



ISO: 9001-2000
ISO: 14001-1996
OHSAS: 18001-1999

नॉर्थ ईस्टर्न इलैक्ट्रिक पावर कॉरपोरेशन लिमिटेड
भारत सरकार का उपक्रम

NORTH EASTERN ELECTRIC POWER CORPORATION LIMITED

(A Government of India Enterprise)

www.neepco.co.in:: CIN U40101ML1976GOI001658

**135 MW AGARTALA GAS TURBINE COMBINE CYCLE POWER PLANT
RAMCHANDRANAGAR:AGARTALA: TRIPURA (W):PIN-799008 :PH. 0381-2391292**

NOTICE INVITING TENDER

e-NIT No. 82 /NEEPCO /AGTCCPP /Sr. M(E/M) /C&P /2016-17 Dated 22.12.2016

Online Sealed bids (Two Stage - Two Envelope) with 120 (One Hundred Twenty) days validity are invited from eligible bidders for the work of " **Construction of Guest house at Residential Complex of AGTCCPP, NEEPCO Ltd., R. C. Nagar, Agartala, Pin - 799008** ". Detailed Tender Document containing Terms and Conditions for Bidding including Qualifying Requirement can be down loaded from NEEPCO's online portal <https://neepco.abcpocure.com>.

Estimated Value: ₹ 1,53,19,228/= (Rupees One Crore Fifty Three Lakh Nineteen Thousand Two Hundred Twenty Eight) only to be submitted along with the offer.

BIDDING PROGRAMME

Participations & Submission of Tenders:

a) **Portal Registration:** The bidders intending to participate in the e-tendering and download the detailed bid document have to register themselves in the portal <https://neepco.abcpocure.com>.

b) **The procedures for registration in the e-tendering portal are as under:**

Step 1 : Visit the e-tendering portal <https://neepco.abcpocure.com>.

Step 2 : Click on new vendor registration and submit the online form for Company/Vendor details required. If a vendor is already registered in the e-tendering portal (<https://neepco.abcpocure.com>) of NEEPCO and registration is valid, then no further registration is required and the vendor may directly login the e- tendering Portal.

Step 3 : **Payment for Bid registration in the e-tendering portal:**

Bidders shall make payment of non-refundable Bidder registration fee of ₹3000.00 (Rupees Three thousand only) per year (Non-refundable) through the following methods :

- i) Payment can be made through "payment gateway" available in the e-procurement portal by " Netbanking / Debit card/ Credit card ".
- ii) Payment can be made by NEFT/RTGS. The bidder has to register first and enter the mandatory details. After that the bidder will go to the " Payment Option" and click on NEFT/RTGS. The details will have to be filled up and the challan printed and payment can be made at any bank. The bidder can then scan the receipt and upload the same to the portal.
- iii) There is no provision for cash payment.

Handwritten signature/initials in blue ink.

- iv) For general information, it may be noted that the E Procurement Account, for NEEPCO Ltd. is as below

Name of account : E Procurement Account, NEEPCO Ltd.
Account No : 913020005982636, Axis Bank, Shillong.
IFS Code : UTIB0000270.

If the vendor is already registered in the portal and the registration is valid, no further payment for registration is required. However, vendor intending to participate in the relevant e-tender is to ensure that his registration in the e-tendering is valid till the completion of the entire bidding process of the relevant NIT.

Step 4 : After payment of vendor registration fee, the scanned copy of payment receipt should be sent along with the bidders details at email Id : contract@neepco.co.in or contract_neepco@yahoo.com to advice the service provider for approval of the vendor. Vendors may contact Sri R. Ramaswami, Manager(C), C&P Department, NEEPCO, shilling Mobile No:+91-9436704369, e-mail: rramaswami@neepco.co.in to get confirmation regarding receipt of vendor registration fee.

Step 5 : After successful payment ,the vendor has to map the digital certificate(Class-II or Class-III Signing & Encryption Certificate) with his login-id as per the name of the registered company for approval process. For registration and digital Certificate, the vendors may contact the service provider at :

Mr. Himalaya Vaishnav
e-Procurement Technologies Ltd, Ahmedabad
Phone No : +91-7940016866/38/21/18
Mobile No. :+91-9099090830
E-mail : info@abcprocure.com

However, vendors are free to obtain Digital Signature Certificate from any other certification Agencies appointed by the Controller of Certification Agencies(CCA) under the provision of IT Act 2000.

Step 6 : On approval of the vendor in the system, e-mail will be sent by the Service provider to the Company/Vendor regarding their vendor profile activation. The registration is valid for one year once vendor profile is activated.

b) **Vendor registration fee:** The fee for Vendor Registration in the portal <https://neepco.abcprocure.com> is ₹ 3000.00 (Rupees Three Thousand) only per year (Non Refundable).

c) **Procedure for payment of registration fee:** Bidders shall make payment of non-refundable vendor registration fee of ₹ 3000.00 (Rupees Three Thousand) only at the following Account:

- (i) Name of the Beneficiary's Account : E-Procurement Account, NEEPCO Ltd.
(ii) Address of Beneficiary : NEEPCO Limited,
Brookland Compound,
Lower New Colony, Shillong - 793003,
Meghalaya, India.
(iii) Name of Bank : Axis Bank. Shillong.

(iv) Account No : 913020005982636.

(v) IFS Code : UTIB0000270

- d) Bidders shall clearly indicate the head against which payment has been made at the above account in the following format: i) e-NIT No. 82 /NEEPCO /AGTCCPP /Sr. M(E/M) /C&P /2016-17 Dated 22.12.2016

Registration fee ₹ 3000.00

(NAME OF BIDDER)

- e) For any clarification related to terms and conditions of Bid Documents, bidders are requested to forward e-mail clearly stating their queries at e-mail id : agtpp.onm@gmail.com.

- f) For any clarification related to procedure for bid submission, online furnishing of clarification in e-procurement portal etc., bidders are requested to forward e-mail stating their queries at e-mail id : contract_neepco@yahoo.com, contract@neepco.co.in

Bidders may also contract e-procurement Technologies Ltd.(Service Provider) having the following contact details:

e-Procurement Technologies Ltd.

A-201-208, Wall Street-II/Opp.Orient Club

Nr. Gujarat College/Ellisbridge,

Ahmedabad-380015

Gujarat, India

Tel : +91-79-40016802-77

Cell : +91-9374519754 / 9377988119

E-mail ID : Support@abcprocure.com. hemang.patel@procuretiger.com

- g) All the bidders are requested to get themselves registered well in advance and no extra time will be considered for submission of bids for the delay in online vendor registration, if any.

- h) **Submission and opening of Bids:** Bidders shall prepare and submit their bids online in e-tendering portal <https://neepco.abcprocure.com>. Online bidding forms will be available in the above website. Submission of online bids is mandatory for consideration of the bids by NEEPCO.

Bidders may view the tender opening results of techno-commercial and price bids in <https://neepco.abcprocure.com> by marking their presence for online tender opening. Price bid of only those bidders who qualify in the Techno-commercial evaluation shall be opened.

- i) **Reverse Auction** : NEEPCO reserves the right to go for Reverse Auction process to finalize the tender or may finalize the tender without Reverse Auction, if required. However, the decision to conduct Reverse Auction or not will be conveyed to the short-listed bidders after opening of the bid.

j) Important Dates & Bid Validity :

(1) Date of commencement of downloading of bid documents from the portal <https://neepco.abcprocure.com> : w.e.f 21:00 Hrs of 22/12/2016.

(2) End date & time for downloading of bid document : 13:00 Hrs of 23/01/2017.

(3) Last date & time for receipt of bids online: 13:00 Hrs of 23/01/2017.

(4) Date & time for opening of bids online: 15:00 Hrs of 23/01/2017.

(5) Bid validity : 120 (One Hundred Twenty) days from the date of opening of bids.

In case 23/01/2017 is a holiday, the Quotation shall be opened on the next working day at the appointed times. Quotations received through any Off-Line Mode shall not be considered.

k) Bidders are requested to visit e-tendering portal <https://neepco.abcpurchase.com>, NEEPCO website <http://www.neepco.gov.in> and CPP portal <http://www.epurchase.gov.in> regularly for any modification/ clarification of bid document.

l) Bidders are requested to adhere to the following :

- (1) Obtain individual Organization Digital Signature Certificate (DSC or DC) well in advance of tender submission deadline on Electronic Tendering System (ETS).
- (2) Register your organization on ETS well in advance to comply with the stipulated tender timeline.
- (3) Get your organization's concerned executives trained on ETS well in advance to comply with the stipulated tender timeline.
- (4) There could be last minute problems due to internet timeout, breakdown etc. Accordingly, the bidders are requested to submit the bid through online e-tendering system well before the bid submission end date and time as per Server System Clock. The Corporation shall not be responsible for any sort of delay or the difficulties faced during the submission of bids online by the bidders at the eleventh hour.

Earnest Money: An amount of ₹ 306000/= (Rupees Three Lakh Six Thousand) only to be submitted along with the offer in the form of Demand Draft Drawn in favour of ' North Eastern Electric Power Corporation Ltd. ' and payable at ' Agartala ' from any Nationalized / Scheduled Bank, failing which their bid shall not be considered. The EMD should reach the office of the undersigned on or before the date of opening of the tender.

If a bidder withdraws the tender while it is under consideration or, after placement of order, the bid security /EMD shall be forfeited along with other action as the Corporation deems fit. The EMD of all unsuccessful bidders shall be returned only after placement of order with the successful bidder.

Tender fees/ Bid Document Fee: A non-refundable Tender Fee of ₹ 2000/= (Rupees Two Thousand) only shall be submitted in addition to the EMD by the prospective bidders in the form of Demand Draft Drawn in favour of ' North Eastern Electric Power Corporation Ltd. ' and payable at ' Agartala ' from any Nationalized / Scheduled Bank, failing which their bid shall not be considered. The Tender Fees should reach the office of the undersigned on or before the date of opening of the tender.

Address : Sr. Manager(E/M), C&P,
AGTCCPP, NEEPCO Ltd.,
R.C. Nagar, Agartala - 799008, Tripura(W).

Evaluation of Tender: Techno-commercial bid shall be opened on 23/01/2017 online. Tenderers' authorized representative shall be permitted to attend the tender opening only on submission of authorization letter. Purchaser will examine the Tender document to determine whether they fulfilled the qualifying requirement, whether they are complete and meet the requirements of this Tender specification. Tender submitted without fulfilling the qualification criteria shall be rejected and shall not be considered for price bid evaluation. Price bid of those tenderers meeting the qualifying requirement and requirements of Tender specification shall be opened on completion of Techno-commercial Evaluation. Date for price bid opening shall be notified at a later date.



INSTRUCTION TO BIDDER

The intending bidders who fulfill the eligibility / qualifying criteria as given below should participate in the on-line Bidding process. Fulfillment of criteria as mentioned is essential, as non-compliance will lead to rejection of the Bid, without any further communication.

Qualifying Criteria: The bidders must fulfill the following qualifying criteria :

(A) General Experience:

1. The Tenders of the bidders must accompany tender fee and EMD. Without Tender Fee and EMD of requisite amount, the tenders will be rejected.
 2. The bidder must have the experience of having successfully completed similar nature or allied works during last 7 (Seven) years in any Govt. of India organization/State Govt. organization /PSU/ reputed private organization. Documentary evidence to that effect shall be submitted.
 - a) Three similar completed works, each of value not less than ₹ 61,28,000/- .
 - OR
 - b) Two similar completed works, each of value not less than ₹ 76,60,000/- .
 - OR
 - c) One similar completed work of value not less than ₹ 1,23,00,000/- .
- (Similar Works means Construction of RCC Civil Structures, Buildings etc.)
3. Copy of Bidders PAN Card/ Service Tax registration, EPF registration & Labour Licence should be submitted along with their bids.

(B) Financial Experience:

- (i) **Minimum Average Annual Turnover (MAAT) :** Minimum Average Turnover of the bidder in the best three Financial Year out of the last 5(Five) Financial year ending 31st March 2016 should not be less than ₹3,06,39,000.00.

(ii) **Liquid Asset:**

The bidder should have liquid assets or / and evidence to availability of unutilized credit facilities not less than INR 43.00 Lakhs. The Certificate of Banker regarding the availability of unutilized credit facilities (Fund based and non-fund based) shall not be dated earlier than 30 (thirty) days prior to the latest date for submission of bids.

Liquid Asset = Current Asset - (Inventory + Pre-paid expenses).

(iii) **Net Worth:**

Net worth of the bidder as on last day of the preceding financial year, ending 31st March of the previous financial year should not be less than 50% of the paid up capital.

The Net Worth shall be calculated based on Subscribed and Paid-up Capital + Free Reserves + Unallocated balance surplus amount of Profit and Loss Account less (a) Expenses not written off (b) Loss in Profit & Loss Account if not reduced from Reserves.

