse sand)	5	Sqm.	65.01	325.04
8	Providing and laying PCC cement concrete under floors in 1:4:8 (1 Cement: 4 Sand: 8 AGG 40 MM and Down)	0.5	Cum.	3300.00	1650.00
9	(a) Reinforced Cement Concrete: Reinforced cement concrete works in	0.25	Cum.	5000.00	1250.00

	lintel, beams, counters, shelves etc. including the cost of centering, shuttering, finishing and at all levels.1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20mm nominal size)				
	(b) Steel in position complete in all respects.	25	Kgs.	70.00	1750.00
10	12 mm th. Cement plaster of mix 1:4 (1 cement: 4 fine sand)	15	Sqm.	105.47	1582.02
11	Vitrified Tile Flooring: P/F 8 mm thick 24" x 24" vitrified tiles, granamite or approved equivalent tile on floor and laid over adequate thickness of cement mortar 1:4 (1 cement: 4 coarse sand) / synthetic tile adhesive mix including cutting of tiles, white cement slurry, matching pigment etc. complete as per design and drawing. Flooring: a) Basic price Rs 70.00 per Sqft matt finish	50	Sqm.	1200.00	60000.00
12	P/F laminated cill treatment with 1.5mm lamination over 12mm thick BWP fixed to the cill with wooden plugs / nails inclusive all nails, glues, wood, preservatives and beech lipping.	1.5	Sqm.	2500.00	3750.00
13	Door Frame: Providing wood work in frames of doors, windows, clerestory windows and other frames, sawn and fixed in position with screws / nails / hold fast including applying coat of wood preservative, melamine polishing etc. complete as per design and drawing. a) First class teak wood	0.7	Cum.	100000.00	70000.00
14	Partly glazed and partly flushed shutter: P/F 57 mm thick partly flushed and partly glazed door shutter comprising of the following: 200mm x 37mm teakwood on bottom and 125mm x 37mm wood on top and side rail as shown in the drawing. The outer frame to be lined with 6mm commercial ply to take 4mm teak veneer as per design all inclusive. Glazed portion made of 6mm thick toughened annulled float glass along two sides held by steel spacers along top and bottom spacers 4). Including all nails, screws, glues, melamine polishing, wood preservative paint, door stopper, holes in glass, spacer wood etc. complete as per design and drawing.	18	Sqm.	6000.00	108000.00
15	Flush Door Shutter: P/F 35mm thick both side commercial type flush door shutters (decorative type) core of block board construction and frame of 1st class hardwood phenol bonded, 12mm thick teakwood lipping on all edges of shutters including butt hinges, PVC buffers, door	7	Sqm.	4500.00	31500.00

	stoppers, melamine polishing to required shade where required adhesive etc. all complete as per design and drawing. a) both side teak veneered				
16	Hydraulic Door Closer: P/F open type hydraulic door closer and cover plate in approved finish and complete etc. make hettick basic price 4000/	3	Nos.	5000.00	15000.00
17	Latch and lock: a) P/F 100mm mortise latch and lock 6 levers and a pair of decorative handles, cylinders etc. in approved finish (Total basic price Rs. 3000/- each) Dorset make	6	Nos.	4000.00	24000.00
	b) Pair of 16" stainless steel (Dorset) handles/ approved	8	Nos	2500.00	20000.00
18	Floor Spring: P/F double action hydraulic floor spring of make ozone including cost of cutting floors as required, embedding in floors and cover plates etc. complete as directed	6	Nos.	7000.00	42000.00
19	(a) Fixed Glazing: P/F 10mm thick clear glass wherever required in teakwood frame with beading 1 ½" x 6/8 x 2/8 or as per requirements (beading include but not frame). Modifloat glass to the entire satisfaction of architect including all nails, melamine polish, wood preservative paint, complete as per design and drawings Regular glazing (main frame not part of this	6	Sqm.	2000.00	12000.00
20	(a) Fixed Glazing: P/F 2 Nos 10mm thick toughened & frosted glass wherever required on SS stud or as per requirements (beading include but not frame). Modifloat glass to the entire satisfaction of architect including all nails, Regular glazing (main frame not part of this	7	Sqm.	4500.00	31500.00
21	Wooden Partition: P/F full height partition 75mm thick comprising of the following: Sal Wood framing made of 2" x 2" section at 600m c/c on both ways fixed to door and ceiling as shown and as required. 8 mm thick commercial ply fixed to framing on both faces as shown. Including all nails, screws, glues, melamine polishing, wood preservative paint, fire retardant paint etc. complete as per design and drawing. Payment for actual finished partition below ceiling only. Cost will include ceiling support frame also. Openings will be deducted. Wood for the framing to be provided by the client as dismantled residue and contractor to make it workable to the need.	82	Sqm.	3200.00	262400.00
22	Paneling (a) P/F 4mm thick maple veneer (matching grain) to be fixed on commercial ply base including base prepration &	160	Sqm.	1500.00	240000.00

