

Ram Lal Anand College  
(University of Delhi)  
Benito Juarez Road, New Delhi-110 021  
(Ph. 011 24112557, Fax. 011 24112151; e mail. rla\_1963@yahoo.com; Website: www.rlac.edu.in)

**NOTICE INVITING TENDER**

Sealed item rate tenders, in two bid system (Technical and Financial Bid) are invited for the following works

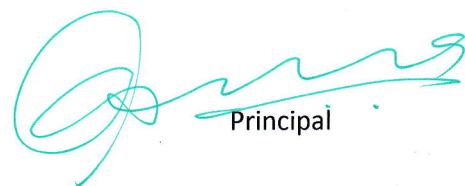
S.No.	Description of Works	Earnest Money Deposit	Eligibility Criteria
1)	Renovation of library, construction of lift shaft, extension of staff room (Civil, Electrical and Plumbing works)	Rs.2,50,000/- (Two Lakh Fifty Thousand)	Composite building works (RCC/Steel structures with Decking Slab, electrical & plumbing) of One work costing 80 Lakhs or two works of 60 Lakhs each or three works of 40 Lakhs each completed in the last three years

Tenderers shall enclose their full company profile with list of T&P, technical staff, list of works completed and completion certificate from the concerned clients in technical Bid along with PAN No, TIN No, solvency certificate etc. details of the company. Technical bid shall be opened first and after evaluation and finalization of technical bid, the list of eligible contractors shall be prepared and financial bid of the short listed contractors shall be opened.

Tender documents can be obtained from the office of Principal Ram Lal Anand College, Benito Juarez Road New Delhi 110021 from 19/03/2016 to 26/03/2016 during working hours on payment of Rs. 1000/- by DD in favour of Principal Ram Lal Anand College

Last Date of Sale of Tenders	26/03/2016
Last date of Submission of Tenders	29/03/2016 upto 11:00 am
Date of Opening of Technical Bid	29/03/2016 at 11:30am
Date of Finalization of Technical Bid	30/03/2016
Date of Opening of Financial Bid	30/03/2016 at 11:00 am

Note: Tender Document can also be downloaded from the college website <http://rlacollege.edu.in> and Delhi University Website [www.du.ac.in](http://www.du.ac.in). Downloaded tender shall accompany a DD of Rs. 1000/- drawn in favour of Principal Ram Lal Anand College, as cost of tender (Non refundable).



Principal

NOTICE INVITING TENDER FOR  
CIVIL, ELECTRICAL AND  
PLUMBING WORKS PERTAINING  
TO CONSTRUCTION OF LIFT  
SHAFT, RENOVATION OF LIBRARY  
AND EXTENSION OF STAFF ROOM  
AT RAM LAL ANAND COLLEGE,  
BENITO JUAREZ ROAD NEW DELHI

(TWO BID SYSTEM )

Prepared by:  
Ranjit Singh and Associates  
1206 Surya Kiran Building, 19 K.G. Marg ,  
New Delhi 110001

**Ram Lal Anand College**  
**(University of Delhi), New Delhi**

Sealed Item rate tenders in two bid system (Technical Bid and Financial Bid) are invited by the Principal, Ram Lal Anand College for Civil, Electrical and Plumbing works pertaining to construction of lift shaft, renovation of library and extension of staff room at Ram Lal Anand college, Benito Juarez road New Delhi 110021 from reputed building contractors who have executed similar composite building works (RCC/Steel structures with Decking Slab, electrical & plumbing works) of One work costing 80 Lakhs or two works of 60 Lakhs each or three works of 40 Lakhs each completed in the last three years.

Tenderers shall furnish proof of satisfactory completion of such work issued by the client along with their full company profile including list of T&P, technical staff, PAN No ,TIN No, solvency certificate and 3 year ITR of company. Technical bid shall be opened first and after evaluation and finalization of technical bid, the list of eligible contractors shall be prepared and financial bid of the short-listed contractors shall be opened.

Tender documents can be obtained from the office of Principal Ram Lal Anand college, Benito Juarez road New Delhi 110021 from 19/03/2016 to 26/03/2016 during working hours on payment of Rs. 1000/- by DD in favour of “Principal Ram Lal Anand college”

Earnest Money Deposit	Rs. 2,50,000/- ( Rupees Two Lakh Fifty Thousand) in a separate envelope
Last Date of Sale of Tenders	26/03/2016
Last date of Submission of Tenders	29/03/2016 upto 11:00 am
Date of Opening of Technical Bid	29/03/2016 at 11:30 am
Date of Finalization of Technical Bid	30/3/2016
Date of Opening of Financial Bid	30/3/2016 at 11:00 am

**Note:** Tender Document can also be downloaded from the college website <http://rlacollege.edu.in> and Delhi University Website [www.du.ac.in](http://www.du.ac.in) Downloaded tender shall accompany a DD of Rs. 1000/- drawn in favor of “Principal Ram Lal Anand college” as cost of tender (Non-refundable). Downloaded tender documents shall be spiral bound before submission. Loose, Stapled or incomplete bid documents will be rejected.

Issued: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Dated: \_\_\_\_\_

Principal,  
Ram Lal Anand College  
Benito Juarez road New Delhi 110021

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## APPENDIX

Defects Liability period	12 Months
Date Of Commencement	The day the Architect /Engineer-in-charge issues written orders to commence the works or the date of handing over the site whichever is later
Date of Completion	12 months from the date of commencement
Penalty for delay	5,000/-per day up-to maximum 10% of the cost of the works.
Value of work for Interim Certificate	Rs. 10,00,000/- (Rupees Twenty Five Lakhs)
Earnest Money Deposit	Rs. 2,50,000/- ( Rupees Two Lakh Fifty Thousand Only)
Retention Percentage	5%(As per the terms and conditions)
Performance Guarantee	Before issue of letter to start the work, Contractor shall furnish a performance guarantee in the form of a Bank Guarantee to the tune of Five percent (5%) of the cost of the accepted tender amount, which will be kept valid up to 12 months after completion of the works.

**Contractor**

**Employer**

**Ram Lal Anand College,  
(University of Delhi), New Delhi**

Dated 19/03/2016

**NOTICE INVITING TENDER**

- 1) Sealed Item rate tenders in two bid system (Technical Bid and Financial Bid) are invited by the Principal, Ram Lal Anand College pertaining to construction of lift shaft, renovation of library and extension of staff room at Ram Lal Anand college, Benito Juarez road New Delhi 110021.
- 2) The Architects for this job are M/s Ranjit Singh & Associates, 1206 Surya Kiran Bldg, 19 Kasturba Gandhi Marg, New Delhi –110001. Ph. 011-23312688 Fax: 011-43560879 Email: [rsa1206@msn.com](mailto:rsa1206@msn.com).
- 3) The Tender shall be submitted in the prescribed form.
- 4) The works are required to be completed within a period of Twelve months from the date of commencement.
- 5) The date of commencement shall be the day on which the Architect/Engineer-in-charge issues written orders to commence the work or from the date of handing over of the site whichever is later.
- 6) The work shall be carried out in accordance with the phasing plan approved by the college authorities to avoid disturbance to the normal working of the College. The site is expected to be handed over immediately. The contractor will prepare and submit a Phasing Plan with Bar Chart of all construction activities with targeted dates of completion for all the construction activities and get it approved from the college authorities
- 7) Tender documents consisting of terms and conditions and Tender schedule can be obtained from the office of the Principal, Ram Lal Anand College, New Delhi on any working day from 19/03/2016 to 29/03/2016 on the payment of Rs.1,000/- by crossed cheque in favour of Principal Ram Lal Anand College . This amount is non-refundable.
- 8) Completed Tender should accompany PAN number, TIN number and Service Tax registration number , email address, phone number and registered address of the Contractor
- 9) Plans, specifications etc. pertaining to the works can be inspected in the office of M/s Ranjit Singh & Associates, 1206 Surya Kiran Bldg, 19 Kasturba Gandhi Marg, New Delhi 110001, during office hours on any working day OR in the office of the Principal, Ram Lal Anand College, New Delhi with prior appointment.
- 10) CONTRACTORS are advised to inspect and examine the site and the surroundings and satisfy themselves before submitting their Tender as to the nature of the ground and sub-soil (so far as practicable), the form and the nature of the site, the means of access to the

site, the accommodation they may require and in general shall themselves obtain necessary information as to the risks, contingencies and other circumstances which may influence or affect their Tender. CONTRACTOR shall be deemed to have full knowledge of the site, whether he inspects it or not and no extra charge consequent to any misunderstanding or otherwise shall be allowed.