Complete Audited Annual Reports along with Audited Balance Sheets, Profit and Loss Account & detailed Schedule and other financial statements for the preceding 5(five) financial years, ending 31st March of the previous Financial Year, along with Letter of adequacy and commitment from their Bankers/ Financial Institutions of International repute should be furnished along with their bids for evaluating the above financial criteria. In case where the audited results of the preceding financial years are not available, certified financial statements from a practicing Chartered Accountant will be also be considered acceptable.

iv) **Bid Capacity:**

The available Bid Capacity of the Bidder at the time of submission of Bid calculated as under should not be less than the estimated cost of the work put to tender:

Available Bid Capacity = $A \times N \times 2 - B$

Where,

A = Maximum value of works executed in any one year during last 7(Seven) years (at current price level).

N = Completion time of the proposed work in years i.e six months = $\frac{1}{2}$ year.

B = Value at current price level of existing commitments and on-going works (as on the latest date for bid submission) to be completed in next six months = $\frac{1}{2}$ year.

Bid capacity shall be assessed at the time of submission of Techno-commercial Bid, for which the Bidder shall have to submit documentary evidence in support of "A" & "B" above along with their Bid.

Authenticated documentary evidence in support of qualifying requirements, as mentioned above, shall be submitted by the bidder. For experience, bidders shall furnish copies of Orders placed on them along with successful Completion/Performance certificate against these Orders. For qualifying requirements specified above, the documents should be in the form of Certificate of Clients/ Owner.

TECHNICAL SPECIFICATION:

- (i) The detailed technical specification of the items included under the scope of the work are as per the BoQ enclosed as Annexure-A. The same may also be viewed in the Price Bid Form of the tender in the online portal of <https://neepco.abcpurchase.com>.
- (ii) Unless specifically otherwise mentioned, all the applicable codes and standards published by the Indian Standard Institution and all other standards which may be published by them before the date of receipt of tenders, shall govern in all respects of workmanship, quality and properties of materials and methods of testing, methods of measurements etc. Wherever any reference to any Indian Standard Specifications occurs in the documents relating to this contract, the same shall be inclusive of all amendments issued thereto or revision thereof, if any, up to the date of receipt of tenders. In case there is no I.S.I. specification for the particular work, such work shall be carried out in accordance with the instructions in all respects, and requirements of the Engineer-in-Charge.
- (iii) The work also includes all minor details which may not have been referred to in these documents but are essential for the successful completion of the work in all respect in accordance with standard Engineering practice.

GENERAL TERMS & CONDITIONS:

(All prospective Bidders are requested to go through these instructions carefully)


The rate quoted against this NIT should be submitted online. The general Terms and Conditions are:

1. **Name of the work** : Construction of Guest house at Residential Complex of AGTCCPP, NEEPCO Ltd., R. C. Nagar, Agartala, Pin - 799008.
2. **Time of completion** : The work shall have to be completed within 9 (Nine) months from the date of issue of the work order.
3. **Payment terms** :- After completion of work in all respect, bills will be prepared by the Engineer designated by the Sr. Manager(C), AGTCCPP for supervision of the work. For R/A bill, the contractor will have to submit an application to the Sr. Manager(C), AGTCCPP requesting release of the R/A bill and the same will be decided by the Sr. Manager(C), AGTCCPP based upon satisfactory progress of the work. The decision of Sr. Manager(C), AGTCCPP in this regard shall be final and binding on all concerned. Also, for effecting e-payment, bank details are to be submitted for RTGS/ NEFT transfer.
4. **Taxes** : Rates quoted by the bidders shall be inclusive of all taxes and duties etc. as applicable but excluding the Service Tax which will be reimbursed on production of documentary evidence.
5. **Liquidity Damage**: In case of delay in execution of the work, $\frac{1}{2}$ % (Half percent) of the value of the work shall be recovered from the bill per week of delay subject to maximum of 10% (Ten percent) of the value of the work.
6. **Force Majeure Condition**: The above clause of liquidated damage shall not be applicable in case of force majeure condition such as Flood, war, civil unrest, natural calamities or acts of God on which the bidder does not have any control.

7. Contractor shall submit the EPF Registration Number, if already had, otherwise EPF deduction in respect of both employees and employer's contribution will be made from their bill(s) as per existing relevant norms. However, this will not relieve the Contractor from his responsibility.
8. Laws, Regulations and Acts pertaining to engagement of Labours, environment protection, Safety etc. shall be applicable.
9. **Security Deposit** : 10% (Ten percent) security deposit will be deducted from the bill(s) for due performance of the work and the same shall be released on expiry of Defect Liability period of 1(One) year from the date of completion. In case, any defect is noticed during the Defect Liability Period, the contractor will have to rectify/correct the same at his cost and risk; else NEEPCO will get the work done at the cost and risk of the Contractor.
10. The Contractor shall have to supply all materials and labours etc. required for the work for successful completion of the same in all respect.
11. In case, the work is not been carried out the work as per specifications or not to the satisfaction of NEEPCO or the Contractor causes any damage to the work or property of NEEPCO or other damages not mentioned herein, NEEPCO shall have the right to recover any amount as considered suitable from the bill/ Security deposit/ any other amount due to the Contractor in NEEPCO.
12. **Special Condition**: The intending bidders are requested to visit the worksite to assess the requirement of the work before submission of their tenders.
- 13. Bidders shall submit their bids online in electronic form in <https://neepco.abcprocure.com>. Online bidding forms are available in above website. Manual offline Bids shall not be accepted. However, the document submitted by the bidder must be signed and sealed at each page by the bidder with signature before scanning and uploading.

The bidders are requested to note that participation in the bid shall be taken as acceptance of the terms & conditions as stated above. Bidders are requested to visit the website (<https://neepco.abcprocure.com>) for any future change/ modification/ corrigendum/addendum to this tender. The Corporation reserves the right to change/modify the requirements or to postpone/accept or reject the tender in full or part of this Notice or cancel without assigning any reason thereof and is not bound to accept the lowest offer.

For & on behalf of North Eastern Electric Power Corporation Ltd.


[SURANJANA SARKAR]
Sr. Manager(E/M), C&P
AGTCCPP, NEEPCO Ltd.

Annexure - ABill of Quantities

Name of Work :- Construction of Guest house at Residential Complex of AGTCCPP, NEEPCO Ltd., R. C. Nagar, Agartala, Pin - 799008.

Sl. No.	Description of Item	Unit	Qty.	Rate(₹)		Amount(₹)
				In figure	In words	
A) Sub Head : Earth Work						
1	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth up to 30 cm measured at a height of 1 m above ground level and removal of rubbish upto a distance of 50 m outside the periphery of the area cleared.	Sqm	683.53			
2	Earth work in excavation over areas (not exceeding 30 cm in depth , 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth,lead upto 50 m and lift upto 1.5 m disposed earth to be levelled and neatly dressed .-All kinds of soil a) By manual means	Cum	546.82			
3	Earth work in excavation in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm. on plan) including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed , within a lead of 50 m. All kind of soil,- By manual means.	Cum.	715.87			
4	Extra for additional lift of 1.5 m or part therof -All kinds of Soil.	Cum	212.40			
5	Filling available excavated earth (excluding rock) in trenches , plinth, sides of foundations etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50m and lift up to 1.50m. All kinds of Soil.	Cum.	930.89			
6	Supplying and filling in plinth, under floor, foundations etc. with sand (fine) from local quarry with all lifts including spreading in horizontal layers, watering, grading to required slope, ramming, consolidating and compacting each layer by using plate compactor or by any suitable method complete.	Cum.	62.71			
7	Supply chemical emulsion in sealed containers including delivery as specified: Chlorpyriphos/ Lindaneemulsifiable concentrate of 20%.	Ltr.	410.12			

8	Diluting and injecting chemical emulsion for PRE CONSTRUCTIONAL anti termite treatment (excluding the cost of chemical emulsion) and continuous chemical barrier under and around the column pits ,wall trenches , basement excavation top surface of plinth filling, junction of wall and floor ,along the external perimeter of building ,expansion joints over the top surface consolidated earth of which apron is to be laid ,surrounding of pipes and conduit etc complete as per specification .The work should be carried out as IS :6313 (part-II) Latest revision (plinth Area of the building or ground floor only shall be measured for payment : With Chlorpyrifos /Lindane E.C 20 % with 1% concentration.	Sqm.	273.41			
B.Sub head : Cement Concrete Work						
9(a)	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering- All work upto plinth level : a) 1:2:4 (1 cement : 2fine sand:4 graded well burnt brick aggregate 20 mm nominal size)	cum	37.29			
9(b)	b) 1:3:6 (1 cement : 3fine sand:6 graded well burnt brick aggregate 40 mm nominal size)	cum	28.32			
10	Extra for providing and mixing water proofing material in cement concrete Work @1kg per 50 kg of cement	kg	79.64			
11	Making plinth protection 50 mm thick of cement concrete 1:3:6 (1 cement : 3 fine sand : 6 graded well burnt brick aggregate 20 mm nominal size) over 75mm bed of dry brick ballast 40 mm nominal size well rammed and consolidated and grouted with fine sand including finishing the top smooth.	Sqm.	42.42			
C) Sub Head : Reinforced Cement concrete Work						
12	Providing and laying in position specified grade of reinforcement cement concrete excluding the cost of centring, shuttering, finishing and reinforcement: All work up to plinth level: 1:1.5:3 (1cement:1.5fine sand: 3 graded stone aggregate 20mm Nominal size).	Cum	130.57			

13(a)	Reinforcement cement concrete work in Wall (any thick ness) including attached pillasters,buttresses ,plinth and skirting courses ,fillets column, pillars ,piers ,abutement ,posts and struts etc upto floor five level excluding cost of centering ,shuutering ,finishing and reinforcement . a) In walls (any thickness) including attached pilasters ,buttress, pier,abutments etc.1) 1:1.5:3 (1 cement :1.5 fine sand: 3 graded stone aggregate 20 mm nominal size)	Cum	4.95			
13(b)	b) In plinth and skirting courses, fillets ,columns,pillars,posts and struts 1) 1:1.5:3 (1 cement :1.5 fine sand: 3 graded stone aggregate 20 mm nominal size)	Cum	34.86			
14(a)	Reinforcement cement concrete work in beams, suspended floors , roofs, having slope upto 15° landings, balconies, shelves, chajjas, lintels, bands, plain window sills, stircases and spiral stair cases upto floor five level excluding the cost of centring, shuttering, finishing and reinforcement: a) RCC work in suspended floor ,roofs having slope upto 15° landings, balconies,shelves and chajjas i) 1:1.5:3 (1cement:1.5find sand: 3 graded well stone aggregate 20mm Nominal size).	cum	110.59			
14(b)	b) RCC Works in beams ,lintels ,bands, plain window sill ,staircases and spral staircases excluding precast spiral staircase. i) 1:1.5:3 (1cement:1.5find sand: 3 graded well stone aggregate 20mm Nominal size).	Cum	77.58			
15(a)	Centering and shuttering including strutting, propping etc. and removal of form work for: Foundations, footings, bases for columns etc. for mass concrete with timber plank. a) Foundations, footings, bases for columns etc. for mass concrete with timber plank.	Sqm	100.58			
15(b)	b)Wall (any thickness) including attached pilasters ,buttress, plinths and string course etc using shuttering ply.	Sqm	125.79			
15(c)	c)Suspended floors ,roofs, landing, balconies and aces platform with 12 mm thick shuttering ply.	Sqm	857.87			
15(d)	d) Lintels , beams , plinth beam,girders bressumersand cantilivers with shuttering ply	Sqm	820.00			

15(e)	e) Column ,pillers, piers ,Abutment ,Post and struts with shuttering ply	Sqm	389.82			
15(f)	f) Stairs (excluding landing) except spiral-staircases with wooden plank.	Sqm	53.07			
15(g)	g)Weather Shade, Chajjas ,corbels etc including edges	Sqm	31.75			
16	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in positionand binding all complete upto floor five level: Thermo-Mechanically Treated bars/ cool twisted deformed steelbars.	Kg	42843.05			
Sub Head(D) : Brick Work						
17	First class brick work in foundation and plinth including cost of all materials as required complete : a) In cement mortar 1:4(1cement: 4 fine sand).	Cum	51.11			
18	Half brick masonry work with first class bricks in superstructure upto floor five level including cost of all materials as required completed. In cement mortar 1:4 (1cement : 4 find sand).	Sqm	922.9			
Sub Head : Wood & PVC work						
19	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position: 1) Karai Wood.	Cum	3.13			
20	Providing and fixing factory made compressed ready to fit wood door primed shuTter of high Density Fiber board (HDF)skin of 3.5 mm (hardened finely prcessed natural wood fiber)with panel of different design viz two panel ,four panel Six panel (both side)compressed on both facves , sandwitching termoite and borer resistant chemically treated and klin seasoned wooden style and rails of 50 mm to 60 mm width ,lock block and high density flax boars /core chemically treated and klin seasoned timber core infill conforming to IS 15380 -2003 complete as per direction of Engineer In Charge .A) 35 mm thick shutter bonded with phenol formalde hyde or adhesive conforming to boiling water proof (BWP)grade of IS 848 and have trim ability option 12.50 mm from all sided with flexibility for painting or polishing to match any interior includiong ISI marked stainless steel butt hinges as per IS 12817 with necessary scrow.	Sqm	84.11			