	melamine polish complete over veneer surface as approved by Engineer-in-charge				
	(b) same as (a) above with 4mm thick jatoba veneer	20	Sqm.	1500.00	30000.00
23	Maple wood skirting: P/F maple wood 100mm high and 20mm thick fixed to wall with wooden plugs including all necessary nails, screws, melamine polishing on exposed surfaces, fire retardant paint etc. complete as per design and drawing secured to walls at 450mm at maximum centres.	130	Rmt.	300.00	39000.00
24	Providing and fixing gypboard false ceiling made of standard GI sections and 12mm thick gyp board sheets inclusive of all hangers, edge members and other clips complete as per with 12mm thick sheets fixed with proper Philip screws by power drills and joints duly finished ensuring level in line and plumbs to make flat and curved as per design to take final paint including all basic preparations etc. complete. All inclusive of making cutouts for light fixtures as grills etc. framework should be confirming to India gypsum specifications. The ceiling is a designer ceiling in various levels. Rates to be quoted accordingly.	180	Sqm.	800.00	144000.00
25	Providing and fixing wooden false ceiling made of standard GI sections and 12mm thick commercial ply inclusive of all hangers, edge members and other clips complete as per with 12mm thick ply fixed with proper Philip screws 1mm thick dark Colour laminate finish with groove	28	Sqm.	3200.00	89600.00
26	Armstrong Mineral Fiber Ceiling.Providing and fixing of false ceilings at all heights of 600mm x 600mm x 15 ARMSTRONG Mineral Fiber ceilings tiles of Dune RH-99 with Regular Edge laid on Armstrong prelude XL exposed grid system With 24 mmWide T-section flanges.And complete in all respects to the specifications of Armstrong	120	Sqm.	1500.00	180000.00
27	Plastic Emulsion Paint: Preparation of surfaces and painting walls / ceilings, with plastic emulsion paint approved brand and manufacturer to give an even shade two or more coats on new work over a coat of primer / with roller finish.	220	Sqm	160.00	35200.00
28	(a) Storage Cabinet (veneered) (a) Storage cabinets of approx. 18" (D) for open office. Item would include shutters. The sides to be ¾" block board veneered on all exposed surfaces and 6mm back ply lining complete with all hardware, spring hinges, locks, shelves as per design and wood lipping and polished / painted as per	16	Sqm.	9500.00	152000.00