- 11) Submissions of the Tender by the CONTRACTOR implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and local conditions and other factors bearing on the execution of the works.
- 12) A CONTRACTOR should quote in figures as well as in words rate(s) quoted. The amount for each item should be worked out and the requisite totals given. Special care shall be taken to write rates in figures as well as in words and the amount in figures only in such a way that interpolation is not possible. The total amount shall be written both in figures and in words. In case of figures the words "Rs." should be written before the figure of rupees and the words "paise" should be written at the end. Unless the rate is in whole rupees and followed by the word "only" it should invariably be upto two places of decimals.
- 13) All rates shall be quoted on the Tender form only.
- 14) Tender shall be received by the office of the Principal, Ram Lal Anand College, New Delhi up-to 1100 hours on 29/03/2016 and the technical bid shall be opened at 1130 hours on the same day in the presence of the CONTRACTORS, who may be present or the earliest convenient time and day thereafter.
- 15) The Tender shall be accompanied by earnest money deposit of Rs. 2,50,000/- (Two Lakh Fifty Thousand Only ) , in the form of a demand draft in favor of the "Principal, Ram Lal Anand College", New Delhi.
- 16) On acceptance of the Tender, earnest money will be treated as a part of the security. In addition contractor shall furnish performance guarantee in the form of an F.D.R or bank guarantee of 5% of the accepted Tender cost in favor of Principal, Ram Lal Anand College, New Delhi before issue of letter to start the work
- 17) The CONTRACTOR, whose Tender is accepted, shall permit of the Principal, Ram Lal Anand College, New Delhi at the time of making any payments to him for works done under the contract to deduct towards security deposit such sum as will along with the amount of earnest money already deposited amount to the following % of the cost of the work: -
  - 5% of the bill amount.
  - 50% of the security money will be released along with the final bill and the balance after expiry of the successful performance of the Defects Liability Period of one year without any interest.
- 18) Ram Lal Anand College, New Delhi will return the earnest money where applicable, to every unsuccessful CONTRACTOR on return of all the Tender documents without any

interest.

- 19) A CONTRACTOR shall submit the Tender which satisfies each and every condition laid down in this notice, failing which the Tender will be liable to be rejected.
- 20) Ram Lal Anand College, New Delhi does not bind itself to accept the lowest or any tender or to give any reasons for their decision.
- 21) Ram Lal Anand College, New Delhi reserves the right of accepting the whole or any part of the Tender and CONTRACTOR shall be bound to perform the same at his quoted rates.
- 22) Sales tax , VAT, purchase tax, turnover tax or any other tax applicable in respect of this contract shall be payable by the Contractor and Ram Lal Anand College will not entertain any claim whatsoever in respect of the same. However, in respect of service tax, same shall be paid by the contractor to the concerned department on demand and it will be reimbursed to him by Ram Lal Anand College after satisfying that it has been actually and genuinely paid by the contractor
- 23) T.D.S. for VAT/WCT etc. as applicable to union territory of Delhi shall be deducted from the payments to be made to the Contractor and tax deduction certificate shall be issued by Ram Lal Anand College, New Delhi as per govt. guidelines
- 24) This notice of Tender shall form part of the contract documents.

**Contractor :**  
 Duly authorized to sign  
 On Behalf of M/s

**Owner:**  
**For and on behalf of**  
**Ram Lal Anand College**

.....  
 .....  
 .....

Signature.....

Date.....

Email.....

Phone.....

Authorized Signatory

Postal Address.....

.....

.....



To,

The Principal  
Ram Lal Anand College,  
New Delhi.

Dear Sir,

I/We have read and examined the following documents relating to Civil, Electrical and Plumbing Works pertaining to construction of lift shaft, renovation of library and extension of staff room at Ram Lal Anand college, Benito Juarez road New Delhi 110021.

- 1) Notice Inviting Tender Specifications
- 2) Drawings
- 3) General Conditions of Contract
- 4) Special Conditions
- 5) Tender Schedule

I/We hereby Tender for execution of the works referred to in the aforesaid, documents upon the terms and conditions contained or referred to therein and in accordance in all respects with the specifications, designs, drawings and other relevant details at the rates quoted by us in the Tender schedule. We have visited and examined the site of works and are fully aware of the site conditions, having a bearing on the contract.

In consideration of I/We being invited to the Tender, I/We agree to keep the Tender open for acceptance for 90 Days from the due date of submission thereof and not make any modifications in the terms and conditions which are not acceptable to Principal, Ram Lal Anand College, New Delhi.

A sum of Rs. 2,50,000/- (Bank Draft No.....Dated.....) is hereby forwarded in Bank Draft in the favor of Principal, Ram Lal Anand College, New Delhi as earnest money. If I/we fail to keep the Tender open as aforesaid or make any modifications in the terms and conditions of the Tender which are not acceptable to Principal, Ram Lal Anand College, New Delhi. I/We agree that Principal, Ram Lal Anand College, New Delhi. Shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Should this Tender be accepted, I/we hereby agree to abide by and fulfill all the terms, conditions and provisions of the aforesaid documents.

If after the Tender is accepted, I/we fail to commence the execution of the works as provided in the conditions, I/we agree that Principal, Ram Lal Anand College, New Delhi shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely.

I/We agree that should Principal, Ram Lal Anand College, New Delhi. decide to forfeit earnest

money as aforesaid, unless a sum equal to the earnest money mentioned above is paid by us forth-with, the principal Ram Lal Anand College, New Delhi may at its option recover it out of the deposit and in the event of deficiency, out of any other money due to me/us or otherwise.

Duly authorized to sign the Tender  
On behalf of M/s

.....

Signature.....

Dated.....

Postal Address.....

## SPECIAL CONDITIONS

1. The work shall be carried out as per specifications in the Tender schedule/latest C.P.W.D. Specifications, along with the correction slips; issued up to date of acceptance of Tender in case of doubt the decision of the Architect shall be final and binding on the Contractor.
2. The Contractor shall carryout the work in stages as to cause minimum disturbance to the working of Ram Lal Anand College, New Delhi and other organizations. He shall be responsible for any damage to the equipment or structures, injury to the personnel during the progress of the work and he shall be liable to pay compensation as may be decided by the Principal or his authorized representative in respect of such damages /injuries.
3. The serviceable materials out of the dismantled materials if any will be the property of the college and properly stacked by the Contractor as directed by the Engineer-in-charge. Decision of principal or his authorized representative on the service-ability of the dismantled materials shall be final and binding on the Contractor.
4. All labour Employed by the Contractor shall be covered by the workman's compensation act. Any death, injury or mishap to the workmen of the Contractor will entirely be the Contractor's responsibility and the College, shall not be liable to pay any damages for the same.
5. Contractor shall take adequate safety precautions to avoid any accident etc. at site. Shall erect proper barricades, sign boards, lights, etc. shall provide safety belts, safety shoes, head gears (helmet I.S.I standard) and shall be fully responsible for any criminal & civil liabilities. All safety arrangements are to be made by contractor at his own cost.
6. No labor or material rate escalation claims will be entertained from the contractor as this work has to be completed within 12 month from the date of commencement of work at site.
7. Rates quoted shall be applicable equally to all floors and shall include all lifts and leads. No extras on this account shall be payable.
8. Water and electricity shall be arranged by the Contractor. In case it is available, the same can be provided by the College authorities at one point. A recovery @ 1 % for providing electricity and 1% for providing water shall be made by the college authorities on gross value of work done by the contractor.
9. Rates quoted by the contractor shall be inclusive of all items of work listed below and Any work, supplies or services which might have not been specifically mentioned in the specifications, schedule of items or drawings but are necessary for entire completion of the work shall be executed / provided/ rendered by the CONTRACTOR without any

Extra cost and within the time schedule specified. Rates quoted shall be deemed to include such elements of labour and materials necessary to complete the items of work in all respects

10. Contractor shall submit only computerized Bills supported with computerized measurement sheets in A4 size hard copy prints and soft copy in Microsoft Excel Format. Manual Handwritten bills or measurement sheets will not be accepted.

11. Labour Camp will be arranged by the contractor outside the college premises. Ram Lal Anand College does not have space for labour camps inside its premises.

12. Principal Ram Lal Anand College reserves the right to

- a) Decrease the items of work,
- b) Remove the entire section of work
- c) Increase the items of work

As may be deemed necessary to finish the proposed works within the available budget as per the requirement of the college and contractor shall not claim any extras on variation (increase/decrease) of quantity of works.