21	Providing 40x5 mm flat iron hold fast 40 cm long including fixing to frame with 10 mm diameter bolts ,nuts and Wooden plugs and embedding in cement concrete block 30x10x15 cm 1:3:6 mix (1 cement :3 fine sand:6 graded stone aggregate 20 mm nominal size.	Nos	300			
22	Providing and fixing IS 3564 marked alumimium extruded section body tubuler type universal hydraulic door closer with double speed adjustment with necessary accessories and scew etc complete.	Nos	50			
23	Providing and fixing bright finished brass tower bolt (barrel type) with necessary srew etc complete:a)250x10 mm.	Nos	100			
24	Providing and fixing bright finished brass handle with scew etc complete: a)125 mm	No	100			
25	Providing and fixing bright finished brass hanging type floor door stopper with necessary scew etc complete.	No	50			
26	Providing and fixing bright finished brass 100 mm mortice latch and lock with 6 levers handles with necessary scew etc complete (best msake of approved quality).	No	50			

Sub Head(F) : Steel work

27	Providing and fixing in position collapsible steel shutters with vertical channel 20x10x2 mm at 100 mm centre to centre and braced with flat iron diagonal 20x5 mm size with top and bottom rail of T irom 40x40x 6 mm with 40 mm dia steel pulleys & with riveted bolts ,nuts locking arrangement ,stopper handles hold fast /anchor bolt including embedding in cement concrete of required grade for fixing in position ,all necessary fitting including appying a priming cpoat of approved steel primer etc complete as required.	Sqm	11.88			
28	Providing and fixing fan clamp type-I of 16 mm dia MS bar bent to shape with hooked ends in RCC slabs during laying including painting the exposed portion of loop all as per the standard complete.	No	50			
29	Providing and fixing of 304 grade stainless steel railing i/c 50 mm dia top pipe ,3 Nos of 16 mm dia middle pipe ,pillar 16 mm couple set & all related accessories .	Sqm	103.20			

30	Providing and fixing M.S grills of required pattern in frames of windows etc. with M.S. flats , square or round bars etc. all complete: Fixed to openings/wooden frames with rawl plugs screws etc.	KG	5277.96			
Sub head : G: Flooring Work						
31	Providing and laying brick flooring in cement slurry etc complete etc complete .I) In cement mortar 1:4 (1 cement :4 Fine sand)	Sqm	684.04			
32	Providing and fixing marble tiles in Skirting riser of step, dado etc (upto 2m height) over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 fine sand) jointed with ordinary cement slurry including pointing with white cement mised with of matching shade complete.i) 8 mm thick Rajnagar marble Tiles (polished)	Sqm	116.25			
33	Providing and fixing 18 mm thick Marble Stone (area not less than 01 Sqm each) in floor over 20 mm thick bed of cement mortart (1:4) (1 cement : 4 fine sand) jointed with ordinary cement slurrry including pointing with white cement mixed with of matching shade ,inlcuding rubbing and polishing complete.1 Agaria White Marble.	Sqm	690.57			
34	Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS : 15622 (thickness to be specified by the manufacturer) of approved make in all colours, shades execpt burgundy, bottle green, black of any size as approved by Engineer-in Charge in skirting, risers of steps and dados over 12 mm thick bed of cement mortar 1: 3 (1 cement : 3 fine sand) jointed with ordinary cement slurry including pointing with white cement mixed with pigment of matching shade complete.	Sqm	287.36			
35	Proving and fixing 22 mm thick prepolished colored concrete designer tiles making by strong vibratory compaction technology using 50% white cement and 50% ordinary cement of size 300 mmx 300 mm , laid in foot path & courtyard on 20 mm thick bed cement mortar 1:4 (1cement :4 fine sand) jointed with neat cement slurry mixed pigment to match the shade of tiles including rubbing and polishing complete as per direction of the Engineer In charge.	Sqm	236.96			

36	Providing and fixing 18 mm thick plain marble stone ,mirror polished, machine cut for, kitchen platforms, vanity counters, facias and similar locations of required size of approved shade, colour and texture laid over 20 mm thick base of cement mortar 1:4 (1 cement: 4 fine sand) with joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing etc. complete at all levels as required:- Granite of any colour and shade duly approved : 1) Area of slab up to 0.50 Sqm.	Sqm	11.44			
37	Extra for providing edge moulding to 18 mm thick stone counters ,vanities etc including machine polishing to edge to give high gloss finish etc complete at all levels as required as design approved by the Engineer In Charge : Granite Work	metre	7.63			
38	Providing and fixing 8 mm mirror polished tile work for wall lining over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 fine sand) and cement slurry @3.3 kg/sqm including pointing in white cement complete including rubbing curing etc complete at all level as required : Granite of any colour and shade duly approved.	sqm	15.68			
Sub Head :H: Roofing and ceiling Work						
39	Providing and fixing on wall face unplasticised Rigid PVC rain water pipes (working pressure 4 Kg/ Cm ²) conforming to IS:13592 Type A including jointing with seal ring conforming to IS 5382 leaving 10 mm gap for thermal expansion :Single socketed pipe -110 mm OD	metre	180.00			
40(a)	Providing and fixing on wall face unplasticised -PVC moulded fitting /accessories for unplasticised rigid PVC rain pipe conforming to IS 13592 Type A including jointing with seal ring conforming to IS 5382 leaving 10 mm gap for thermal expansion a) Coupler i) 110 mm	Nos	25			
40(b)	b) Single Equal Tee without door i) 110x110x110	Nos	12			
40(c)	c) Single Equal Tee with door i) 110x110x110	Nos	8			
40(d)	d) Bend 87.5° i) 110 mm	Nos	15			
40(e)	e) Shoe Plain 110 mm OD	Nos	15			

41	Providing and fixing unplasticised PVC clip of approved design to unplasticised -PVC Rain Water pipes by means of 50x50x50 mm hard Wood plug ,screwed with MS screw of required length including cutting brick work and fixing with cement mortar (1:4) (1 cement: 4 fine Sand)making good the wall etc complete . a)110 mm	Nos	80			
42	Providing and fixing to the inlet mouth of rain water rain PTMT grating with thoickness of 8 mm and weighing not less than 100 gm complete .a) 100 mm	Nos	12			

Sub Head : I:Finishing Work

43	12 mm cement plaster in single layer including cost of materials required and finishing even and smooth and curing complete: 1.In cement mortar 1:4(1 cement : 4 fine sand)	Sqm	1473.63			
44	15 mm cement plaster in single layer including cost of materials required and finishing even and smooth and curing complete: 1.In cement mortar 1:4(1 cement : 4 fine sand)	Sqm	1291.25			
45	6 mm cement plaster in single layerincluding cost of materials required and finishing even and smooth and curing complete: In cement mortar 1:3 (1 cement : 3 fine sand).	Sqm	1233.80			
46	Neat Cement Punning.	Sqm	182.39			
47	Wall painting with plastic emulsion paint (two or more coat)of required colours of approved brand and manufacture on new work to give an even shade including cost of material required .	Sqm	3067.44			
48	Providing and applying plaster of paris putty of 2mm thickness over plastered surface to prepare the surface even and smooth complete	Sqm	3067.44			
49	Finishing wall with textured exterior paint of required shade of approved brand and manufacture on new Work(two or more coat applied @3.28 Kg/10 sqm)over and including base coat water proofing cement paint applied @2.20Kg/10 sqm complete including cost of material .	Sqm	706.25			
50	Applying one coat of cement primer of approved brand and manufacturer on wall surface complete.	Sqm	3773.69			

Sub Base :J: Aluminum Work

51(a)	Providing and fixing aluminium work for doors, windows ,ventilators, stair railing including hand rail and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixed with rawl plugs and screws or with fixing clips, or with expansion hold fasteners including necessary filling up of gaps at junctions, at top, bottom and sides with required PVC/ neoprene felt etc. aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, aluminiumsnap beading for glazing/ paneling, C.P. brass/ stainless steel screws, all complete as per architectural drawing and the direction of Engineer-in-charges. (Glazing and paneling to be paid for separately):- For fixed portion of approved quality:- 1) Anodized aluminium (anodized transparent or dyed to required shade according to IS : 1868, Minimum anodiccoating of grade AC 15).	Kg	1630.08			
51(b)	For shutters/ sliding shutters of doors, windows & ventilators including providing and fixing hinges/ pivots / rollers and making provision for fixing fittings wherever required including the cost of PVC / neoprene gasket required of approve quality (Fitting shall be paid separately) Anodized aluminium (anodized transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15).	Kg	795.45			
52(a)	Providing and fixing glazing of approved quality in aluminium doors, windows, ventilator, shutters and partition frames with PVC / neoprene gasket etc. complete as per architectural drawing and the direction of Engineer-in- charges. (a) With glass/ float glass panes of 4mm thickness (weight not less than 10.0 kg / sqm)	Sqm	85.32			
52(b)	(b)With glass/ float glass panes of 5mm thickness (weight not less than 13.50 kg / sqm)	Sqm	82.90			

53	Providing, fitting & fixing in position of semi utilised structural glazing with anodised or powder coated (of approved shade) aluminum section (of a company of repute) in frame work including fixing of 6mm thick pyrolythick online coated solar heat reflective toughened glass of approved colour & brand glass fixing arrangement with aluminium structure with sub frame of appropriate sections, structural silicone of approved make will be used for fixing glass to subframe, joining line of glasses should be filled up with polyurethane back up foam and weather sealant of approved make, GI coated MS bracket of suitable design shall be fixed to structural element to hold main frame, including necessary fixture complete EPDM quality gasket will be used on all necessary points and SS nut bolts GI fastener will be used for fixing clamps, including necessary scaffolding complete as per approved architectural drawing and design and direction of the Engineer In charge.	Sqm	59.59			
54	Providing and fixing double action hydraulic floor spring of approved brand and manufacture (conforming to IS 6315) for aluminium doors including cost of cutting floor as required embedding in floor and cover plates etc complete as per direction of the Engineer In Charge. A) With CP brass cover plate	No	7			
55	Providing and fixing stainless steel (SS-304 GRADE) adjustable friction window stay of approved quality with necessary stainless steel screws etc to the side hung window etc complete as per direction of Engineer In charge. A) With CP brass cover plate.	No	54			
56	Providing and fixing aluminum tubular handle bar of 32 mm outer dia, 3.0 mm thick and 2100 mm long with stainless steel screw etc of approved quality complete as per direction of Engineer In Charge : polyester Powder coated aluminium minimum thickness 50 micron.	No	7			
57	Providing and fixing 100 mm brass locks (best make of approved quality) with 6 lever without pair of handles for aluminum door including necessary cutting and making good etc complete as per direction of Engineer In charge	No	5			

58	Providing and fixing aluminum round shape handle of outer 100 mm with SS screw etc of approved quality complete as direction of engineer In charge A)anodised aluminium of grade AC15	No	54			
K) Sub head : Water proofing Work						
59	Providing and laying grading of roof for water proofing treatment complete as required as per direction of the Engineer in Charge :-a) Cement concrete 1:2:4 (1cement : 2 fine sand: 4 graded stone aggregate 20 mm nominal size)	Cum	12.44			
60	Providing and applying heavy duty Polymer modified acrylic base , two component ploymer membrane water proofing coating 2(two) coat over sunken floor ,bathroom etc by mixing polymer liquid and powder at 1:4 ratio using 3.00 Kg/Sqm at floor and wall including cleaning the Surface and saturated the same with clean water and chmfering the junction between sunken floor and wall by 15 mm thick cement plaster 1:3 mixed with SBR base latex powder using .200 kg/sqm upto a height of 150 mm on wall and 150 mm on floor surface before application of polymer membrane and finally 12 mm cement plaster 1:4 ratio mixed with water proofing admixture 100 gm /50 Kg bag of cement complete as direction of Engineer In Charge and technical specification . After completion a pond test should be conducted by ponding about 150 mm water for three days ,both in sunken portion and in the normal level floor area.	Sqm	24.60			
61	Providing and laying UV resistant acrylic base non toxic , crack bridging properties water proofing caoting 2(two) coat on RCC roof, top balconies ,terrace ,reservoir by brush using .600 Kg plymer per sqmtr in 2 (two) coarts after mixing with cement and sand at the ratio 1:2:2 by weight with fiber glass cloth between the coats (polymer mixed with cement and sand should be appiled at the rate of 3 Kg per Sq mtre in 2 coats).A screed concrete 50 mm thick (average) wIth paneling to bed one over chemical treatment complete aa per direction of Engineer vIn Charge and technical specification .(Cost for claeing of roof and screed shall be paid separately.	Sqm	248.86			