	design. (all surfaces to be veneered & jatoba & melamine polish				
	(b) Storage Cabinet (veneered) (a) Storage cabinets of approx. 18" (D) for open office. Item would include shutters. The sides to be ¾" block board veneered on all exposed surfaces and 6mm back ply lining complete with all hardware, spring hinges, locks, shelves as per design and wood lipping and polished / painted as per design. (all surfaces to be veneered & jatoba & melamine polish	31	Sqm.	9000.00	279000.00
29	Imported Carpet Providing and laying tufted level loop graphic design carpet in repeat 8.13 x 7.62 cms weighting 950 gms/sqm (total weight of carpet 2230 kg / Sqm) made of 100% solution and spaced dyed BCF OLEFIN YARN in 12'0" wide and having primary and secondary backing of woven polypropelene etc. complete	80	Sqm.	1800.00	144000.00
30	Providing and applying three coats sandtax matt of approved brand and shade on the walls / POP surface.	8	Sqm.	2600.00	20800.00
31	Storage / display for conference in levels out of veneered cupboards combined with glass cases totally finished to approved detail and design and in melamine finish with glass shelves etc. finish in jatoba veneer	5	Sqm.	10000.00	50000.00
32	Providing and fixing Lumar decorative PU film as per approved design (non reflective)	20	Sqm.	1200.00	24000.00
33	Solid Wooden Floor (oak). Providing and laying solid wooden flooring of lotus brand 18mm to 19mm thick and as per approved sample, Colour and laid on the existing leveled flooring with approved adhesive & underlay including skirting & profile etc. complete as per manufacturers specification & approved of Architect.	35	Sqm.	6000.00	210000.00
34	P/f of PVC floor make LG 8mm thick joint less Welded and to manufacturers specification	75	Sqm.	4500.00	337500.00
35	**Roman Blinds**				
	Stitching, assembling and fixing in position Roman Blinds made out of approved fabric with a base rate of Rs. 600 per meter as per approved patterns. Complete with locking thread, Metal bush, and removable aluminum Pangs and first quality markene backing.	53	Sqm.	4000.00	212000.00
36	Providing and applying OIKOS "stucco" paint as per manufacturer's specification over plaster of Paris punning as required as per shade approved complete as directed by the Architect.	10	Sqm	1300.00	13000.00
37	P\F of windows make UPVC by Fenesta	21	Sqm	8500.00	178500.00

	building system the outer profile out of 65mm/62mm in wooden finish (oak) the windows tabe & sliding with 6mm toughened glass & all the hardware, finishing & fixing to fenesta specifications				
38	Fabric paneling : P/L fabric mounted pin-board panels using ½" tackboard surface on ¼" ply cladding duly covered in suitable fabric, as selected by architect. (cost of fabric not to exceed Rs. 600 per meter.) tack board to have suitable ½" x1/4" timber beading under fabric for crisp edge	95	Sqm	3500.00	332500.00
39	P/F of 12mm thick MDF interior grade on existing ply panelling to pattern & design including all nails, glues, and complete	90	Sqm	800.00	72000.00
40	P/F of 19mm thick commercial board in the form of boxing horizontal – vential bands falce beams in design & pattern the items to take (in pattern) the item in including complete finished enament including nails, glues & hardware all complete	12	Sqm	1500.00	18000.00
				Sub Total of Civil (A) = Rs.	**3550423.26**
B.	**Electrical System**				
41	Laying and fixing of one number PVC insulated and PVC sheathed/ XLPE aluminum conductor cable of 1.1 KV grade having 3.5 core, of size exceeding 25 sq. mm but not exceeding 120sqmm on surface (cable tray) as required.	50	RM	80.00	4000.00
42	Fabrication and installation of 100 mm width x 50 mm depth x 1.6 mm thickness perforated M.S. cable trays including horizontal & vertical bends, reducers, tees, cross members and other accessories as required and duly suspended from the ceiling with M.S. suspenders and including painting with powder coating etc as required.	50	RM	400.00	20000.00
43	Supplying and making end termination with brass compression glands & Aluminium lugs for following size of PVC insulated & PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.				
a	3.5 x 120 sq.mm	2	Each	400.00	800.00
44	Earthing with copper earth plate 600 mm X 600 mm 3 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc, (but without charcoal or coke and salt) as required.	2	Set	5000.00	10000.00
45	Salt / charcoal for plate earth electrode : Extra for using salt and charcoal for G.I. or copper plate earth electrode as required.	2	Set	1000.00	2000.00