## **GENERAL CONDITIONS OF CONTRACT**

**Definitions:** the contract document consists of the agreement, the special and general conditions of the contract, specifications and bills of quantities including all modifications and the contract drawings prepared by the Architect from time to time

1. **The site:** shall mean the site of contract work at Ram Lal Anand College, New Delhi.
2. **Sub-Contractor:** includes those who have a direct contract with the Contractor.
3. **Notice:** written notice shall be deemed to have been served if delivered in person to a member of the Contractors firm.
4. **Owner:** Principal, Ram Lal Anand College, New Delhi.
5. **Work:** the term “work” includes both labour and material of the Contractor/Sub-Contractor.
6. **Time limits:** time limits or 12 months stated in the contract are essence of the contract.
7. **Law:** law of the place of work shall govern the construction under this contract.
8. **Virtual completion:** date of virtual completion is the date when the construction is sufficiently completed in accordance with the contract documents, including modifications, if any.
9. **Contract documents:** shall consist of the following
  - a) Articles of agreement
  - b) General and special conditions of contract
  - c) Technical specifications
  - d) Bills of quantities

## **TYPE OF CONTRACT**

It is an item rate contract. The Contractor shall be paid for the actual quantity and quality of work done, as measured at site on the rates quoted by him, on the basis of a payment certificate issued by the Architect/ Engineer- Incharge

## **SCHEDULE OF QUANTITIES**

Schedules of quantities given in the contract bill are provisional and are meant to indicate the intent of the work and to provide a uniform basis for the contract. The Owner reserves the right to increase or decrease any of the quantities or to totally omit any of them. Contractor shall be bound to carry out the same without claiming any extras.

## CONTRACT DRAWINGS

1. In general, drawings shall indicate dimension, position & type of construction.
2. Specifications shall indicate the qualities, methods, and bill of quantities shall indicate the quantum and rates. Any work indicated in drawings and not mentioned in the specifications or vice versa shall be furnished as fully set forth in both.
3. Contractor shall not deviate from the drawings and Architects interpretation of the drawings shall be final and without appeal.
4. Errors/inconsistencies discovered in the drawings shall be instantly brought to the notice of the Architect for interpretation and correction, if any.
5. All drawings are the property of the Architect and shall not be used on any other project.
6. Bar bending schedule, if requested by the Architect/Engineer in-charge shall be furnished to him prior to fabrication.

## ARCHITECTS INSTRUCTIONS

If within seven days of receipt of written instructions from the Architect, requiring compliance with an instruction the Contractor does not comply hence-with, then the Owner may get the work executed through another agency at the risk and cost of the Contractor.

## SCOPE OF WORK OF CONTRACTOR

The scope of work to be carried out by the CONTRACTOR shall also include the following:

- a) Setting out of the works in respect of position, level dimensions, alignments, etc. including establishment of bench marks, survey reference points, etc.
- b) Clearance of the site.
- c) Site leveling /terracing within the limits as shown in the drawings or as directed by the Engineer In charge.
- d) Disposal of debris, excavated materials, etc. as per the instructions of the Engineer In-Charge
- e) Testing of water, soil and concrete. And any other test as required by CPWD norms
- f) Pumping out rain water/underground water from foundations, excavations and drainage of surface water from work site.
- g) All scaffolding, shorting, centering, shuttering works, etc.
- h) Running and maintenance of all construction plants and equipment, tools and tackles, etc.

- i) All temporary /enabling works such as approach road to the site, water supply, drainage and sewerage, power supply including diesel generator set, temporary offices, stores, construction yard, canteens, toilet blocks, labour camp, fencing, etc.
- j) Protection and maintenance of trees, shrubs, green and other surfaces as instructed by the Engineer In charge.
- k) Any other work required in connection with the execution of the contract work.

The cost of all the above mentioned works shall be deemed to be included in the rates for various items of work although such inclusion may not be specifically spelt out.

Whether specified elsewhere in the Agreement or not, the CONTRACTOR shall provide all materials (including steel and cement unless specifically spelt out in the agreement otherwise), labors of every description, energy and water and all tools, tackles, plant and transport necessary for proper execution of the work to the entire satisfaction of the OWNER.

#### SAMPLES AND SHOP DRAWINGS

The Contractor shall submit samples of materials and shops drawings required by the Architect with promptness within a week.

#### PROGRESS CHART

In order to achieve the completion time as stated above, the CONTRACTOR shall submit to the OWNER within 2 (two) weeks from the effective date of Agreement a detailed Bar chart/PERT Network showing all the activities including mobilization, site clearance, procurement of major construction materials like steel and cement, excavation, foundation work, sanitary and water supply work, etc. The list of activities for which the Bar chart/PERT network has been worked out and their commencement, duration and completion shall be subject to the approval of the OWNER

#### ACCESS FOR ARCHITECT TO THE WORKS

The Architect and his representative shall have access, at all reasonable times, to the work and workshops of the Contractor.

#### ARCHITECTS STATUS AND DECISIONS

The Architect shall be Owner's representative during the construction period. He shall periodically visit the site to familiarize himself generally with the progress and the quality of work and to determine, in general if the work is proceeding in accordance with the contract documents. The Architect shall not be required to make exhaustive or continuous on-site inspections to check the quality and quantity of the work, and shall not be responsible for the

Contractors failure to carry out the construction work in accordance with the contract documents. During his site inspections the Architect shall inform the Owner about progress of work, defects and deficiencies if any.

The Architect may in his absolute discretion from time to time, issue further drawings, details, written instructions, written decisions and written explanations in regard to: -

1. Variation or modification of the design
2. Quality or quantity of work, addition/alteration/omissions and substitutions of any work
3. Any discrepancy and divergence between drawings and specifications.
4. Removal and re-erection of any works executed by the Contractor
5. Dismissal of any persons employed on the site, who in the opinion of the Architect is not fit for the job.
6. Opening up for inspection any work-covered up
7. Amending and making good any defects under defects liability period
8. Removal from site, any materials brought by the Contractor, which in the opinion of the Architect is not up to the desired standard.
9. Delay and extension of time
10. Postponement of any work

#### ENGINEER INCHARGE

Engineer In-Charge shall mean the person approved by the Architect and appointed and paid by the Owner and acting under the directions of the Architect.

#### CONTRACTORS FIELD ORGANIZATION AND EQUIPMENT

1. The Contractor shall employ qualified and competent licensed Electricians on the site.
2. Contractor shall provide and install all necessary hoists, ladders, scaffoldings, tools, tackles, plants and machinery necessary for execution of the works
3. Contractor shall provide and maintain simple water tight office accommodation at site
4. Contractor shall make his own security arrangements at site and keep a 24hours Watchman
5. Contractor shall provide sanitary convenience for site staff and labour to keep the site clean
6. A telephone line at site to be maintained and paid by the Contractor
7. Guardrails shall be provided by the Contractor for safety of labour and general public at the site of works.



## TAXES

Sales-tax/VAT (except service tax), purchase tax, turnover tax or any other tax applicable in respect of this contract shall be payable by the Contractor and Ram Lal Anand College will not entertain any claim whatsoever in respect of the same. However, in respect of service tax, same shall be paid by the contractor to the concerned department on demand and it will be reimbursed to contractor by Ram Lal Anand College after satisfying that it has been actually and genuinely paid by the contractor

## STATUTORY OBLIGATIONS

The Contractor shall comply with and give all notices required by any Govt. authority and instrument, rule or order made under an act of parliament or state assembly or any regulation or bye-law of the local body, relating to the work and indemnify the Owner against any such liability arising out of noncompliance of the law.

By way of illustration of various Acts/statutory compliances as stated above, the following Acts as amended from time to time shall be complied with by the CONTRACTOR:

- a) Employee's Provident Fund Act 1952
- b) Contract Labour Act (Regulations and Abolition 1970)
- c) Minimum Wages Act 1948
- d) Payment of Wages Act 1936
- e) Workmen Compensation Act 1923
- f) Factories Act 1948
- g) Apprenticeship Act 1961

## SUB CONTRACTOR

Before awarding any sub contract, the Contractor shall notify the Architect in writing the names of the Sub-Contractors proposed. Contractor shall not employ the Sub-Contractor to whom Architect or Owner may have a reasonable objection.

## MEASUREMENT OF WORK

Unless otherwise specified, measurement of work shall be carried from the works actually executed. The measurements for the purpose of preparing Bills will be taken jointly by the CONTRACTOR's representative and the Engineer In charge. In measurement of work as stated above, the CONTRACTOR shall certify that the work has been carried out strictly as per the drawings, specifications and item of work in terms of the agreement. Such certificate shall require Engineer In-Charge's endorsement for the purpose of payment.

In the event of any dispute with regard to the measurement of the work executed, the decision of

the OWNER shall be final and binding on the CONTRACTOR

In the case of site measurements, should the CONTRACTOR not attend or neglect or fail to send his representative for taking joint measurements, the measurements taken by the Engineer In Charge shall be deemed to be the correct measurement of work and shall be binding on the CONTRACTOR

#### REJECTION

If the Contract work or any portion thereof, at any time, is found to be defective or fails to fulfill the requirements of the agreement, the Engineer In Charge shall give the CONTRACTOR notice in writing setting-forth particulars of such defects or failure and the CONTRACTOR shall forthwith make good the defects or replace or alter the same to make it comply with the requirements of the agreement.