L) Sub head : Sanitary Fitting

62	Providing and fixing white vitreous China pedestral type water closet (european type WC pan) with seat & lid and with compositely coupled vitreous china ware "Dual Flush" flushing cistern with 6 litre/3 litre water conforming to IS 7231 with all fitting and fixture complete ,including cutting an good the wall and floors wherever rerquired : Make : Jaquar W.C Cat No: VGS-WHT-81751 P and cistern VGSWHT 81201 or Equivalent brand as approved by Engineer In charge .	No	11			
63	Providing and fixing counter top wash basin with CI/MS brackets 32 mm CP brass half tread waste coupling of standard pattern including painting of fitting and bracket ,cutting and making good the wall wherever required . Star White vitreous china ware as per IS -2556 (Make Jaquar Cat No: CNS WHT 601 or equivalent brand as approved by Engineer Incharge) (SIZE : 440X525X 195)	No	16			
64	Providing and fixing C.P brass Pillar cock for wash basin Complete with all fixing accessories. (Jaquar model no ; FLR-CHR-5015 or equivalent brand as approved by engineer incharge	No	16			
65	Providing and fixing C.P. Brass Angle valve for wash basin pillar cock for wash basin only of approved quality conforming to IS 8931 (make :jaquar -ORP cat no: 10053PM or equivalent brand as approved by engineer In charge . (15 mm nominal bore)	No	16			
66	Providing and fixing chlorinated Polyvinyl chlride (cpvc) pies ,having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fitting including fixing i/c fifixing the pipe with clamps at 1.00 m spacing . This includes jointing of pipe & fitting with one step CPVC solvent cement and the cost of cutting chase and making good the same inclding test of joint complete as per direction of Engineer In charge .Concealed work including cutting chase and making good the wall 32 mm nominal outer dia pipes	RM	20.00			

67	Supplying and fixing of 32 mm CP brass bottle Trap with waste pipe including CP wall connection Waste pipe (for basin) (bottle trap with 32 mm dia ,190 mm long wall connecting pipes and wall flange . Make Jaquar cat No: ALE-769L250X190 or equivalent brand as approved by Engineer In charge .	No	16			
68	Providing and fixing stainless steel AISI 304 (18/8) kitchen sink as per IS 13983 with CI brackets and stainless steel plug 40 mm including painting of fitting and brackets ,cutting and making good the walls wherever required Kitchen Sink with drain board 510x 1040 mm bowl depth 250 mm	No	1			
69	Providing and fixing C.P. Brass Single lever wall mixer (sink mixer) swinging spout with all fixing accessories of approved quality conforming to IS 8931 (make : Jaquar) OPL -15165 . Or equivalent brand as Approved engineer Incharge. A) 15mm nominal bore	No	1			
70	Providing and fixing CP brass " health Faucet " with 8 mm dia -1.0 meter long Flexible tube and wall hook of approved quality conforming to IS :8931 (make : Jacuar-Allied Cat No : 573 or equivalent brand as approved by Engineer Incharge . a)15 mm nominal bore	No	16			
71	Providing and fixing C.P. Robe hook supported on anodised chromium plated base ,fixed with 40 mm long screw rawl plugs etc all complete .(make : jaquar - model AKP-CHR-35791P or equivalent brand as approved by Engineer Incharge .	No	48			
72	SS/Cp circular grating (with or without hole) with cockroach arrestor device (make chilly or equivalent brand) in all floor trap /p trap mouth) 150 mm	No	16			
73	Providing and fixing toilet paper holder with Flap cover along with all fixing accessories . Make : Jaquar-AHS1551 or equivalent brand as approved by Engineer Incharge .	Nos	11			

74	Providing and fixing CP brass angle lever wall mixer with hand shower arrangement with connecting Legs ,Wall flanges & wall bracket for hand shower Of approved quality conforming to IS 8931 (make : jaquar -CQT-23267 " or equivalent brand as approved by competent authority . a) 15 mm nominal bore	Nos	11			
75	Providing and fixing of hand shower 32 mm round straight design dual flow (ABS) with rubit cleaning system . Make Jaquar : HSH-5541 or any equivalent brand as approved by Engineer Incharge .	Nos	11			
76	Providing and fixing mirror of superior glass (of approved quality) and of required shape and size with plastic moulded frame of approved make and shade with 6mm thick hard board backing: 2) Rectangular shape 453x357mm	No	16			
77	Suplying and fixing of Soap dish holder .Model NO: AKP-35731P (JAQUAR)or equivalent brand as approved by Engineer In charge .	No	16			
78	Providing and CP towel ring complete with bracket fixed to wodden cleats with CP brass screw with concealed fitting of approved quality .(Make :Jaquar ACN 1121 BNM or Equivalent brand as approved b y Engineer In Charge)	No	16			
79	Supplying fitting and fixing liquid soap Dispenser including CP screws complete as directed and specified (: Make :jaquar SDR-WHT-D-J0010F or equivalent brand as approved by Engineer Incharge)	No	16			
80	Providing and fixing Soil waste and vent pipes : a) 100 Mm dia I) Sand cast iron S&S Pipe as per IS 1729	metre	30.00			
81	Providing and fixing 600x120x5 mm glass self with edges round of supported on anodised aluminium angle frame with C.P.brass brackets and guard rail complete fixed with 40 mm long screws, rawl plugs etc. complete.	No	11			
82	Proviiding and fixing MS holder bat clamps of approved design to sand cast iron /cast iron (spun) pipe embeded in and including cement concrete block 10x10x10 of 1:2: 4 mix (1cement : 2 coase sand ; 4 graded stone of aggregate 20 mm nominal size) including cost of cutting hole and making good the walls etc a) For 100 mm dia pipe	Nos	180			

83	Providing and fixing heel rest sanitary bend a) 100 mm dia i) Sand cast iron S& S pipe as per IS 1729	Nos	8			
84	Providing and fixing Single equal plain junction of required degree a) 100x100x100 mm i) Sand cast iron S& S pipe as per IS 1729	Nos	8			
85	Providing and and fixing single equal plain junction of required degree withh acess door ,insertion rubber washer 3 mm thick ,bolt and nuts complete a) 100x100x100 mm i) Sand cast iron S&S pipe as per IS 1729	Nos	8			
86	Providing and fixing collar : a) 100 mm sand cast iron S& S pipe as per IS : 1729	Nos	32			
87	Providing and fixing sand cast iron S&S offsets as per IS 1729	Nos	8			
88	Providing and fixing terminal guard a) 100mm sand cast S&s pipe as IS 1729	Nos	9			
89	Providing lead caulked joints to sand cast iron /centrigugally cast (spun) iron pipes and fitting of diameter .A) 100 mm dia	Nos	120			
90	Providing and and fixing trap of self cleansing design with scewed down or hinged grating with or without vent arm complete ,includin cost of cutting and making good the walls and floors: a)100 mm inlet and 100 mm outlet sand cast iron S&S pipe as per IS 1729	Nos	13			
91	Cutting chase in brick masonary walls for following diameter sand cast iron / centrifugally cast (spun) iron pipes and making good the same with cement concrete 1:3:6 (1cement ; 3 fine sand: 6 graded stone agrregate 12.5 mm nominal size) including necessary plaster and pointing in cement mortar 1:4 (1cement; 4 fine sand)	metre	16			
92	Providing and fixing double equal junction of required degree with access door insertion rubber washer 3mm thick bolts and nuts complete a) 100x100x100x100mm i) sand cast iron as per IS1179	no	8			
Sub head : water supply						

93(a)	Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes SDR 7.4 UV stabilized and anti -microbial fusion welded having thermal stability for hot & cold water supply including all PP-R plain & brass threaded polypropylene random fitting i/c fixing the pipe with clamps at 1.00 M spacing .this includes the cost of cutting chases and making good the same including testing of joints complete as direction of engineer In Charge . concealed Work including cutting chases and make good the wall etc : 1) PN -16 Pipe ,16 mm OD	metre	180.00			
93(b)	2) PN -16 Pipe 20mm OD	metre	150.00			
93(c)	3) PN-16 Pipe 25 MM OD	metre	75.00			
93(d)	4) PN- 16 pipe,32 mm OD	metre	90.00			
94	Providing and fixing 3 layer PP-R (poly propylene random copolymer) pipes U.V stabilised and antio microbial fusion welded having thermal stability for hot & cold water supply including all PP -R plain & brass threaded ploypropylene random fitting including trenching ,refilling & testing of joints complete as direction of Engineer In charge External work i)PN -16 Pipe ,40 mm OD	metre	50.00			
95	Making connection of G.I.distribution branch with G.I. main of following sizes by providing and fixing tee, including cutting and threading the pipe etc. complete: 25 to 40 mm nominal bore.	Nos	10			
96	Proving and fixing bib cock of approved Quality conforming toIS : 8931 I) 15 mm nominal bore	nos	26			
97	Providing and fixing CP brass stop cock (concealed) of standard design and of approved make conforming to IS 8931	Nos	26			
98(a)	Providing and fixing gun metal gate valve with CI wheel of approved quality (scewed end) a) 25 mm dia nominal bore	Nos	5			
98(b)	b) 40 mm dia nominal bore	Nos	10			
99	Proving and fixing non return valve of approved quality (screwed end) : a) vertical type i)40 mm dia nominal bore	Nos	5			
100	Providing and placing on terrace (at all floor levels 0 plyethylene water storage tank ISI : 12701 marked with cover and suiatble locking arrangement and making neceassry holes for inlet ,outlet and overflow pipes but without fitting and the base support for tank	litre	4000			

101	Constructing masonry chamber 30x30x50 cm inside with 75 class designation brick work in cement mortar 1:5 (1 cement :5 fine sand) for stop cock with CI surface box 100x100x75 (inside) with hinged cover fixed in cement concrete slab 1:2:4 mix (1cement : 2 fine sand: 4 graded stone aggregate 20 mm nominal size) and inside plastering with cement plaster 1:3 (1 cement : 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design : a) With second class brick	No	10			
102	Providing fixing GI union in existing GI pipeline cutting and thrading the bpipe and making long screws includng excavtion refilling the earth or cutting of wall and making good the same complete wherever required a) 40 mm dia nominal bore	No	5			

Sub Head :N: Drainage

103	Providing ,laying and jointing glazed stoneware pipes grade A with stiff mixture of cement mortar in the of (1:1) (1 cement : 1 fine Sand) including testing of joints etc complete : 150 mm diameter .	Metre	30.00			
104	Providing and laying cement concrete 1:5: 10 (1cement :5 fine sand: 10 graded stone of 40 mm nominal size) around SW ipes including bed concrete as standard design i)150 mm diameter	Meter	30.00			
105	Making soak pit 2.5 m diameter 3.0 meter deep with 45x45 cm dry brick honey comb shaft with well burnt 2nd class bricks and S,W. drain pipe 100 mm diameter, 1.8 m long coplete as per standard design.	No	1			
106	Construction of brick masonry chamber for underground C.I. inspection chamber and bends with 1st class bricks in cement mortar 1:4 (1 cement : 4 fine sand) C.I.cover with frame (light duty) 455 x 610 mm internal dimensions, total weight of cover with frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) RCC top slab with 1:2:4 mix(1 cement : 2 fine sand : 4 graded stone aggregate 20 mm nominal size) foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) , inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 fine sand) finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete as per standard design: Inside dimensions 455x610 mm and 45cm deep for single pipe line	No	5			

Sub Head :O: Other Works

107	Supplying ,fitting and fixing of fully Auto matic hand dryer including fixing CP screws complete as directed and specified : Make : Jaquar Model No:HDR-WHT-M04A or any equivalent brand as approved by Engineer In charge .	Nos.	16			
108	Providing and fixing 18 mm thick ,150 mm wide pelmet of coir veneer board ISI marked IS 14842 -2000,including top cover of 6 mm coir venner board nickelplated MS pipe 20 mm dia (heavy type) curtain rod with nickel plated bracket including fixing with 25x3 mm flat 10cm long and rawl plug 50 mm long (designation 10 No)etc all complete.	RM	100.00			
109	Providing and fixing specified wood frame work consisting of batten 50x20 mm fixed with rawl plug and drilling necessary holes for rawl plug etc including priming coat complete.	Cum	0.17			
110	Providing and fixing ISI marked flush door shutter conforming to IS 2202 (part-I) decortative type ,core of block board constrcution with frame of 1st class hard wood and well matched teak 3 ply veneering with vertical grain or cross bands and face veneers on both faces of shutters 1) 35 mm thick including ISI marked stainless steel butt hinge with necessary scw.	Sqm	25.74			
111	Providing and fixing flat pressed 3 layer particle board medium density exterior grade (Grade-I) or gaded wood partioicle board IS 3087 marked to frame backing or studding with scw etc complete (frames ,backing or studding to be paid separate ly)18 mm thick	Sqm	18.72			
112	Providing and fixing of the towel rail with all necessary fittings. Make : Jaquar ACN - 1181 FN or equivalent brand as approved by Engineer Incharge .	Nos	16			