46	Supplying and laying 8 SWG copper wire at 0.50 meter below ground level for conductor earth electrode, including soldering etc, as required.	20	RM	60.00	1200.00
47	Providing and fixing earth bus of 50mm X 5 mm copper strip on surface for connections etc, as required.	20	RM	1000.00	20000.00
48	Supply of cable, include unloading, shifting upto site. All cables shall be of XLPE category as per specs.				
	120 sq mm x 3.5 C A2XFY cable	50	RM	589.00	29450.00
49	Supply installation, testing and commissioning of 180deg PIR occupancy sensor of 6A load for group fixture on onon regulating type on-off lights. Wipro 1200series or approved equivalent	2	No	5111.00	10222.00
50	Supplying, receiving, storing, handling erecting, testing and commissioning of cabinet type of original factory fabricated double door distribution board 18 gauge rust inhibited and baked enamel painted sheet steel and comprising of incoming ELCB/MCB, outgoing MCBs' bus bar (copper), double door, neutral bus bar or links, top & bottom detachable conduit entry plates, earthing terminals with bolts, grouting etc. complete as per specifications (Class of Protection IP-42)				
i)	8 ways TPNDB with 24 Nos. SPMCBs' of 10A/20A rating & controlled by 1No. 63A 4P ELMCB.	1	Nos.	15000.00	15000.00
ii)	6 ways TPNDB with 12 Nos. SPMCB's of 10A/20A rating & controlled by 3 Nos 63A DP ELCB +1No. 63A 4P MCB.	3	Nos.	12000.00	36000.00
51	Supply, receiving, storing, handling, fixing, wiring for miscellaneous work using 1100 V grade, PVC insulated, Cu conductor stranded wiring cable drawn in rigid U PVC, conduit (ISI marked), in surface / concealed system complete with all conduit accessories such as identification ferrules etc. As per required conduit being laid either in ceiling slab or wall chase including making & filling chases with cement mortar / wooden partition above false ceiling with hanging support wherever required				
a)	4 x 6 sq.mm. Cu. wires in 32 mm dia conduit along with 2 x 4 sq.mm. PVC insulated copper earth wire.	75	RM	250.00	18750.00
b)	4 x 10 sq.mm. Cu. wires in 40 mm dia conduit along with 2 x 6 sq.mm. PVC insulated copper earth wire.	75	RM	320.00	24000.00

52	Supplying, receiving, storing, handling, fixing, wiring & testing for light, fan, exhaust fan, 6 A socket etc. Starting from point control box to the outlet using 1100 volts grade 2.5 sq.mm. PVC insulated copper conductor stranded wiring cable in concealed / surface system using 20 mm / 25 mm / 32 mm rigid UPVC conduit, (ISI marked) including all conduit accessories such as bends, tees, check nuts, PVC bushes for conduit ends, draw boxes, fan hook boxes, fan regulator boxes together with wiring accessories such 6 A module type switch, 3 pin 6 A module type socket. Batten holders (wherever required) chrome plated brass screws, including 1.5 sq.mm. PVC insulated single strand Cu.earth wire, identification ferrules at either ends complete in all aspects. Conduit being concealed either in ceiling slab / wall chase including making & filling chases with cement mortar etc. wooden partition / above false ceiling with hanging support wherever required as per requirement.Note :i Each circuit shall have indipendent earth wire. ii Each point should be earth.				
a)	One light point controlled by1No.6A module type switch	10	Nos.	700.00	7000.00
b)	A set of two light point controlled by 1No. 6A module type switch. (2 points counted as 1set)	12	Nos.	850.00	10200.00
c)	A set of 3 light points controlled by 1No. 6A module type switch. (3 points counted as 1 set).	20	Nos.	1200.00	24000.00
d)	A set of 4 light points controlled by 1No. 6A module type switch. (4 points counted as 1set).	4	Nos.	1500.00	6000.00
e)	A set of 2 Nos. 3 pin 6A socket points controlled by 1 No. 6A module type switch	12	Nos.	800.00	9600.00
f)	A set of 3 Nos. 3 pin 6A socket points controlled by 1 No. 16A module type switch	12	Nos.	1200.00	14400.00
g)	A set of 1 Nos. 6 pin 16A socket points controlled by 1 No. 16A module type switch	12	Nos.	1500.00	18000.00
53	Same as item no. 19 but wiring for 6 pin 16A module type socket point using 4.0 sq.mm. PVC insulated Cu. conductor stranded wiring cable from DB to first socket & same wiring cable from 1st socket to 2nd socket including providing & fixing of 6 pin module type socket with 16A module type switch Earthing the third pin with 2.5 sq.mm. PVC insulated single strand copper earth wire, painting etc. as required.				
a)	Power socket point (Ist point)	7	Nos.	1700.00	11900.00
b)	Power socket point (IInd Point)	7	Nos.	1100.00	7700.00