Any materials, equipment, etc. brought to the site and found to be not in accordance with the agreement, shall be rejected by the Engineer In-Charge and the CONTRACTOR shall remove the materials from the site within the period specified by the Engineer In-Charge.

The CONTRACTOR shall not be entitled to any extension of time or extra cost for rejection as per above

#### CERTIFICATES OF PAYMENTS

Architect shall issue an interim certificate of payment stating the amount due to the Contractor from the Owner and the Contractor shall be entitled to payment thereof within a period of two week after issue of the certificate. From the total amount, certified deduction shall be made towards payments already made, security deposit, TDS etc.as applicable to Delhi or any other tax applicable at the time of making payment.

All running payments shall be regarded as payment by way of advance against final payment only and not as payment for the work completed till the date of final payment. The running payment made shall not preclude the liability of the CONTRACTOR to finally complete the work strictly in accordance with the specifications and drawings, if required by re-constructing faulty work

#### CLAIM FOR EXTRA

In the case of extra item(s) (items that are completely new, and are in addition to the items contained in the contract), the contractor will submit rates, supported by rate analysis, for the work and the engineer-in-charge shall within one month of the receipt of the rates supported by rate analysis, after giving consideration to the analysis of the rates submitted by the contractor, determine the rates on the basis of the market rates and the contractor shall be paid in accordance with the rates so determined.

### DEDUCTION FOR UNCORRECTED WORK

If the Architect deems it in-expedient to correct work damaged or not done in accordance with the contract, an equitable deduction from the contract price shall be made thereof.

### FLUCTUATIONS

The Contractor shall not claim any extras for fluctuation of price and the contract price shall not be subjected to any rise or fall in prices.

### POSSESSION BEFORE VIRTUAL COMPLETION

If the Owner, with the consent of the Contractor takes possession of part of the building for handing over to the finishing Contractor, such part of the building shall not be deemed to be virtually completed. Virtual completion of such part would occur only on completion of the last part of the structure.

### TIME EXTENSION

Upon it becoming reasonably apparent that the progress of the work is delayed, the Contractor shall forthwith give written notice of the cause of delay to the Architect, to enable the Architect and Owner to take a proper decision in the matter.

### INSPECTION AND TEST

- i. The CONTRACTOR shall ensure inspection and test of all materials and work at his cost through his ENGINEER IN CHARGE and other technical staff either at site or through any approved laboratory.
- ii. The CONTRACTOR shall ensure proper supervision and inspection during the progress of work at site.
- iii. All materials and work, whether at the site or in the CONTRACTOR's /Sub-Contractor's premises shall be subject to inspection and test by the ENGINEER IN CHARGE. The CONTRACTOR/ his Sub-Contractor shall provide all facilities free of cost to the ENGINEER IN CHARGE including all labor, materials, tools, tackles, instruments, appliances, etc. to enable the ENGINEER IN CHARGE to carry out inspection and/or test.
- iv. All test certificates shall be subject to certification by the ENGINEER IN CHARGE.
- v. The CONTRACTOR shall submit to the ENGINEER IN CHARGE three copies of all inspection/ test certificates.

- vi. The CONTRACTOR shall not be entitled to any claim for extra time or cost due to any delay in carrying out inspection and testing or re-inspection and re-testing if so decided by the ENGINEER IN CHARGE.
- vii. The CONTRACTOR shall take adequate steps to rectify the defects or to replace such materials and work which have failed during inspection /testing

#### RESPONISBILITY OF COMPLETION

Any work, supplies or services which might have not been specifically mentioned in the specifications, schedule of items or drawings but are necessary for entire completion of the contract work shall be executed / provided/ rendered by the CONTRACTOR without any Extra cost and within the time schedule specified. Rates quoted shall be deemed to include such elements of labor and materials necessary to complete the items of work in all respects.

#### DAMAGES FOR NON-COMPLETION

If the Contractor fails to complete the works by the date specified or within any extended time granted to him, the Contractor shall allow the Owner to deduct a sum calculated at the agreed liquidated damages, from the money due to him for the period the work remained incomplete, subject to a maximum amount of 10% of the Contract Value.

#### LIQUIDATED DAMAGES FOR DELAY

If the CONTRACTOR fails to complete the work/item (s) of work in all respects and hand over the same to the OWNER within the time stipulated the CONTRACTOR, without prejudice to any other right or remedy of the OWNER on account of such breach, be liable to pay the OWNER liquidated damages at the rate of 1% (one percent) of the total contract price for delay of every week or part thereof.

The total amount of liquidated damages shall be limited to 10% (Ten percent) of the total contract price.

The above provisions shall not apply in cases of delay for which the CONTRACTOR is entitled to extension of completion time

#### VIRTUAL COMPLETION CERTIFICATE AND DEFECTS LIABILITY PERIOD

When in opinion of the Architect the works are practically completed, he shall forthwith issue a certificate to that effect, that date will be taken as the date of virtual completion.

The Architect shall prepare a schedule of defects, not later than 14 days after the expiry of the defects liability period. The Contractor shall within a reasonable period of time after receipt of schedule of defects shall rectify the same, failing which the Architect will make

suitable deductions from the contract sum.

#### MAINTENANCE GUARANTEE / DEFECTS LIABILITY PERIOD

Maintenance Guarantee period will be 12 months from the actual date of completion and handing over to the OWNER.

- a) The CONTRACTOR guarantees that within the maintenance guarantee period, the contract work shall not show any signs of defects, cracks, settlements, disfigurations, shrinkage, leakage, dampness or any other defects.
- b) The CONTRACTOR shall maintain and satisfactorily execute, at his own cost, all such works of repair, amendment, re-construction, rectification, replacement and any other work to make good the faulty work as stated in Article (a) during the maintenance guarantee period.
- c) The CONTRACTOR shall, if required by the ENGINEER IN CHARGE, search for the causes of any defects, imperfection or fault under the direction of the ENGINEER IN CHARGE. The cost of such search shall be borne by the CONTRACTOR.
- d) At intervals specified by the ENGINEER IN CHARGE the CONTRACTOR, along with the ENGINEER IN CHARGE, shall inspect the contract work to satisfy himself that no defects have cropped up in the contract work. Should there be any signs of defects, the CONTRACTOR shall take immediate steps to rectify the same, failing which; the ENGINEER IN CHARGE may get the defects rectified at the risk and cost of the CONTRACTOR.
- e) At the end of the maintenance guarantee period, the CONTRACTOR, along with the ENGINEER IN CHARGE, shall carry out final inspection of the contract work to prove that no defects had appeared in the contract work or that all defects which appeared in the contract work have been rectified to the entire satisfaction of the ENGINEER IN CHARGE. If during the final inspection it is found that the defects still remain in the contract work, the period of maintenance guarantee shall be extended at the discretion of the ENGINEER IN CHARGE and the CONTRACTOR shall be liable to make good the defects and be responsible for the maintenance of the work till the defects have been fully rectified.
- f) Upon successful completion of the maintenance guarantee period the OWNER shall issue final acceptance certificate to the CONTRACTOR

#### PAYMENT WITH HELD

The Architect may withhold or on account of subsequently discovered evidence nullify the whole or part of any certificate to such an extent as may be necessary in his reasonable opinion to protect the Owner from loss, for defective work, non- payment to Subcontractors, or other claims connected to this work.

### INJURY TO PERSONS

The Contractor shall indemnify the Owner against any liability, loss, claim or proceedings whatsoever arising under any statutory or common law in respect of personal injury to or the death of any person, whomsoever arising out of or in the course of or caused by carrying out the work.

### INSURANCE

Without prejudice to his ability to indemnify the Owner, the Contractor and his Subcontractors shall maintain such insurance as are necessary to cover the liability of the Contractor and the sub-Contractors.

### INSURANCE AGAINST FIRE

The Contractor shall in the joint name of the Owner and the Contractor, insure against loss or damage due to fire, earthquakes and riots.

### COORDINATION OF WORK

Contractor shall extend complete coordination to other agencies i.e. air-conditioning, firefighting and interiors working on the same site.

### LABOUR

Contractor shall not employ child labour under 14 years of age and if female workers are employed he should make provision for safeguarding the small children to keep them clear of the site. All labour shall wear safety helmets and shoes to protect them from injury.