Total = ₹

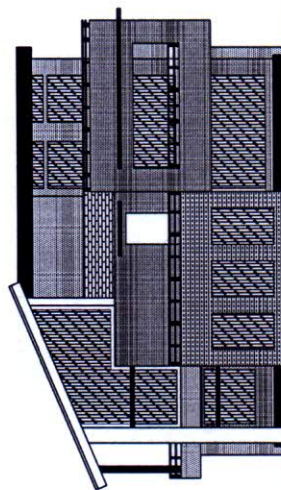
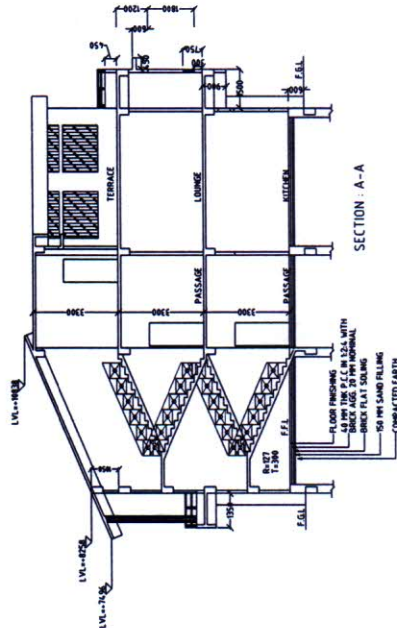
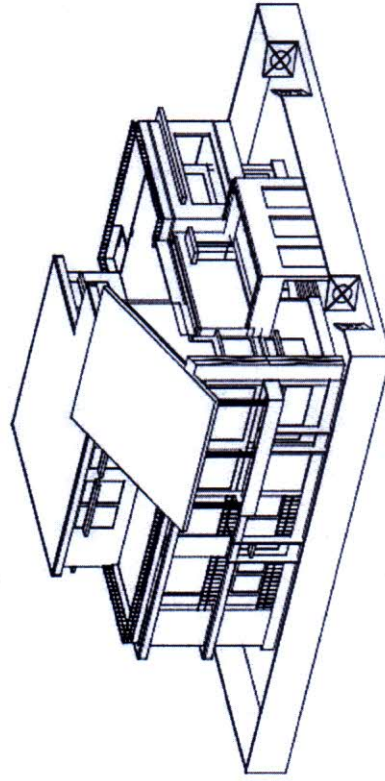
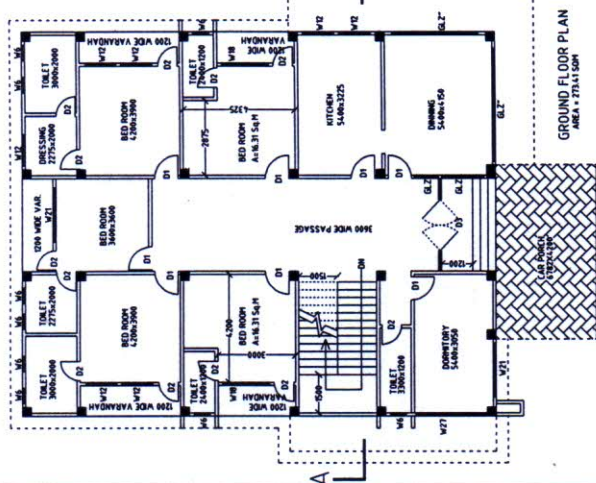
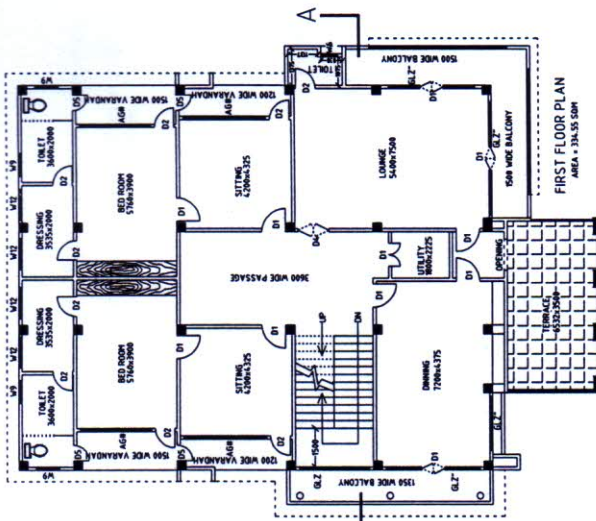
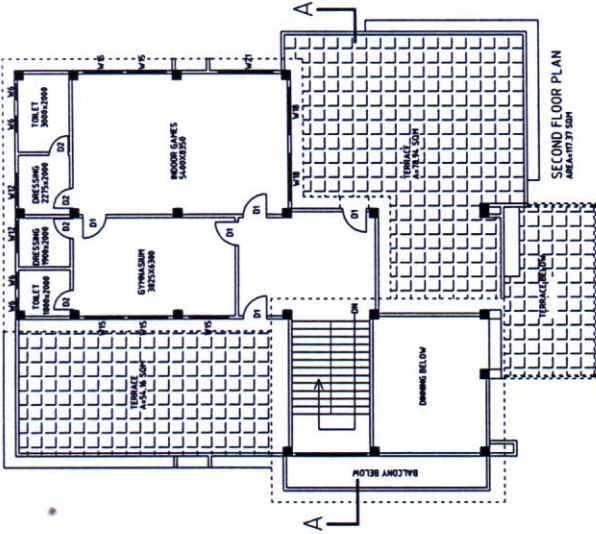
Say ₹

1. SCALE = 1/800 (A1) / 1/200 (A3)
2. ALL DIMENSIONS ARE IN MILLIMETER UNLESS OTHERWISE SPECIFIED
3. DOOR & WINDOW SCHEDULE

SIZE	DIMENSION	SALL WT
S1	6.0 x 1.00	150
S2	6.0 x 1.25	150
S3	6.0 x 1.50	150
S4	6.0 x 1.75	150
S5	6.0 x 2.00	150
S6	6.0 x 2.25	150
S7	6.0 x 2.50	150
S8	6.0 x 2.75	150
S9	6.0 x 3.00	150
S10	6.0 x 3.25	150
S11	6.0 x 3.50	150
S12	6.0 x 3.75	150
S13	6.0 x 4.00	150
S14	6.0 x 4.25	150
S15	6.0 x 4.50	150
S16	6.0 x 4.75	150
S17	6.0 x 5.00	150
S18	6.0 x 5.25	150
S19	6.0 x 5.50	150
S20	6.0 x 5.75	150
S21	6.0 x 6.00	150
S22	6.0 x 6.25	150
S23	6.0 x 6.50	150
S24	6.0 x 6.75	150
S25	6.0 x 7.00	150
S26	6.0 x 7.25	150
S27	6.0 x 7.50	150
S28	6.0 x 7.75	150
S29	6.0 x 8.00	150
S30	6.0 x 8.25	150
S31	6.0 x 8.50	150
S32	6.0 x 8.75	150
S33	6.0 x 9.00	150
S34	6.0 x 9.25	150
S35	6.0 x 9.50	150
S36	6.0 x 9.75	150
S37	6.0 x 10.00	150
S38	6.0 x 10.25	150
S39	6.0 x 10.50	150
S40	6.0 x 10.75	150
S41	6.0 x 11.00	150
S42	6.0 x 11.25	150
S43	6.0 x 11.50	150
S44	6.0 x 11.75	150
S45	6.0 x 12.00	150
S46	6.0 x 12.25	150
S47	6.0 x 12.50	150
S48	6.0 x 12.75	150
S49	6.0 x 13.00	150
S50	6.0 x 13.25	150
S51	6.0 x 13.50	150
S52	6.0 x 13.75	150
S53	6.0 x 14.00	150
S54	6.0 x 14.25	150
S55	6.0 x 14.50	150
S56	6.0 x 14.75	150
S57	6.0 x 15.00	150
S58	6.0 x 15.25	150
S59	6.0 x 15.50	150
S60	6.0 x 15.75	150
S61	6.0 x 16.00	150
S62	6.0 x 16.25	150
S63	6.0 x 16.50	150
S64	6.0 x 16.75	150
S65	6.0 x 17.00	150
S66	6.0 x 17.25	150
S67	6.0 x 17.50	150
S68	6.0 x 17.75	150
S69	6.0 x 18.00	150
S70	6.0 x 18.25	150
S71	6.0 x 18.50	150
S72	6.0 x 18.75	150
S73	6.0 x 19.00	150
S74	6.0 x 19.25	150
S75	6.0 x 19.50	150
S76	6.0 x 19.75	150
S77	6.0 x 20.00	150
S78	6.0 x 20.25	150
S79	6.0 x 20.50	150
S80	6.0 x 20.75	150
S81	6.0 x 21.00	150
S82	6.0 x 21.25	150
S83	6.0 x 21.50	150
S84	6.0 x 21.75	150
S85	6.0 x 22.00	150
S86	6.0 x 22.25	150
S87	6.0 x 22.50	150
S88	6.0 x 22.75	150
S89	6.0 x 23.00	150
S90	6.0 x 23.25	150
S91	6.0 x 23.50	150
S92	6.0 x 23.75	150
S93	6.0 x 24.00	150
S94	6.0 x 24.25	150
S95	6.0 x 24.50	150
S96	6.0 x 24.75	150
S97	6.0 x 25.00	150
S98	6.0 x 25.25	150
S99	6.0 x 25.50	150
S100	6.0 x 25.75	150
S101	6.0 x 26.00	150
S102	6.0 x 26.25	150
S103	6.0 x 26.50	150
S104	6.0 x 26.75	150
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S106	6.0 x 27.25	150
S107	6.0 x 27.50	150
S108	6.0 x 27.75	150
S109	6.0 x 28.00	150
S110	6.0 x 28.25	150
S111	6.0 x 28.50	150
S112	6.0 x 28.75	150
S113	6.0 x 29.00	150
S114	6.0 x 29.25	150
S115	6.0 x 29.50	150
S116	6.0 x 29.75	150
S117	6.0 x 30.00	150
S118	6.0 x 30.25	150
S119	6.0 x 30.50	150
S120	6.0 x 30.75	150
S121	6.0 x 31.00	150
S122	6.0 x 31.25	150
S123	6.0 x 31.50	150
S124	6.0 x 31.75	150
S125	6.0 x 32.00	150
S126	6.0 x 32.25	150
S127	6.0 x 32.50	150
S128	6.0 x 32.75	150
S129	6.0 x 33.00	150
S130	6.0 x 33.25	150
S131	6.0 x 33.50	150
S132	6.0 x 33.75	150
S133	6.0 x 34.00	150
S134	6.0 x 34.25	150
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S136	6.0 x 34.75	150
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S138	6.0 x 35.25	150
S139	6.0 x 35.50	150
S140	6.0 x 35.75	150
S141	6.0 x 36.00	150
S142	6.0 x 36.25	150
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S150	6.0 x 38.25	150
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S153	6.0 x 39.00	150
S154	6.0 x 39.25	150
S155	6.0 x 39.50	150
S156	6.0 x 39.75	150
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S158	6.0 x 40.25	150
S159	6.0 x 40.50	150
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S168	6.0 x 42.75	150
S169	6.0 x 43.00	150
S170	6.0 x 43.25	150
S171	6.0 x 43.50	150
S172	6.0 x 43.75	150
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S174	6.0 x 44.25	150
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S180	6.0 x 45.75	150
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S182	6.0 x 46.25	150
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S200	6.0 x 50.75	150
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S210	6.0 x 53.25	150
S211	6.0 x 53.50	150
S212	6.0 x 53.75	150
S213	6.0 x 54.00	150
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S224	6.0 x 56.75	150
S225	6.0 x 57.00	150
S226	6.0 x 57.25	150
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S230	6.0 x 58.25	150
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S235	6.0 x 59.50	150
S236	6.0 x 59.75	150
S237	6.0 x 60.00	150
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S239	6.0 x 60.50	150
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S278	6.0 x 70.25	150
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S281	6.0 x 71.00	150
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S285	6.0 x 72.00	150
S286	6.0 x 72.25	150
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S294	6.0 x 74.25	150
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S296	6.0 x 74.75	150
S297	6.0 x 75.00	150
S298	6.0 x 75.25	150
S299	6.0 x 75.50	150
S300	6.0 x 75.75	150
S301	6.0 x 76.00	150
S302	6.0 x 76.25	150
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S304	6.0 x 76.75	150
S305	6.0 x 77.00	150
S306	6.0 x 77.25	150
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S340	6.0 x 85.75	150
S341	6.0 x 86.00	150
S342	6.0 x 86.25	150
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S344	6.0 x 86.75	150
S345	6.0 x 87.00	150
S346	6.0 x 87.25	150
S347	6.0 x 87.50	150
S348	6.0 x 87.75	150
S349	6.0 x 88.00	150
S350	6.0 x 88.25	150
S351	6.0 x 88.50	150
S352	6.0 x 88.75	150
S353	6.0 x 89.00	150
S354	6.0 x 89.25	150
S355	6.0 x 89.50	150
S356	6.0 x 89.75	150
S357	6.0 x 90.00	150
S358		

LEGENDS :

..... FULL HT. DECORATIVE GLASS PARTITION IN TOILET



NORTH EASTERN ELECTRIC POWER CORPORATION LTD.
(A GOVERNMENT OF INDIA ENTERPRISE)

PLAN, ELEVATION, SECTION & DOOR WINDOW SCHEDULE
GUEST HOUSE

UNITED STATES DEPARTMENT OF AGRICULTURE

INSPECTED & CHECKED

B. KALITA, SR. MANAGER (C)	
----------------------------	--

DRAWN / DESIGN

S. BARUAH, ASSTT. MANAGER (C)

APPROVED

M.K SHARMA, GM (C)-D&E

NOTES:

DEPTH OF FOUNDATION SHALL BE THE SAME IN CASE OF EACH & EVERY FOOTING / FOUNDATION FOR A PARTICULAR BUILDING.