54	Supply & fixing of the following rigid ERW steel conduits bearing ISI marking with all accessories such as junction boxes, bends, tees as required, the conduits being laid in ceiling slab or floor finish, columns or wall chase / above false ceiling/ between wooden partition, with hanging support wherever required etc., making and filling of chases with cement mortar and providing G.I. pull wires in conduits.				
a)	40 mm conduit	5	RM	250.00	1250.00
b)	32 mm conduit	5	RM	225.00	1125.00
c)	25 mm conduit	5	RM	200.00	1000.00
d)	20 mm conduit	5	RM	190.00	950.00
55	Supply & fixing of the following rigid UPVC 2 mm wall thickness conduits bearing ISI marking with all accessories such as junction boxes, bends, tees as required, the conduits being laid in ceiling slab or floor finish, columns or wall chase / above false ceiling /wooden partition, with hanging support wherever required etc. making & filling of chases with cement mortar and providing G.I. Pull wires in conduits.				
a)	40 mm conduit	100	RM	130.00	13000.00
b)	32 mm conduit	100	RM	110.00	11000.00
c)	25 mm conduit	100	RM	80.00	8000.00
d)	20 mm conduit	100	RM	60.00	6000.00
56	Supplying and fixing of the following Telephone TAG Blocks made out of M.S. Sheets of 2 mm thickness wherever required as shown in the relevant drawings. Properly welded complete with all accessories such as tag block, connector (KRONE make) mounting strips, tapped holes, fixing bolts, approved shad of point after primer as per requirement				
a)	20 Pair (KRON make) Telephone Tag Block in suitable M.S. Box.	1	Nos.	3000.00	3000.00
57	Supplying and fixing Module type telephone socket, LAN socket & TV socket in a suitable galvanized box.				
a)	RJ -11 socket	10	Nos.	600.00	6000.00
b)	RJ -45 socket	10	Nos.	750.00	7500.00
58	Supplying, wiring & connecting telephone outlet with four pair 0.6 mm dia twin core tinned copper conductor PVC insulated cables in existing conduits.	100	RM	100.00	10000.00
59	Supplying, wiring & connecting telephone outlet with two pair 0.6 mm dia twin core tinned copper conductor PVC insulated cables in existing conduits.	50	RM	80.00	4000.00

60	Supplying, wiring and connecting following pairs 0.6 mm dia twin core tinned copper conductor PVC insulated and sheathed Unarmored telephone cables in existing conduits				
a)	20 pair cable	40	RM	120.00	4800.00
61	Supply of the following luminaries comprising of basic channel, holder, Low loss copper ballast (5W losses) starter, condenser, control gear box complete with decorative attachments, lamps etc. as per catalogue number given below. Decorative attachments, lamps etc. as per catalogue number given below.				
a)	Receised type fluorescent fixture with lamp.				
i)	LED based luminaries, 48 W Power consumption, LED type-power, size 600mm x 600mm	40	Nos.	12000.00	480000.00
b)	LED based downlighter, 12 W Power consumption, LED type-power	50	Nos.	2000.00	100000.00
c)	LED based downlighter, 6 W Power consumption, LED type-power	30	Nos.	1200.00	36000.00
d)	Philips trang light complete with tube	20	Nos	600.00	12000.00
62	ITC of the following luminaries comprising of basic channel, holder, Low loss copper ballast (5W losses) starter, condenser, control gear box complete with decorative attachments, lamps etc. as as per catalogue number given below. Decorative attachments, lamps etc. as per catalogue number given below				
a)	Receised type fluorescent fixture with lamp.				
i)	LED based luminaries, 48 W Power consumption, LED type-power, size 600mm x 600mm	40	Nos.	75.00	3000.00
b)	LED based downlighter, 12 W Power consumption, LED type-power	50	Nos.	75.00	3750.00
c)	LED based downlighter, 6 W Power consumption, LED type-power	30	Nos.	75.00	2250.00
d)	Philips trang light complete with tube	20	Nos	50.00	1000.00
				Sub Total of Electrical (B) = Rs.	**1015847.00**
C.	**FURNITURE WORKS**				
C1.	**VIDEO CONFERENCING ROOM**				