### SAFTEY

In respect of all labour directly or indirectly employed in the work for the performance of the contractor's part of this contract, the contractor shall at his own expense arrange for the safety provisions as per C.P.W.D. Safety Code framed from time to time and shall at his own expense provide for all facilities in connection therewith. In case the contractor fails to make arrangement and provide necessary facilities as aforesaid, he shall be liable to pay a penalty of Rs.200/- for each default and in addition, the Engineer-in- Charge shall be at liberty to make arrangement and provide facilities as aforesaid and recover the costs incurred in that behalf from the contractor.

### ANTIQUITIES

All fossils and other objects of interest or value, which may be found on the site or in excavating the same during progress of the work, shall become a property of the Owner. The Contractor shall carefully take out and preserve all such objects and hand them over to the Owner, through the Architect.

### GUARANTEE

Besides guarantees required elsewhere, the Contractor shall guarantee the works in general for one year after completion of defects liability period.

### TREES AND SHRUBS

The Contractor shall protect trees and shrubs designated by the Owner/Architect/Engineer In Charge from damage during the course of work

### PERFORMANCE GUARANTEE

In addition to the Security Deposit the Contractor shall furnish a performance guarantee in the form of a Bank Guarantee to the tune of Five percent (5%) of the cost of the tender amount, which will be kept valid up to 12 months after completion of the work.

### ARBITRATION

In case of dispute, the difference of opinion on any matter pertaining to the works, the decision of the Architect shall be final and binding on the contractors and the owners. If either party is not satisfied with the decision of the Architect, within 28 days a notice to this effect will be sent to the Architect in writing. The matter can then be referred to sole arbitrator or a panel of two arbitrators who should be fellows of Indian Institute of Architect, for a final award. Decision of Principal RAM LAL ANAND COLLEGE shall be final and binding in this regard.

### LIQUIDATION

If the CONTRACTOR commences to be wound up, not being a member's voluntary winding up for the purpose of amalgamation or reconstruction, or carries on his business under a receiver for the benefits of his creditor the OWNER shall be at liberty to:

- i) Give such receiver the liquidator or other person the option of carrying out the performance under the Agreement, subject to the receiver, liquidator or other person providing a guarantee up to an amount to be agreed upon by the OWNER and such

receiver liquidator or other person for the due and faithful performance of the CONTRACTOR's obligations under this Agreement, or

ii) If the receiver, liquidator or other person fails within 30 (thirty) days to exercise the option to carry out performance of the Agreement then the OWNER may terminate the Agreement and give notice in writing to the CONTRACTOR or to the receiver, liquidator or to any person in whom the Agreement may have become vested.

#### TERMINATION OF CONTRACT

If the CONTRACTOR violates the Agreement or shall neglect to execute the work with due diligence or expedition or shall refuse or neglect to comply with any reasonable directions, instructions or orders given to him in writing by the Architect/Engineer In-Charge in connection with the work or shall contrivance or breach any provisions of the Agreement, the OWNER may give notice in writing to the CONTRACTOR to make good the failure, neglect or contravention complained of or cure that breach within a period of 30 (thirty) days of receiving such notice and in default of the compliance with the said notice, the OWNER without prejudice to his rights as below may rescind or terminate the Agreement stating therein the effective date of termination, holding the CONTRACTOR liable for the damages that the OWNER may sustain in this behalf.

Without prejudice to any of the rights or remedies under this contract, if the contractor dies, the Owner shall have the option of terminating the contract without compensation to the CONTRACTOR.



## **CIVIL WORKS**

### **SECTION A. DEMOLITION, EARTHWORK AND ENABLING WORKS**

The rates quoted shall include the following:

1. Excavation either straight, inclined or curved in trenches, footings, rafts, basements etc., including raking out, cutting and dressing sides and bottom to true dimension and depositing excavated stuff beyond three meters clear of the edge of the trench, filling back as required and disposal of surplus earth anywhere within the plot as directed by engineer-in charge/ architect.
2. Clearing all shrubs, roots, vegetation and trees from alignment of the buildings
3. Bailing out, pumping out or otherwise removing all water which may accumulate in the excavation from any or all causes whatsoever
4. All labour and material required for fencing and protection against risk of accident to open excavations etc., with necessary shoring planking and strutting and for providing gangways, with handrails across open trenches etc., where necessary during the progress of the work.
5. Watching and lighting arrangements wherever necessary whether ordered by the Owner/Architect/Engineer-In Charge or otherwise
6. Filling back available excavated earth in plinths, sides of foundations, sides of basements, under floors and for ground formation etc., as and where required in 150 mm thick layers, breaking coods, ramming, watering, consolidation, the same with 10 M.T. Rollers or hand tampers where rollers are not accessible, and dressing the filled up areas.
7. Battering, benching, forming steps in the sides of foundations and mass excavations where required and removal of the slips and falls. This item is not payable separately.
8. Anti termite treatment shall be got done through a specialized sub-contractor approved by the architect. This item is payable separately. The contractor shall guarantee against termite for a period of 10 years.
9. Water proofing shall be done by specialized agency as approved by the Architect/Engineer Incharge. Water proofing Agency shall give a guarantee for its effectiveness over a period of 10 years. The rates for waterproofing shall be

inclusive of all labour and material for the successful completion of the job. This item is payable separately.

10. Water table has to be maintained at least 1.0 Mt., below lean concrete level of raft by providing adequate de-watering arrangements. This water table has to be maintained till Basement floor slab is cast including the retaining wall. This item is not payable separately.

11. Water table shall also be maintained till such time the waterproofing of retaining wall and raft is complete. This item is not payable separately.

S.No.	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
	<b>SECTION-A EARTH WORK &amp; DEMOLITION</b>				
1	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth. 1.5m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be leveled and neatly dressed.				
1. (a)	Ordinary Rock	CUM	130		
1. (b)	Extra for every additional lift of 1.5 m or part thereof in excavation /banking excavated or stacked materials (up to 3 meter depth)	CUM	20		
2	Filling available excavated earth (including rock) in trenches, plinth, sides of foundations , floor etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	CUM	100		
3	Supplying and filling in plinth with Jamuna sand under floors, including watering, ramming, consolidating and dressing complete.	CUM	10		
4	Providing, diluting and injecting chemical emulsion (Chlorpyriphos/Lindane E.C. 20% with 1% concentration) for anti-termite treatment of under floor soil @ one litre per	SQM	15		

S.No.	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
	<b>SECTION-A EARTH WORK &amp; DEMOLITION</b>				
	hole, 900 mm apart including drilling 1meter deep 12 mm diameter holes and plugging with cement mortar 1 :2 (1 cement : 2 Coarse sand)  Anti-termite treatment shall be got done through a specialized sub-contractor approved by the owner. The contractor shall guarantee against termite for a period of 10 years				
5	Providing and Filling light weight ACC broken blocks /ACC Rubble in toilet sunken floors	CUM	10		
6	Disposal of excess earth/ building rubbish / malba / similar unserviceable, dismantled or waste materials by mechanical means, including loading, transporting, unloading to approved municipal dumping ground, beyond 50 m initial lead, for all leads including all lifts involved.	CUM	100		
7	Demolishing all types of brick work (including plaster paint etc.) manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge.	CUM	15		
8	Demolishing all types flooring including underfloor cement concrete (all mixes) manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in- charge.	CUM	15		
9	Demolishing mud phaska/Brick Coba/ all type of terrace/toilet water proofing and disposal of material within 50 metres lead	CUM	15		
10	Dismantling old plaster/ skirting/ wall tile/cladding raking out joints and cleaning the surface for plaster including disposal of rubbish to the dumping ground within 50 meters lead	SQM	150		

S.No.	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
	<b>SECTION-A EARTH WORK &amp; DEMOLITION</b>				
11	Dismantling doors, windows and clerestory windows of all sizes (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking within 50 meters lead And Making good the opening using cement mortar/plaster as instructed by architect /engineer in charge	Each	5		
11.a	Upto 3 Sqm	Each	30		
11.b	Above 3 Sqm	Each	6		
12	Removal of existing shed outside staff room including all pipes, sheet etc. and stacking all at approved place within the college compound within 200 meter lead:	SQM	80		
	<b>TOTAL AMOUNT OF SECTION - A EARTH WORK</b>				

## **SECTION B: PLAIN & REINFORCED CEMENT CONCRETE AND STRUCTURE**

### **STEEL**

The rates quoted below shall include the following:

1. Making all drips, grooves, moulds, curved surfaces and chamfered edges etc. in concrete and/or plaster work as directed
2. Forming all expansion and/or construction joints as per standard specification and/or as directed.
3. All projections, toothings, ornamental work etc. and finishing to shape as directed.
4. Embedding all electric pipes, fan hook boxes, false ceiling suspensions and inserts of any description etc. in R.C.C slab, beam, walls etc., as directed.
5. Installing a calibrated cube-testing machine at site, getting it calibrated every month and submitting test report to the architects. Alternately getting the cubes tested in an approved lab.
6. Preparing 7 days and 28 days test cube, testing them at site and /or getting tested in an approved laboratory including all fees, costs, transportation etc. relating to them.
7. Providing slump tests apparatus at site and test for checking the workability of concrete.
8. Working up or hacking of concrete surfaces for providing keys for further concrete work including applying thick cement slurry or mortar as directed
9. Providing 12 mm thick cement plaster 1:6 (1 cement: 6 fine sand) and a coat of lime wash on all brick wall surfaces serving as bearing for RCC work.
10. Exposed architectural or ordinary centering, shuttering and formwork, strutting, boxing, propping etc. except wherever specified to exclude in the item. Shuttering to be made water tight with plywood and timber if necessary.
11. Use of shuttering oil as specified
12. Use of cement slurry over shuttering before commencing concreting

13. Machine mixing of all concretes and hoisting to all lifts, carrying to all leads, consolidating by rodding, vibrating, tamping and curing.
14. Sinking of floors in specified areas.
15. Providing of dowel bars wherever directed by the architect/engineer.
16. Forming cutouts, openings and concreting at a later stage as required
17. Providing sleeves for pipes etc. before concreting
18. Working in narrow widths, small quantities and curved alignments etc.
19. Removing rust, mild scales, oil, grease, paint etc. from steel reinforcement.
20. Providing 16 gauge annealed binding wire and binding the reinforcement with the same without any extra cost on the account for labour or material
21. Providing cover to steel with cement concrete briquette spacers at no extra cost.
22. Payment of labour for laying steel as per Indian standard section weights actually placed in position as per design and drawing or as directed
23. The contractor shall not undertake the RCC work including form-work of first floor before laying lean concrete on the lowest floor if so directed by the architect/engineer.
24. Wherever new structural slab/beam is to be connected with the old structural slab/beam, the cost of chipping the necessary old concrete members and re-casting the same is to be included in the item.

S.No.	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
	<b>SECTION-B: Plain &amp; Reinforced Cement Concrete And Structure Steel</b>				
1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level, underfloors, kerbs, steps and the like upto 2 <sup>nd</sup> floor level excluding the cost of centering, shuttering and finishing				
1.a	1:1½:3 (1 Cement: 1½ coarse sand: 3 graded stone aggregate 20 mm nominal size)	CUM	5		
1.b	1:4:8 (1 Cement : 4 coarse sand : 8 graded stone aggregate 40mm nominal size)	CUM	13		
1.c	1:2:4 (1 Cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	CUM	15		
2	<p>Providing and laying water proofing treatment in sunken portion of WCs, bathroom or any other area as required by applying cement slurry mixed with water proofing cement compound consisting of applying :</p> <p>a) Laying first layer with slurry of cement @0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm.</p> <p>b) Laying second layer with fiber glass cloth when the first layer is still green. Overlaps of joints of fiber glass cloth should not be less than 10 cm. evenly with overlapping joints</p> <p>c) Laying third layer of 1.5 mm thickness consisting of slurry of cement @ 1.289 kg/sqm mixed with water proofing cement compound @ 0.670 kg/sqm and coarse sand @ 1.289 kg/sqm.</p> <p>d) The entire treatment will be taken upto 30 cm on side wall and tucked into groove in side walls all around</p> <p>The third layer will be allowed to air cure for 4 hours followed with water curing for 48 hours. The rate includes preparation of surface, treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry and fiber glass cloth. For the purpose of measurement the entire treated surface will be measured</p>	SQM	40		

S.No.	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
	<b>SECTION-B: Plain &amp; Reinforced Cement Concrete And Structure Steel</b>				
3	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge.  (Note: - Cement content considered in this item is @ 330 kg/cum. Excess/ less cement used as per design mix is payable/recoverable separately).				
3.a	All works up-to plinth level.	CUM	30		
3.b	All works above plinth level up-to floor VI level.	CUM	45		
4	Steel reinforcement for R.C.C. Work including straightening, cutting, bending, placing in position and binding all complete up-to all levels (Tata/Sail)				
4.a	Thermo-Mechanically Treated bars.	MT	9		
5	Centering and shuttering including strutting, propping etc. and removal of form for all works at all levels:				
5.a	Foundations, footings, bases of columns, etc. For mass concrete.	SQM	150		
5.b	Suspended floors, roofs, landings, balconies and access platform	SQM	50		
5.c	Lintels, beams, plinth beams, girders, bressumers and cantilevers.	SQM	50		



S.No.	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
	<b>SECTION-B: Plain &amp; Reinforced Cement Concrete And Structure Steel</b>				
5.d	Columns, Pillars, Piers, Abutments, Posts and Struts.	SQM	100		
5.e	Edges of slabs and breaks in floors and walls under 20 cm wide	meter	100		
6	Structure steel work : Preparing shop drawings, obtaining consultant's approval, supplying, fabricating, delivering at site, hoisting and fixing in position including all temporary staging and supporting work and making all structural steel work in accordance with the design, drawings prepared by the consultants. the rate of steel work shall include 1 coat of red oxide primer and 2 coats of enamel paint assembly, welding, jointing, building up new sections using plates / rolled section,/chs/rhs cost of fasteners , nuts, bolts and washers), pre-heating the sections to temperatures up to 250°C if thickness of the section is equal to or more than 25mm.and fabrication out of the following types of structural steel material for trusses, purlins, girders, brackets, etc. with connections using plates, channels and angles, gusset plate, connection bolts, cleats, fasteners etc. as per drawing, steel conforming to IS:226 and IS:2062-Gr.A with minimum yield strength of 335 Mpa for plates. (Fasteners,welding electrodes, consumables will not be paid separately. Rates inclusive of necessary tests as per technical specification)				
6.a	For Deck slab, roof extension including columns, trusses, purlins, extension of existing members , site welding etc as required at site	TON	25		
6.b	Providing & Fixing in position Metal Decking Sheets ( Pennar/ CRIL Deckspan/ Tata Bluscope/ inter arch roofing/ raj mohan) roofing 1.0 mm thk @ minimum 10.34 kg per sq.m for supporting RCC Slab (permanent shuttering) including edge trims cutting,	KG	3000		

S.No.	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
	<b>SECTION-B: Plain &amp; Reinforced Cement Concrete And Structure Steel</b>				
	trimming, fixing, leak proofing of joints etc. complete.				
7	Rebarring by using various diameter 12mm to 25mm. Dia, hilti make chemical (Re-500) max. depth 300 mm.	Each	50		
8	Providing & fixing in position 12mm thk. of Shalitek board at various joints such as isolation joints at wall edge, and column junctions and sealing with Winsil-20 neutral base sealant manufactured by GE Silicon , as per manufacturer's requirements ,etc. complete,	SQM	5		
9	Providing & fixing in position flashing at the junction of roof sheet and existing wall	RMT	15		
10	Providing & fixing Hilti make anchor bolts (mechanical)	KG	20		
	<b>TOTAL AMOUNT OF SECTION B: PLAIN AND REINFORCED CEMENT CONCRETE</b>				

## **SECTION C MASONRY WORK**

The rates quoted shall include the following:

1. Work in English bond or any other design as directed by the architect/engineer incharge.
2. Work in square round and rectangular pillars, flower troughs, under floor drains, making curved and tapered surfaces steps etc.
3. Forming openings, chases, grooves etc.
4. Embedding/ cutting chases for conduits, boxes other fixture of any descriptions, hold fasts of doors,
5. Fixing Windows glazing etc.,
6. Making all drip courses, projected courses of any description, offsets, setbacks, corbels, architrave's or any other feature of description.
7. Raking out joints for plastering or pointing in plinth super structure or finishing joints flush in foundation as directed
8. Bonding with RCC work
9. Work in narrow widths, small quantities etc. supplying moulds, taking briquettes, getting tested, any fees, costs etc., relating to the same.
10. Machine mixing of mortars
11. Curing of brick work
12. Preparing bricks for testing (efflorescence, water absorption, crushing strength, shapes, sizes etc.) in the field laboratory and or an approved laboratory, and any fees, costs etc. relating to them.