ABBREVIATIONS/LEGEND

C/C CENTRE TO CENTRE
UNO UNLESS NOTED OTHERWISE
LD DEVELOPMENT LENGTH (REFER R1)
φ NOMINAL BAR DIA

GENERAL

- G1. ALL DIMENSIONS ARE IN MILLIMETER UNLESS OTHERWISE SPECIFIED
- G2. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS THAT MAY BE ISSUED DURING THE COURSE OF THE CONSTRUCTION / CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE ENGINEER IN CHARGE BEFORE PROCEEDING WITH THE WORK.
- G3. ALL RELEVANT DIMENSIONS SHALL BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION IS COMMENCED.
- G4. DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE STRUCTURE IN A STABLE CONDITION AND ENSURING NO PART SHALL BE OVERSTRESSED UNDER CONSTRUCTION ACTIVITIES.
- G5. WORKMANSHIP AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE SPECIFICATION AND THE RELEVANT CURRENT INDIAN CODES INCLUDING ALL AMENDMENTS, AND THE LOCAL STATUTORY AUTHORITIES, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.

CONCRETE

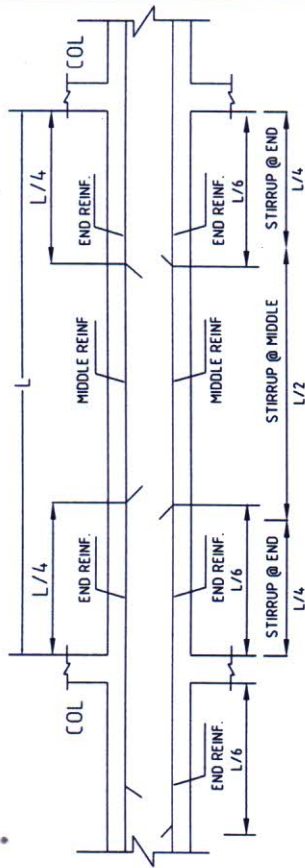
- C1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE SPECIFICATION.
- C2. SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF ANY APPLIED FINISHES.
- C3. BEAM WIDTHS ARE WRITTEN FIRST.
- C4. BEAM DEPTHS ARE WRITTEN SECOND AND INCLUDE SLAB THICKNESS.
- C5. FORMWORK SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH RELEVANT INDIAN CODE.
- C6. CONCRETE GRADE FOR ALL STRUCTURAL COMPONENTS SHALL BE M20 AS PER IS:456-2000, UNLESS NOTED OTHERWISE.

REINFORCEMENT

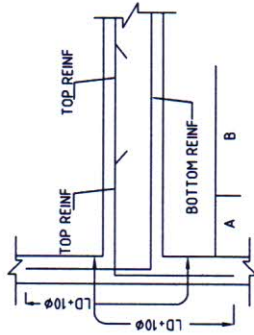
- R1. LENGTH OF REINFORCEMENT SPLICES SHOULD BE EQUAL TO DEVELOPMENT LENGTH OF THE BAR.
DEVELOPMENT LENGTH OF REINFORCEMENT BAR SHOULD NOT BE LESS THAN 'n' TIMES DIAMETER OF BAR, WHERE 'n' IS GIVEN BELOW.

GRADE OF CONCRETE	n
M20	50.0

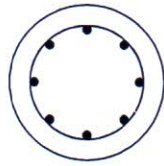
- R2. REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY SHOWN IN TRUE PROJECTION.
- R3. SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN POSITIONS SHOWN OR AS OTHERWISE APPROVED BY THE ENGINEER IN CHARGE.
- R4. WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED WITHOUT THE APPROVAL OF THE ENGINEER IN CHARGE.
- R5. ALL REINFORCEMENT SHALL BE SECURELY SUPPORTED IN ITS CORRECT POSITION DURING CONSTRUCTION BY APPROVED BAR CHAIRS, SPACERS OR SUPPORT BARS.
- R6. REINFORCEMENT SYMBOLS:
- HIGH STRENGTH DEFORMED BARS OF STRENGTH $F_{yk} \geq 415$ (IS 1786-1985)
Ø - MILD STEEL BARS IS:432(PART 1)-1982
- R7. NOT MORE THAN 50% BARS SHALL BE SPLICED AT ONE SECTION
- R8. IF MORE THAN 50% BARS ARE TO BE SPLICED THEN SPLICING SHALL BE STAGGERED
- R9. SPLICING SHALL BE CONSIDERED STAGGERED IF CENTER TO CENTER DISTANCE BETWEEN SPLICING IS NOT LESS THAN 13 TIMES DEVELOPMENT LENGTH.
- R10. FOR ALL STRUCTURAL MEMBERS DUCTILE DETAILING AS PER IS-13920-1993 SHALL BE FOLLOWED.
- R11. _____ DENOTES BARS TO BE CRANKED
_____ 16 MAX. UNO.
- R12. _____ DENOTES NUMBER OF BARS
_____ TO BE STOPPED AT THIS POINT.
- R13. # 16 @ 150 C/C
_____ CENTRE TO CENTRE
_____ CENTRE TO CENTRE SPACING OF BARS IN MM
_____ AT THE RATE OF
_____ DIA. OF BAR IN MM
_____ HIGH STRENGTH DEFORMED BAR
- R14. SLAB REINFORCEMENT DETAILING SHALL BE CARRIED OUT AS PER THE FOLLOWING:
1. SECTION-9, SP-34 (1987).
2. APPENDIX - D, IS 456 (2000).



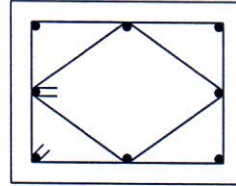
TYPICAL BEAM DETAIL



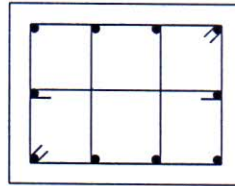
ANCHORAGE IN BEAM



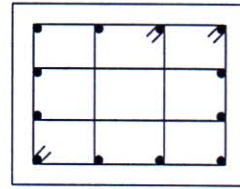
STIRRUP ARRANGEMENT
6 LONG BARS (RECT COLUMNS)



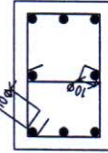
STIRRUP ARRANGEMENT
8 LONG BARS (RECT COLUMNS)



STIRRUP ARRANGEMENT
8 LONG BARS (CIRCULAR COLUMNS)



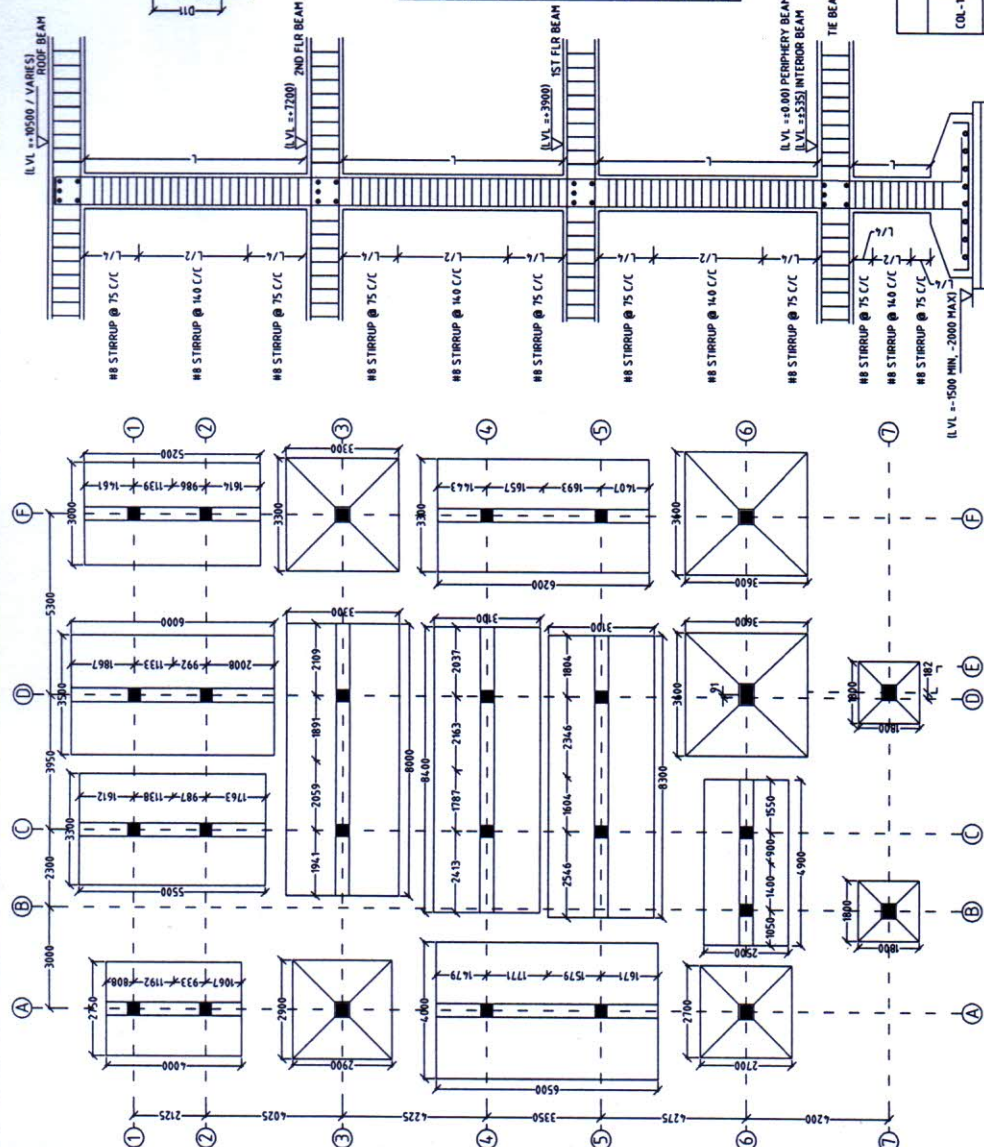
STIRRUP ARRANGEMENT
12 LONG BARS (RECT COLUMNS)



STIRRUP DETAIL

REV NO	DESCRIPTION
01	
02	
03	
04	
05	
06	
07	

NORTH EASTERN ELECTRIC POWER CORPORATION LTD. (A GOVERNMENT OF INDIA ENTERPRISE)		DRAWN S. BANJARI, ASSTT. MANAGER (C)	DESIGN S. BANJARI, ASSTT. MANAGER (C)
GENERAL NOTES ON STRUCTURAL DRAWINGS OF GUEST HOUSE AGARTALA GAS TURBINE PROJECT		INSPECTED & CHECKED B. KALITA, SR. MANAGER (C)	APPROVED M. K. SHARMA, GH (C)-DEE
		DATE SEPT 2012	DRAWING NO. NEEPCO/AGTP/GH/ST-001 (R-0)



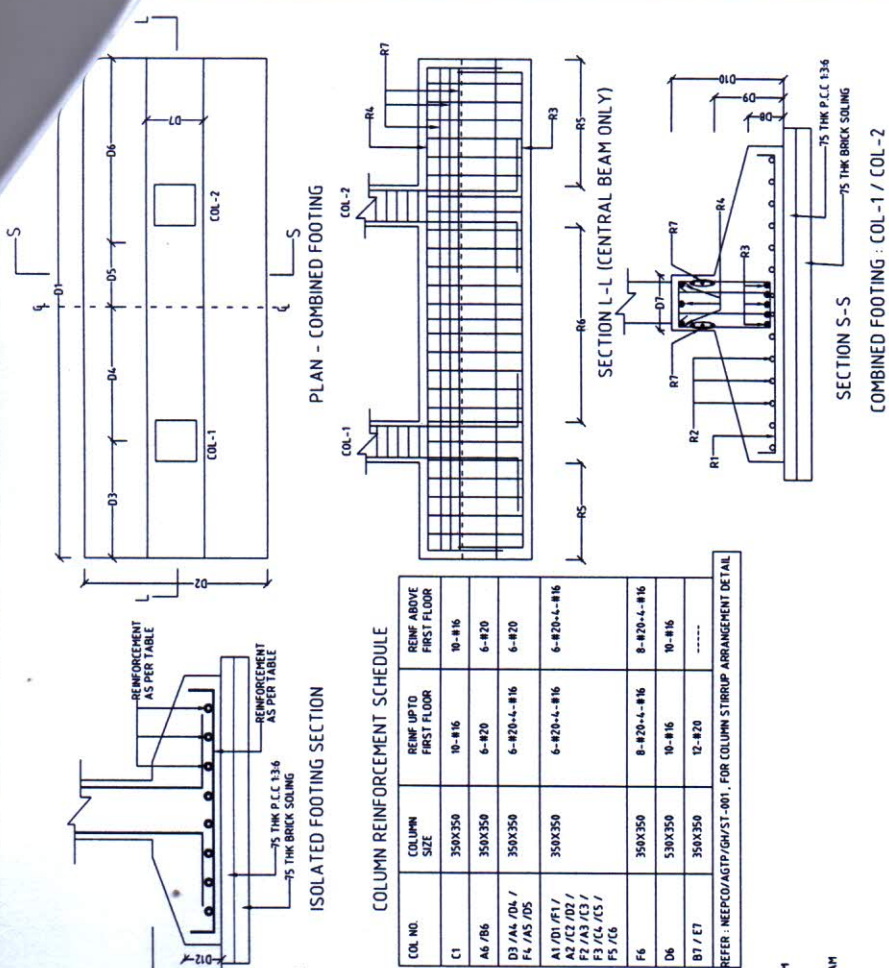
FOUNDATION LAYOUT
AGPT GUEST HOUSE

ISOLATED FOOTINGS DETAILS

COLUMN	SIZE	DTI	DTZ	REINFORCEMENT	REMARKS
B7, E7	1800 X 1800	450	150	8B @ 150 C/C	BOTHWAYS
A6	2700 X 2700	750	200	10B @ 150 C/C	BOTHWAYS
A3	2900 X 2900	850	200	10B @ 140 C/C	BOTHWAYS
F3	3300 X 3300	1000	250	10B @ 110 C/C	BOTHWAYS
D6, F6	3600 X 3600	1100	250	10B @ 100 C/C	BOTHWAYS