63	**CONFERENCE TABLE - CURVILINEAR LINE (10 SEATER) for Video Conferencing Room :** Manufacturing, Supplying, and placing in position of extendable & detachable conference. The conference table is formed by combination of basic modules - 2 seater modules. These modules form to give curvilinear look along the length to maintain continuity. The module top is made up of 38mm thick MDF covered with veneer top. The top is supported by 18mm thick MDF panels. The final shape, size, Colour and aesthetics has to match the requirements given by the Engineer In Charge.	3.50	Sqm.	45000.00	157500.00
64	**OPERATING TABLE - STRAIGHT LINE (2 SEATER) for Video Conferencing Room :** Manufacturing, Supplying, and placing in position of extendable & detachable conference. The conference table is formed by combination of basic modules - 2 seater modules. These modules form to give straight line look along the length to maintain continuity. The module top is made up of 38mm thick MDF covered with veneer top. The top is supported by 18mm thick MDF panels. The final shape, size, Colour and aesthetics has to match the requirements given by the Engineer In Charge.	1.00	Sqm.	46867.50	46867.50
65	**TWO SEATOR SOFA FOR VIDEO CONFERENCE ROOM** Supplying, and placing in position of Two Seator contemporary chic design Sofa Black Color of Godrej Make Model Name LION / BP Ergo Name CLIFF	1	No	17719.00	17719.00
66	SIDE TABLE ALONG WITH THE SOFA FOR VIDEO CONFERENCING ROOM: Manufacturing, Supplying, and placing in position **of Durian Make Contemporary Chic design Side Table Circular Clear glass top Metal chrome plated rods on with Glass base Dim - Dia from rod to glass -500mm H-600mm. Code- TXJ/31308**	1	No	5008.50	5008.50
	CONFERENCE CHAIR FOR MAIN EXECUTIVE: Supplying, and placing in position of High Back Executive Chair, Colour : Black Color of Godrej Make Model Name Halo Very High Back / BP Ergo Model No. BOS-421	10	No.	32712.00	327120.00

	CONFERENCE CHAIR FOR EXECUTIVES IN VIDEO CONFERENCING ROOM: Supplying, and placing in position of High Back Executive Chair, Colour : Black Color of Godrej Make Model Name Halo High Back / BP Ergo Model No. BOS-422	14	No.	23912.00	334768.00
C2.	**CONFERENCE CUM TRAINING ROOM**				
67	**U- SHAPED CONFERENCE TABLE (18 SEATER) for Conference Room :** Manufacturing, Supplying, and placing in position of extendable & detachable conference. The conference table is formed by combination of basic modules - 2 seater & corner modules. The structure of the table shall be made out of 19mm thick commercial block board as shown in the drawing and also have a front modesty panels. All exposed surfaces shall be cold pressed with 3.5mm thick Walnut/ Mapel veneer as per design. The table top shall be made of two 19mm MDF board and framed with a 62x42mm thick Mapel wood section as per required shape. Wooden members and veneer shall be sprit polished and melamine 3 coats in matt finish as approved by the Architect. The table shall have a careway for carryng audio-visual, data and power cables from the floor outlet point and through the entire land of the table. The outlets shall be conneted through cable cubbies which is inclusive in cost) measurement will be done on plan area on top.	12.00	Sq m.	24750.00	297000.00

68	**CONFERENCE TABLE- STRAIGHT LINE (2 X 9 SEATER) for Conference Room :** Manufacturing, Supplying, and placing in position of extendable & detachable conference. The conference table is formed by combination of basic modules - 2 seaters & single seater modules. These modules form to give straight line look along the length to maintain continuity. The structure of the table shall be made out of 19mm thick commercial block board as shown in the drawing and also have a front modesty panels. All exposed surfaces shall be cold pressed with 3.5mm thick Walnut/ Mapel veneer as per design. The table top shall be made of two 19mm MDF board and framed with a 62x42mm thick Mapel wood section as per required shape. Wooden members and veneer shall be sprit polished and melamine 3 coats in matt finish as approved by the Architect. The table shall have a careway for carryng audio-visual, data and power cables from the floor outlet point and through the entire land of the table. The outlets shall be conneted through cable cubbies which is inclusive in cost) measurement will be done on plan area on top.	11.00	Sq m.	24750.00	272250.00
69	**CONFERENCE TABLE- STRAIGHT LINE (4 SEATER) for Conference Room :** Manufacturing, Supplying, and placing in position of extendable & detachable conference. The conference table is formed by combination of basic modules - 2 seater modules. These modules form to give straight line look along the length to maintain continuity. The structure of the table shall be made out of 19mm thick commercial block board as shown in the drawing and also have a front modesty panels. All exposed surfaces shall be cold pressed with 3.5mm thick Walnut/ Mapel veneer as per design. The table top shall be made of two 19mm MDF board and framed with a 62x42mm thick Mapel wood section as per required shape. Wooden members and veneer shall be sprit polished and melamine 3 coats in matt finish as approved by the Architect. The table shall have a careway for carryng audio-visual, data and power cables from the floor outlet point and through the entire land of the table. The outlets shall be conneted through cable cubbies which is inclusive in cost) measurement will be done on plan area on top.	2.50	Sq m.	28125.00	70312.50