<b>S.No.</b>	<b>DESCRIPTION OF ITEM</b>	<b>UNIT</b>	<b>QTY</b>	<b>RATE</b>	<b>AMOUNT</b>
	<b>SECTION-C MASONRY WORK</b>				
1	Brick work with common burnt clay selected F.P.S. (non-modular) bricks of class designation 7.5 in exposed brick work including making horizontal and vertical grooves 10 mm wide 12 mm deep complete in cement mortar 1:6 (1 cement : 6 coarse sand)				
1.a	A) Above plinth level upto floor V level	CUM	70		
2	Half brick masonry with common burnt clay F.P.S. (non-modular) bricks of class designation 7.5 in superstructure above plinth level up to floor VI level				
2.a	Cement mortar 1:4 (1 cement :4 coarse sand)	SQM	30		
3	Extra for providing and placing in position 2 Nos. 6mm dia. M.S. bars at every third course of half brick masonry.	SQM	30		
4	Brick work with common burnt clay F.P.S. (non-modular) bricks of class designation 7.5 in foundation and plinth in: Cement mortar 1:6 (1 cement : 6 coarse sand)	CUM	6		
	<b>TOTAL AMOUNT OF SECTION-C MASONRY WORK</b>				

## **SECTION D: ALUMINIUM , GLASS AND WOOD WORK**

The rates quoted below shall include the following

1. Providing and fixing all flush door shutters of M/S DURO/GREEN/VIRGO/CENTURY make with 18mm teakwood lipping on all edges.
2. Kiln seasoning and termite proofing of all timber work
3. Providing so-lignum paint to hidden faces of timber work
4. The frames for doors, windows, AC openings or any other frame shall be measured for finished dimensions. The length of projections for tenons etc. shall not be measured for payment.
5. Providing heavy quality SS hardware fittings and fixtures which shall be included in the rates of the shutters as per details below
  - a. single door shutter
  - b. i) Butt hinges 100 mm long 4.00 No.
  - c. ii) Stainless Steel Handles 200 mm long 2.00 No.
  - d. iii) Door stopper 1.00 No.
  - e. double door shutter
  - f. i) Butt hinges 100 mm long 8.00 No.
  - g. ii) Stainless Steel Handles 200 mm long 4.00 No.
  - h. iii) Door stopper 2.00 No.
6. The rate shall include spirit polish for all exposed wood work and veneer finishes unless specified otherwise.
7. All items for wood work shall be got approved by the architects before applying primer coat
8. Areas of door and windows shutters shall be measured in closed position covering the rebates of the frame. Overlap of two shutters shall not be measured. The width and height of shutters shall be measured correct to one centimeter within frame rebates
9. Teak ply to be fixed to base cladding/commercial board with group matching
10. All block board and ply shall be used of BWP grade, termite and “powder beetles” proof.

11. Supplying and fixing of M.S. frames in the openings with lugs 16 mm x 3.15 mm x 10 cms long in cement concrete 1:3:6 (1 cement: 3 coarse sand: 6 graded stone aggregate 20 mm nominal size) blocks of size 15 x10 x 10 cms or with wooden plugs and screws or with rawl plugs and screws or with clips or with bolts and nuts as required.
12. Supplying and fixing of approved quality of heavy anodised aluminium hardware fittings.
13. Supplying and fixing approved heavy quality oxidized M.S. Hardware fittings to steel glazed windows/doors as per drawing.
14. Painting all M.S. Works with a coat of red oxide primer.
15. Providing necessary couplings, transom and mullions wherever required.
16. Providing mastic compound at junction of window or glazing frames with openings to make the joint water tight and for embedding mullions.
17. Minimum thickness of glass to be used in glazing to be 5.5 mm unless otherwise specified.
18. Contractor shall provide full shop drawings for Wood work, Steel Work and Aluminum doors, windows and partitions with full details of Aluminum sections and joinery for approval from architect/ engineer in charge before proceeding with procurement of materials or starting of these works at the site.

S.No.	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
	<b>SECTION -D: ALUMINIUM, GLASS AND WOOD WORK</b>				
1	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia & length (Hold Fast/ Fastner payable extra)				
1.a	Second Class Teak Wood	CUM	0.25		
2	Providing and fixing ISI marked flush <b>door shutters</b> conforming to IS: 2202 (Part I) non-decorative type, core of block board construction with frame of 1st class hard wood and well matched commercial				

S.No.	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
	<b>SECTION -D: ALUMINIUM, GLASS AND WOOD WORK</b>				
	3 ply veneering with vertical grains or cross bands finished with <b>1mm thick Laminate on both faces of shutter : (Flush door only of Duro/Green/Century/Virgo make and laminate only of Merino, Sundek, Century, Duro make)</b>				
2.a	35 mm thick including ISI marked 3 no.s 4 inch long Heavy Duty Stainless Steel butt hinges with necessary SS screws complete	SQM	9		
2.b	Extra for providing melamine polish finished C.P. teakwood lipping size 35mmx 25 mm size on all four edges of flush door shutters (over all area of door shutter to be measured).	SQM	9		
2.c	Providing/fixing 5.5 mm thick fixed plain glass panel in ventilator above door including 18mm x 18mm teakwood beading (melamine polished finished complete including nails etc.)	SQM	4		
2.d	Extra for providing <b>vision panel</b> 150mm x 250mm in all type of flush doors (including providing fixing of 5.5 mm thk. Glass with melamine polished teakwood mouldings )	Each	4		
3	Providing 40x5 mm flat iron <b>hold fast</b> 40 cm long including fixing to wooden frame with 10 mm diameter bolts, nuts and wooden plugs and embedding in cement concrete block 30x10x15cm 1:3:6 mix (1 cement : 3 coarse sand:6 graded stone aggregate 20mm nominal size).	Each	24		
4	Providing and fixing bright finished heavy duty SS <b>tower bolts</b> (barrel type) with necessary SS screws etc. complete (Only Dorma/Dorset/Hafle/Hettich Make)				
4.a	250x10 mm	EACH	8		

S.No.	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
	<b>SECTION -D: ALUMINIUM, GLASS AND WOOD WORK</b>				
5	Providing and fixing bright finished Heavy duty SS <b>AL drop</b> with necessary SS screws etc. complete :				
5.a	300x16x5 mm	EACH	8		
6	Providing and fixing bright finished Heavy duty SS 304 Grade <b>handles</b> with SS screws etc. complete:				
6.a	Dorset SOP 12" SS ( 300mm Pull) Handle (Or equivalent in Godrej, Golden locks, Dorma, Hettich)	PAIR	4		
7	Providing and fixing aluminium extruded section body tubular type universal hydraulic <b>door closer</b> (having brand logo with ISI, IS : 3564, embossed on the body, door weight upto 36 kg to 80 kg and door width from 701 mm to 1000 mm), with double speed adjustment with necessary accessories and screws etc. complete. (Only of Godrej/Hettich/Dorset/Dorma)	EACH	4		
8	Providing and fixing melamine polished wooden moulded corner beading of triangular shape to the junction of door chowkhats, paneling etc. with all necessary nails /screws, plugs etc. complete using 2nd class teak wood.				
8.a	50x50 mm (base and height)	metre	25		
9	Providing and fixing circular/ Hexagonal cast iron or M.S. sheet box for ceiling <b>fan clamp</b> , of internal dia 140 mm, 73 mm height, top lid of 1.5 mm thick M.S. sheet with its top surface hacked for proper bonding, top lid shall be screwed into the cast iron/ M.S. sheet box by means of 3.3 mm dia round headed screws, one lock at the corners. Clamp shall be made of 12 mm dia M.S. bar bent to shape as per standard drawing.	EACH	25		



S.No.	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
	<b>SECTION -D: ALUMINIUM, GLASS AND WOOD WORK</b>				
10	Providing and fixing MS railing with CP Teakwood wood handrail matching in size and cross section with the existing railing design in the library complete including primer & painting of MS railing and polishing of teakwood Handrail with 2 coats of matt finish melamine polish complete	RMT	33		
11	Repair and Re-polishing of existing Wooden hand rail in the library (after removing the old polish and re-polishing in the desired tone ) with 2 coats of matt finish melamine polish And Giving a fresh coat of enamel paint of the approved colour and shade to the M.S. work in the railing	RMT	44		
12	Providing and fixing aluminium work for doors, windows, ventilators 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, (Jindal/ Hindalco make only) including fixing with Hilti dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including Hilti dash fasteners, cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling to be paid for separately) :				
12.a	<b>For fixed portion</b>				
12.a.1	Powder coated aluminium (minimum thickness of powder coating 50 micron)( minimum 2mm thick aluminum section of Jindal/Hindalco only)	KG	800		