GENERAL NOTES :

- SCALE = NOT TO SCALE
- ALL DIMENSIONS ARE IN MILLIMETER UNLESS OTHERWISE SPECIFIED
- REFER DWG - NEPCO/AGTP/GH/ST-001 FOR GENERAL NOTES
- OTHER RELEVANT DRAWINGS : NEPCO/AGTP/GH/AR-101, NEPCO/AGTP/GH/AR-102, NEPCO/AGTP/GH/AR-103, NEPCO/AGTP/GH/AR-104, ST-105, ST-106
- SAFE BEARING CAPACITY CONSIDERED IS 70 KN/SQM AT A DEPTH OF 15M TO 2M BELOW E.G.L.
- DEPTH OF FOUNDATION SHALL BE SAME FOR ALL FOUNDATION
- ENGINEER-IN-CHARGE MAY CARRY OUT ANY MODIFICATION / ADDITIONAL ALTERATION, IF REQUIRED, TO SUIT SITE CONDITION



COMBINED FOOTING DETAILS

COL-1	COL-2	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	R1	R2	R3	R4	R5	R6	R7
A1	A2	4000	2750	808	192	933	1067	400	250	400	500	100 C/C	100 C/C	200 C/C	3-16	150	120	---
C1	C2	5500	3300	1612	1338	987	1763	400	250	450	700	100 C/C	100 C/C	100 C/C	7-16	100	140	---
D1	D2	6000	3500	1867	1333	992	2008	400	250	450	750	100 C/C	100 C/C	100 C/C	8-16	100	140	---
F1	F2	5200	3000	1441	1339	986	1614	400	250	400	600	100 C/C	100 C/C	100 C/C	6-16	100	140	---
A4	A5	6500	4000	1479	1771	1579	1671	400	250	600	700	100 C/C	100 C/C	100 C/C	7-16	100	140	---
C4	C5	8400	3100	2413	1787	2163	2037	400	250	400	900	100 C/C	100 C/C	100 C/C	9-16	100	140	---
D5	D6	8300	3100	2546	1664	2346	1864	400	250	400	900	100 C/C	100 C/C	100 C/C	9-16	100	140	---
C3	C4	8000	3300	1941	1659	1891	2109	400	250	450	800	100 C/C	100 C/C	100 C/C	8-16	100	140	---
F4	F5	6200	3300	1443	1657	1693	1407	400	250	450	600	100 C/C	100 C/C	100 C/C	5-16	90	100	---
B6	C6	4900	2500	1050	1400	900	1550	400	250	400	550	100 C/C	100 C/C	100 C/C	5-16	100	140	---

REVISION

01	TIE BEAM LEVELS MODIFIED
02	
03	
04	
05	
06	
07	

DESIGN

S. BAHUJ, ASSTT. MANAGER (C)

S. BAHUJ, ASSTT. MANAGER (C)

APPROVED

M. K. SHARMA, GM (C)-DEE

DRAWING NO.

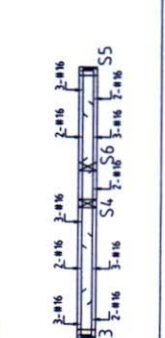
NEPCO/AGTP/GH/ST-101 (R-1)


FOUNDATION LAYOUT & DETAILS CUM COLUMN SCHEDULE

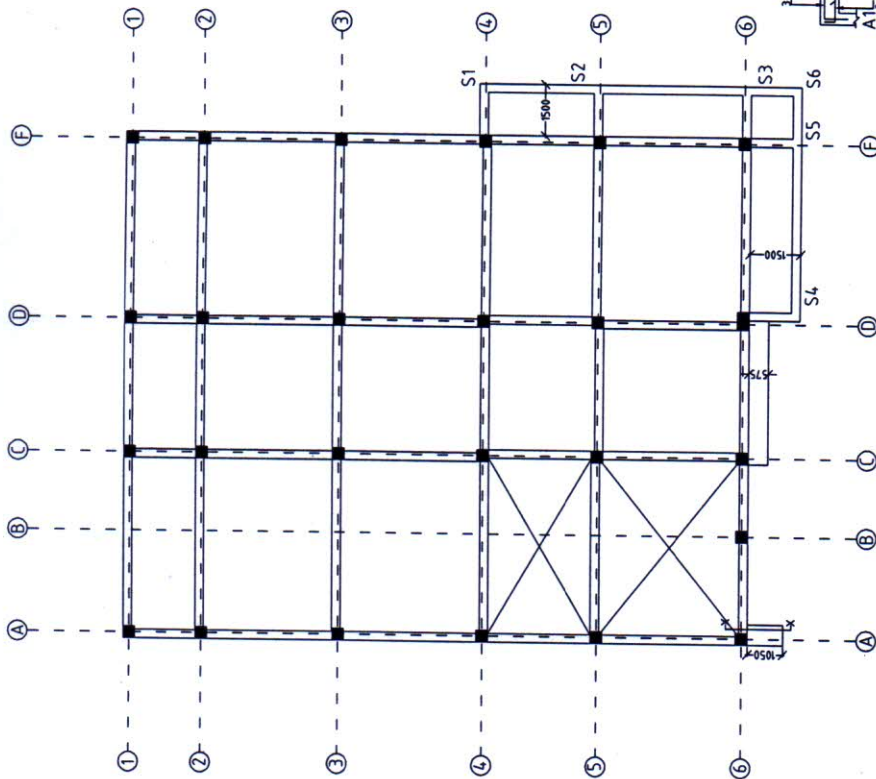
GUEST HOUSE

AGARTALA GAS TURBINE PROJECT

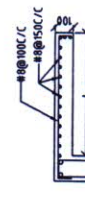
SAFE BEARING CAPACITY OF 70 KN/SQM CONSIDERED IS BASED ON LETTER NO. NEPCO/AGTP/HDP/1-70/2008/395 DATED 12.09.2008 AND AS PER MDP, AGTP - U.O. NO. 1331 DATED 28.08.2012

[illegible]

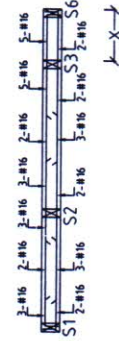
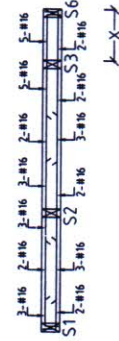
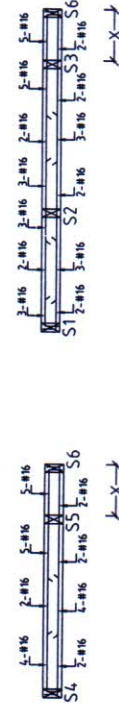
REV NO.		DESCRIPTION	<div></div>	S. BARUAH, ASSTT. MANAGER (C)				DESIGN							
01		STRUCTURAL DETAILS MODIFIED		S. BARUAH, ASSTT. MANAGER (C)				S. BARUAH, ASSTT. MANAGER (C)							
02															
03															
04															
05															
06															
07															
				<div><div>NORTH EASTERN ELECTRIC POWER CORPORATION LTD. (A GOVERNMENT OF INDIA ENTERPRISE)</div><div>TIE BEAM LAYOUT AND DETAILS GUEST HOUSE</div><div>AGARTALA GAS TURBINE PROJECT</div></div>								DRAWN		DESIGN	
				INSPECTED & CHECKED		RECOMMENDED		APPROVED							
				B. KALITA, SR. MANAGER (C)		R. M. SONOWAL, D.G.M(C)		M.K. SHARMA, GM (C)-DBE							
				DATE		SEPT 2012		DRAWING NO.							
								NEEPCO / AGTP / GH / ST-102 (R-1)							



SECOND FLOOR BEAM LAYOUT



SECTION - X-X



GENERAL NOTES :

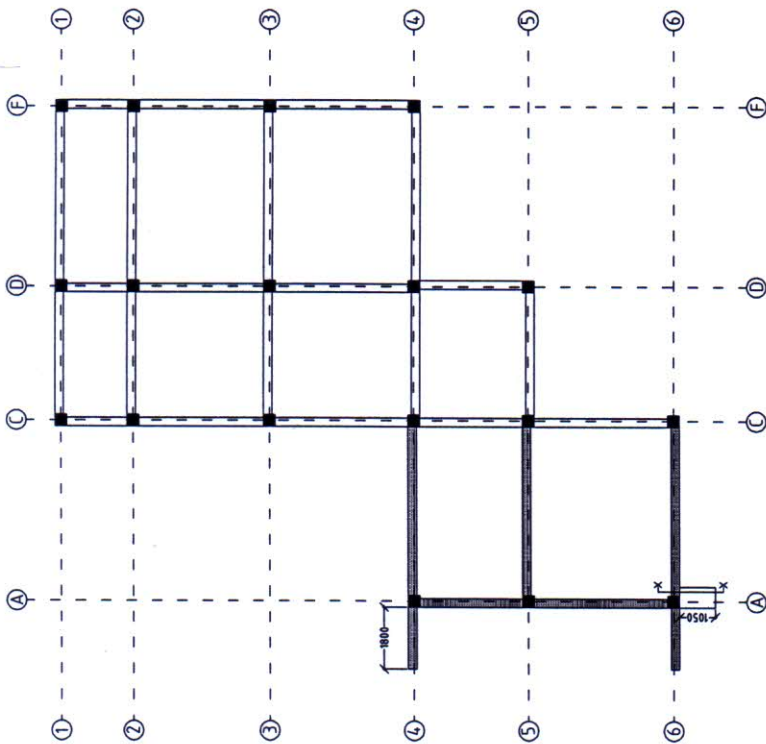
1. SCALE - NOT TO SCALE
2. ALL DIMENSIONS ARE IN MILLIMETER UNLESS OTHERWISE SPECIFIED
3. REFER DWG NEEPCO/AGTP/GH/ST-001 FOR GENERAL NOTES
4. OTHER RELEVANT DRAWINGS - NEEPCO/AGTP/GH/AR-101/ST-102/ST-103/ST-104/ST-105/ST-106
5. ENGINEER-IN-CHARGE MAY CARRY OUT ANY MODIFICATION/ADDITION/ALTERATION IF REQUIRED, TO SUIT SITE CONDITION.