70	**CONFERENCE CHAIR FOR MAIN EXECUTIVE:** Supplying, and placing in position of High Back Executive Chair, Colour : Black Color of Godrej Make Model Name Halo Very High Back / BP Ergo Model No. BOS-421	4	No.	32712.00	130848.00
71	**THREE SEATER SOFA FOR CONFERENCE ROOM** Supplying, and placing in position of Two Seater contemporary chic design Sofa Black Color of Godrej Make Model Name LION / BP Ergo Name CLIFF	1	No.	22874.00	22874.00
72	SIDE TABLE ALONG WITH THE SOFA: Manufacturing, Supplying, and placing in position of Durian Make Contemp**orary Chic design Side Table Circular Clear glass top. Metal chrome plated rods on with Glass base. Dim - Dia from rod to glass -500mm H-600mm. Code-TXJ/31308**	2	No.	5008.50	10017.00
73	**CONSOLE TABLE FOR CONFERENCE ROOM:** Manufacturing, Supplying, and placing in position of Classic chic moduled & carved design wooden console. One wooden shelf with railing at the edge on either ends of the console & 4 drawers in the centre. **Dim - L- 1450mm D - 460mm H - 860mm.**	1	No.	51300.00	51300.00
74	**COUNTER FOR TEA/COFFEE** Manufacturing, Supplying, and placing in position of Contemporary chic design Crockery Trolley; 4 Drawers on top with a set of 2 Doors below. Dim - L- 1200mm D - 400mm H - 750mm.	1	No.	19602.00	19602.00
				Sub Total of Furniture (C) = Rs.	**1763186.50**
D.	**AC SYSTEM**				
75	SITC of inverter based Variable Refrigerant Flow air conditioning system, with DC twin rotary / scroll compressors, capable of cooling and heating, with R410A refrigerant, suitable for input power at 415 V ± 10% (50 Hz), complete with modular type out door unit & following indoor units, remote controls, fittings, etc. and with following configuration. The outdoor unit should have COP of minimum 4.5 at 50% load.				
75.1	Out-door unit				
	Total Nominal Capacity	32	HP	22307.00	713824.00

75.2	Four way Cassette Type Unit with following Nominal Capacity, size-600mmx600mm, Complete with panel, fittings, inbuilt drain water lift up mechanism, etc.				
a	1.5 TR / 2 HP	20	No.	35000.00	700000.00
75.3	Corded less remote controls with LCD Display.	20	Nos.	2200.00	44000.00
76	Supply and laying of refrigerant pipe with (19mm/13 mm thick) closed cell elastomeric nitrile rubber tubular insulation as per following sizes, including supply and fixing of MS hanger & clamps.				
a	41.3 mm O.D. (insulation : 19 mm)	10	RM	1550.00	15500.00
b	34.9 mm O.D. (insulation : 19 mm)	10	RM	1350.00	13500.00
c	28.6 mm O.D. (insulation : 19 mm)	30	RM	1150.00	34500.00
d	22.2 mm O.D. (insulation : 13 mm)	20	RM	950.00	19000.00
e	19.1 mm O.D. (insulation : 13 mm)	30	RM	800.00	24000.00
f	15.9 mm O.D. (insulation : 13 mm)	40	RM	600.00	24000.00
g	12.7 mm O.D. (insulation : 13 mm)	40	RM	500.00	20000.00
h	9.5 mm O.D. (insulation : 13 mm)	40	RM	450.00	18000.00
i	6.4 mm O.D. (insulation : 13 mm)	40	RM	390.00	15600.00
77	Supply and laying of PVC piping 32mm dia and 2 mm thick complete with fittings, supports as per requirement and duly insulated with 6 mm thick closed cell nitrile rubber insulation.	100	RM	175.00	17500.00
78	Supply and laying of Sheet metal ducting complete with supports dampers etc. as per requirement				
	0.63 mm (24 Gauge)	25	Sq m	540.00	13500.00
	0.80 mm (22 Gauge)	1	Sq m	650.00	650.00
79	Supply and fixing of nitrile rubber insulation 9 mm thick on ducts complete as per requirement	25	Sq m	425.00	10625.00
80	Duct acoustic lining 25mm thick with glass wool insulation boards, covered with perforated aluminium sheet, nuts, bolts etc.	1	Sq m	435.00	435.00
81	Supply, fixing, testing and commissioning of grilles/ diffusers as per requirement including fixing frame of G.I./wooden in false ceiling/walls.				
	Aluminium grill with damper	4.0	Sq m	8600.00	34400.00
	Aluminium grill without damper	3.0	Sq m	5000.00	15000.00
82	Supply and fixing M.S. Volume control damper in ducts complete as per requirement	1.0	Sq m	3600.00	3600.00

83	Providing and fixing Fire retardant non porous double layer flexible connection between each indoor unit and duct.	2	Nos.	1200.00	2400.00
84	Supply and laying of 150 mm dia PVC pipes for running refrigerant pipes through shaft.	12	RM	560.00	6720.00
85	Supply and laying of cable of 3C x 1.5 Sq. mm copper conductor through PVC conduit (including providing and fixing of PVC conduit)	15	RM	165.00	2475.00
86	Providing & fixing control cum transmission wiring of 2 core x 1.5 sqmm copper through PVC conduit (including providing and fixing of PVC conduit)	250	RM	255.00	63750.00
87	Providing & fixing weather proof isolator with suitable rating near each outdoor unit.	3	Nos.	3500.00	10500.00
88	Providing & fixing of MS Stands for outdoor units (for VRF)	1	Nos	5500.00	5500.00
89	Supply and laying of Double Earthing continuity conductors of G.S.S between panel boards and equipments as required.	1	Set	5500.00	5500.00
90	Supply and fixing of Air filters	8	Nos.	1500.00	12000.00
91	Supply and fixing of Canvas	8	Nos.	1500.00	12000.00
92	Supply and fixing of Cable tray	50	RM	550.00	27500.00
93	Supply and fixing of Joints	1	Set	85000.00	85000.00
				Sub-Total of AC system (D) = Rs.	**1970979.00**
				Grand Total of **(A)+(B)+(C)+(D) = Rs.**	**8300435.76**
	All the taxes are inclusive in the above grand total except service tax as applicable on the above.				

Annexure-III

PRICE BID FORMAT				
SNo.	**Description of Item**	**Qty**	**Unit**	**Amount (in Rupees)**
I	Estimated Cost of Creation of Project Review Room and Conference cum Training Room at Ground Floor in BHEL House, New Delhi as per detailed BOQ for Civil Works, Electrical Works, Furniture & AC Sytem (in Rupees)	As per BOQ	As per BOQ	83000435.76
II	Price offered against Item No. (I) above (in Rupees)	As per BOQ	As per BOQ	
III	Buyback amount offered towards existing conference table 46 Nos. 2 seater and 4 Nos. single seater available in the conference room	1	Lot	
IV	Net Amount (II) - (III)			
	Notes:			
(a)	The L1 bidder would be decided on the basis of net Amount as quoted at Item No. (IV.) above. For the purpose of ordering, the percentage variation between the Estimated amount at (I.) above and the offered amount at (II.) above would be calculated. And then this percentage would be applicable over and above the Estimated amount at (I.) above .			
(b)	In the event of Reverse Auction, the bidders would be required to quote the Net Amount as at (IV) above as their initial price bid. The successful L1 bidder would then be required to give the break-up of the closing price in the above format. For the purpose of ordering, the percentage variation between the Estimated amount at (I) above and the offered amount at (II) of the price break-up format would be calculated. And then this percentage would be applicable over the Estimated amount at (I) above .			
(c)	All the taxes are inclusive in the above Net Amount except service tax as applicable on the above.			

Sign and seal of Bidder