ALL BEAM SIZE - 250 X 450
@ END, #8@100 C/C
STIRRUP @ 150mm C/C
X - STIRRUP @ CENTRE LINE

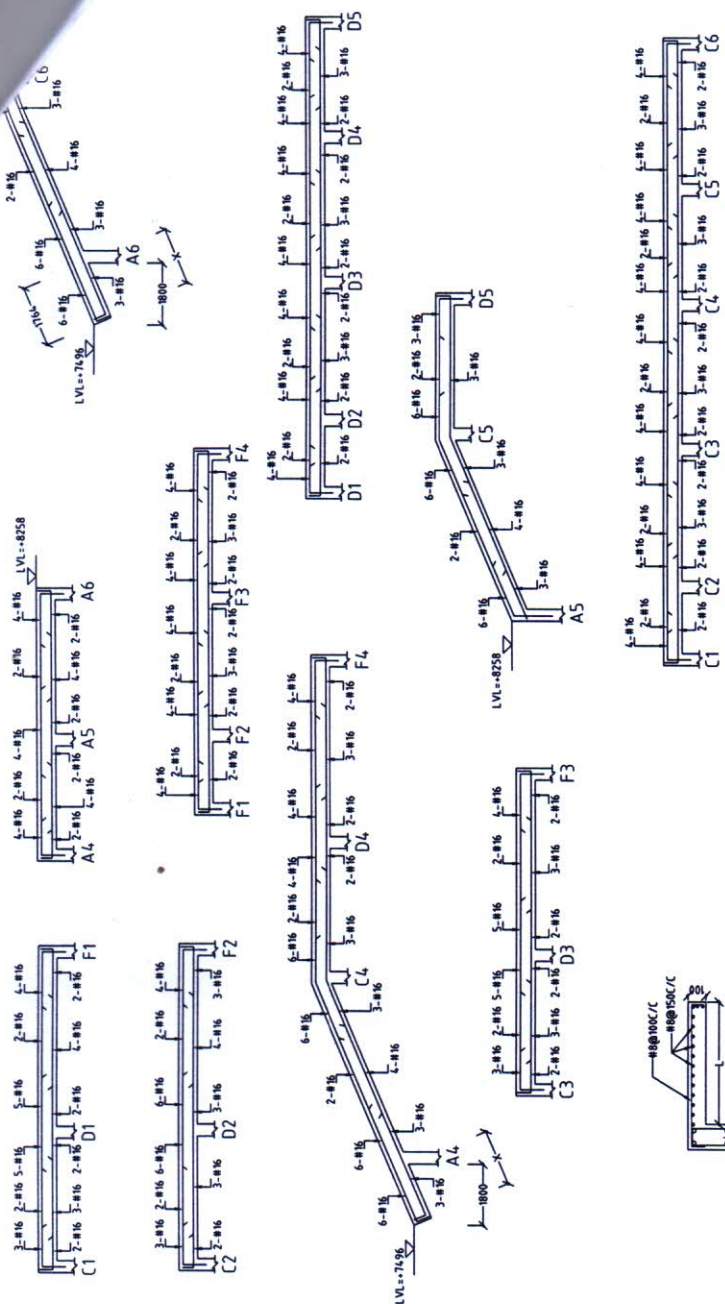
REV NO.	DESCRIPTION	DATE	SEPT 2012	DRAWING NO.	NEEPCO / AGTP / GH / ST-104 (R-0)
01					
02					
03					
04					
05					
06					
07					

DESIGN		S. BARIJAH, ASSTT. MANAGER (C)	
INSPECTED & CHECKED	RECOMMENDED	APPROVED	
B. KALITA, SR. MANAGER (C)	R.M. SONDAWAL, D.G.M.C.	M.K. SHARMA, GH (C)-D&E	

NORTH EASTERN ELECTRIC POWER CORPORATION LTD. (A GOVERNMENT OF INDIA ENTERPRISE)	
SECOND FLOOR BEAM LAYOUT AND DETAILS	
GUEST HOUSE	
AGARTALA GAS TURBINE PROJECT	



ROOF BEAM LAYOUT
LVL=1050 (UND)

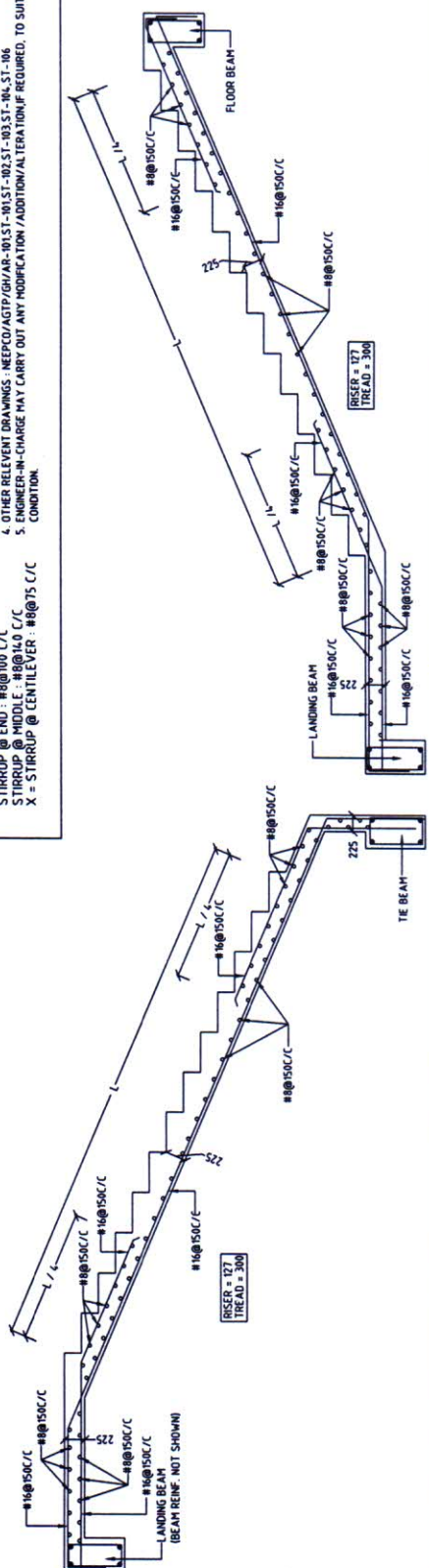


SECTION - X-X

GENERAL NOTES :

1. SCALE - NOT TO SCALE
2. ALL DIMENSIONS ARE IN MILLIMETER UNLESS OTHERWISE SPECIFIED
3. REFER DWG NEEPCO/AGTP/GH/ST-101 FOR GENERAL NOTES
4. OTHER RELEVANT DRAWINGS - NEEPCO/AGTP/GH/AR-101, ST-102, ST-103, ST-104, ST-106
5. ENGINEER-IN-CHARGE MAY CARRY OUT ANY MODIFICATION / ADDITIONAL TOLERANCE IF REQUIRED, TO SUIT SITE CONDITION

ALL BEAM SIZE : 250 X 450
 STIRRUP @ END : $\#8@100$ C/C
 STIRRUP @ MIDDLE : $\#8@150$ C/C
 X = STIRRUP @ CENTILEVER : $\#8@75$ C/C



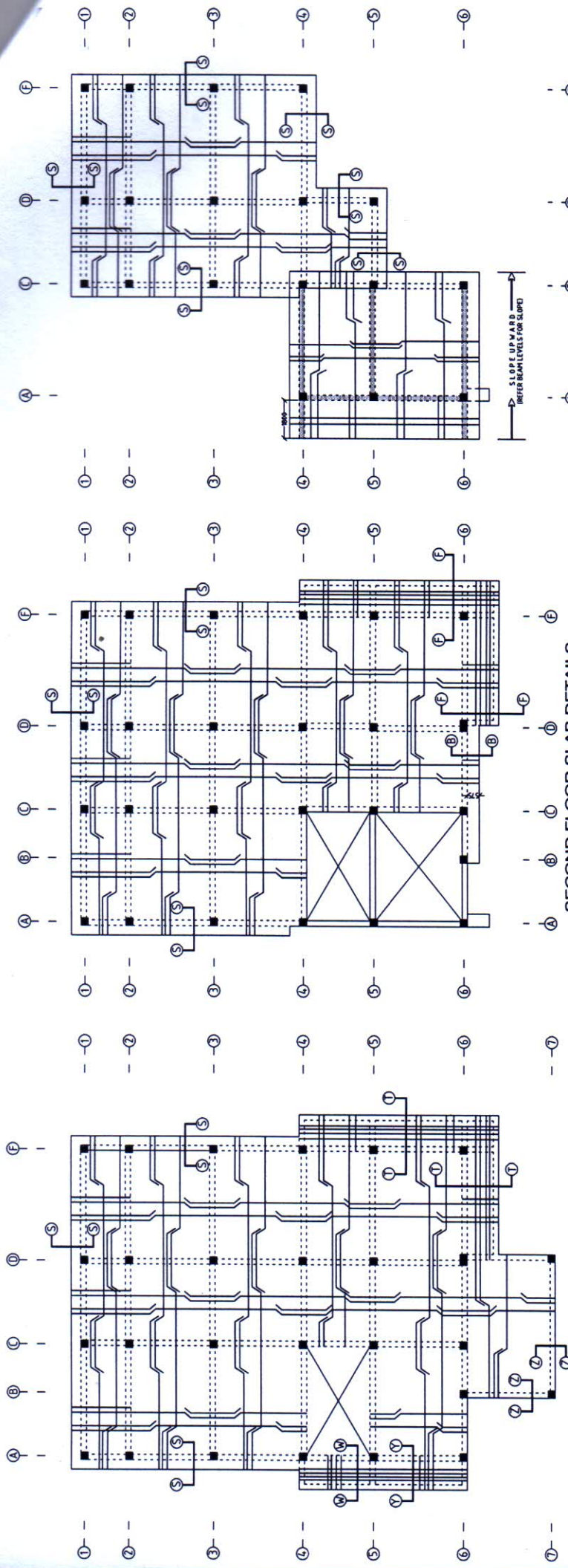
STAIRCASE LAYOUT

REV NO		DESCRIPTION
01		STAIRCASE DESIGN MODIFIED
02		
03		
04		
05		
06		
07		

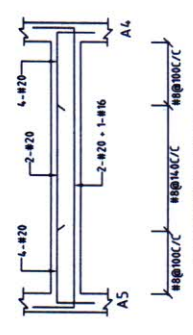
DRAWN		DESIGN
S. BARRUAH, ASSTT. MANAGER (C)		S. BARRUAH, ASSTT. MANAGER (C)
INSPECTED & CHECKED		RECOMMENDED
B. KALITA, SR. MANAGER (C)		R. M. SONOWAL, D.G.MIC
DATE		APPROVED
SEPT 2012		M. K. SHARMA, GM (C)-D&E
DRAWING NO.		NEEPCO / AGTP / GH / ST-105 (R-1)



ROOF BEAM & STAIRCASE - LAYOUT AND DETAILS
 GUEST HOUSE
 AGARTALA GAS TURBINE PROJECT

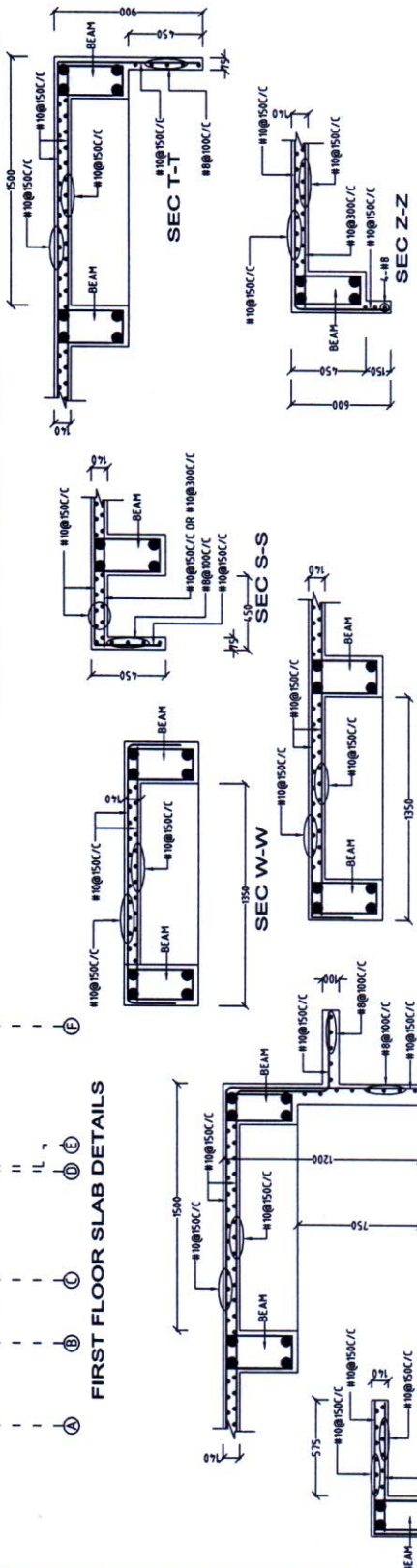


ROOF SLAB DETAILS




BEAM SIZE : 250 X 450

- GENERAL NOTES :**
1. SCALE - NOT TO SCALE
 2. ALL DIMENSIONS ARE IN MILLIMETER UNLESS OTHERWISE SPECIFIED
 3. REINFORCEMENT IS TO BE PROVIDED AS PER IS:456-1978
 4. OTHER RELEVANT DRAWINGS: MECH/ELEC/PAV/GRAB/ST-101/ST-105
 5. ENGINEER-IN-CHARGE MAY CARRY OUT ANY MODIFICATION/ADDITION/ALTERATION IF REQUIRED, TO SUIT SITE CONDITION



ALL SLAB PANEL THICKNESS = 140 MM
ALL SLAB PANEL REINFORCEMENT = #10 @ 150 C/C BOTHWAYS

REV NO.	DESCRIPTION	DATE	SEPT 2012	DRAWING NO.	NEEPCO / AGTP / GH / ST-106 (R-0)
01					
02					
03					
04					
05					
06					
07					

		NORTH EASTERN ELECTRIC POWER CORPORATION LTD. (A GOVERNMENT OF INDIA ENTERPRISE)		DESIGN S. BARUAH, ASSTT MANAGER (C)	
SLAB LAYOUT AND DETAILS AND STAIRCASE LANDING BEAM DETAILS GUEST HOUSE AGARTALA GAS TURBINE PROJECT		INSPECTED & CHECKED B. KALITA, SR. MANAGER (C)		RECOMMENDED R.M. SONOWAL, D.G. (M/C)	
		APPROVED M.K. SHARMA, GH (C)-D&E			