S.No.	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
	<b>SECTION -D: ALUMINIUM, GLASS AND WOOD WORK</b>				
12.b	For <b>shutters</b> of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber /neoprene gasket etc. complete (minimum 2mm thick aluminum section of Jindal/Hindalco only)				
12.b.1	Powder coated aluminium (minimum thickness of powder coating 50 micron)	KG	900		
13	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-in-charge.(Cost of aluminium snap beading shall be paid in basic item):				
14.a	With float glass panes of 5.50 mm thickness	SQM	70		
14.b	With frosted glass panes of 5.5 mm thickness	SQM	10		
15	Providing and fixing both side decorative 12 mm thick pre-laminated particle board flat pressed three layer or graded wood particle board conforming to IS: 12823 Grade 1 Type II, in panelling fixed in aluminum doors, windows shutters and partition frames with C.P. brass / stainless steel screws etc. complete as per architectural drawings and directions of engineer-in-charge.	SQM	25		
16	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 6 mm thick hard board backing				
16.a	Rectangular Shape with mirror glass size : 450 mm x 750 mm	Each	4		

S.No.	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
	<b>SECTION -D: ALUMINIUM, GLASS AND WOOD WORK</b>				
17	Providing and fixing double action hydraulic <b>floor spring</b> of approved brand and manufacture conforming to IS : 6315, having brand logo embossed on the body / plate with double spring mechanism and door weight upto 125 kg, for doors, including cost of cutting floors, embedding in floors as required and making good the same matching to the existing floor finishing and cover plates with brass pivot and single piece M.S. sheet outer box with slide plate etc. complete as per the direction of Engineer-in-charge.				
18.a	With brass cover plate minimum 1.25 mm thickness	EACH	4		
19	Filling the gap in between aluminium frame & adjacent RCC/ Brick/ Stonework by providing weather silicon sealant over backer rod of approved quality as per architectural drawings and direction of Engineer-in-charge complete.				
19.a	Upto 5mm depth and 5 mm width	metre	100		
20	Providing and fixing stainless steel (SS 304 grade) adjustable friction windows stays of approved quality with necessary stainless steel screws etc. to the side hung windows as per direction of Engineer-in-charge complete				
20.a	255 x 19 mm	Each	24		
21	Providing and fixing 150mm brass handle and lock (Only Godrej/ Victory/ Kodia/ Laxmi make) for aluminium doors including necessary SS Screws, cutting and making good etc. complete. (1 Set includes 2 Handles and One Lock and Keys)	SET	8		
22	Providing and fixing Frameless Doors with S/S Patch fitting consisting of 12mm thick clear toughened glass with DORMA (PT Standard)/ECKELT/AUSTVISION. Patch fittings such as PT-91 Corner Connector, PT-20-Top patch,PT-10-Bottom Patch, PT 30	Sqm	8.4		

S.No.	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
	<b>SECTION -D: ALUMINIUM, GLASS AND WOOD WORK</b>				
	Over panel patch, US 10 Corner Lock with EPC, Lock keeper plate, 'H' Pull Handle TGDI-H-450 (450mm*25mm) and Floor spring Dorma BTS75V confirming to DIN EN1154 with adjustable spring strength EN(1-4), Leaf weight upto 120kg. The above work complete in all respect as per approved drawings and to the satisfaction of Engineer-in-Charge/ Architect Consultant. The above work complete in all respect as per approved drawings and to the satisfaction of Engineer-in-Charge / Architect Consultant.				
23	Providing and fixing 12 mm thick frameless toughened glass partition of approved brand and manufacture, fixed in 25mm clip in aluminium U channel including perimeter sealing of glass to glass joints with silicon sealants. The above work complete in all respect as per approved drawings and to the satisfaction of Engineer-in-Charge / Architect Consultant.	Sqm	27		
24	Providing and fixing of frosted film pasted on toughened glass upto 4'-6" height (3M Make )	Sqm	20		
25	Providing, assembling and supplying and fixing vision glass panels (IGUs) comprising of hermetically-sealed 6-12- 6 mm insulated glass (double glazed) vision panel units of size and shape as required and specified, comprising of an outer heat strengthened float glass 6mm thick, of approved colour and shade with reflective soft coating on surface # 2 of approved colour and shade, an inner Heat strengthened clear float glass 6mm thick, spacer tube 12mm wide, dessicants, including primary seal and secondary seal (structural silicone sealant) etc. all complete for the required performances, as per the Architectural drawings, as per the approved shop drawings, as specified and as directed by the Engineer-in-Charge.	Sqm	10		

S.No.	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
	<b>SECTION -D: ALUMINIUM, GLASS AND WOOD WORK</b>				
	Coloured tinted float glass 6mm thick substrate with reflective soft coating on face # 2, + 12mm Airgap + 6mm Heat Strengthened clear Glass of approved make having properties as visible Light transmittance (VLT) of 25 to 35 %, Light reflection internal 10 to 15%, light reflection external 10 to 20 %, shading coefficient (0.25- 0.28) and U value of 3.0 to 3.3 W/m2 degree K etc. The properties of performance glass shall be decided by technical sanctioning authority as per the site requirement.				
	<b>TOTAL AMOUNT OF SECTION D : JOINERY, ALUMINIUM , WOOD AND STEEL WORK</b>				

## **SECTION E (FLOORING)**

The rates quoted below shall include the following

1. Cleaning and final preparation of base, sub-grade or sub floor by trimming undulations etc., including applying neat cement slurry.
2. Laying floors to required slope in any size and shape of panels and strips of any description.
3. Making “V” grooves of any pattern in plaster and dados including rounding off junctions with floors.
4. Baroda/Kota stone slabs or tiles in floors, treads and risers, of steps, skirting, wall cladding etc., shall be machine cut of sizes as per approved samples and shall be laid and fixed as per pattern shown on the drawing
5. Cutting holes in stone for treads of steps for fixing staircase-railing balustrades.
6. Cleaning paint splashes, drops or dirt, glasses, joinery, electric fittings, wiring etc., including washing the floors and leaving the premises neat and clean.
7. Edge polishing to stone slabs and tiles shall not be paid separately.
8. Grinding and polishing shall be blade edge granite polish to all marble and granite.
9. Measurement shall be as per drawing.

S.No.	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
	<b>SECTION -E FLOORING</b>				
1	Providing and fixing 18 mm thick gang saw cut, mirror polished, pre-moulded and pre-polished, machine cut for kitchen platforms, vanity counters, window sills , facias and similar locations of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels.				
1.a	Granite of any color and shade (Basic cost Rs. 90 per sqft)				
1.a .i	Area of slab upto 0.50 sqm	SQM	10		
1.a .ii	Area of slab over 0.50 sqm  (Library Staircase treads and risers to be joint-less single piece granite with chamfered edges and 3no.s non-slip grooves)	SQM	100		
2	Providing edge molding to 18 mm thick marble stone counters, Vanities etc., including machine polishing to edge to give high gloss finish etc. complete as per design approved by Engineer-in-Charge.				
2.a	Granite work	RMT	100		
3	Extra for providing opening of required size & shape for wash basin/ kitchen sink in kitchen platform, vanity counter and similar location in marble/Granite/stone work, including necessary holes for pillar taps etc. including molding, rubbing and polishing of cut edges etc. complete.	EACH	5		
4	Mirror polishing on marble work/Granite work/stone work where ever required to give high gloss finish complete.	SQM	100		

S.No.	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
	<b>SECTION -E FLOORING</b>				
5	Cement concrete pavement with 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size), including finishing complete.	CUM	10.00		
6	Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab, including rubbing and polishing complete with base of cement mortar 1 : 4 (1 cement : 4 coarse sand) :				
6.a	25 mm thick	SQM	300		
7	Kota stone slabs 20 mm thick in risers of steps, skirting, dado and pillars laid on 12 mm (average) thick cement mortar 1:3 (1 cement: 3 coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing and polishing complete.	SQM	10		
8	Providing and fixing Ist quality ceramic glazed wall tiles conforming to IS:15622 (thickness to be specified by the manufacturer), of approved make, in all colors, shades and of any size as approved by Engineer-in-Charge, in skirting, risers of steps and dados, over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm, including pointing in white cement mixed with pigment of matching shade complete. Basic cost of tile Rs. 60/- per sqft	SQM	50		
9	Providing and laying rectified Glazed Ceramic floor tiles of size 300x300mm or more (thickness to be specified by the manufacturer), of 1st quality conforming to IS : 15622, of approved make, in all colors, laid on 20 mm thick cement mortar 1:4 (1 Cement: 4 Coarse sand), including grouting the joints with white cement and matching pigments etc., complete. Basic cost of tile Rs. 60/- per sqft	SQM	20		



S.No.	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
	<b>SECTION -E FLOORING</b>				
10	Providing and laying vitrified floor tiles in different sizes (thickness to be specified by the manufacturer) with water absorption less than 0.08% and conforming to IS : 15622, of approved make, in all colors and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand), including grouting the joints with white cement and matching pigments etc., complete. Basic cost of tile Rs. 60/- per sqft				
10.a	Size of Tile 600x600 mm	SQM	300		
11	Providing and laying Vitrified tiles in different sizes (thickness to be specified by manufacturer), with water absorption less than 0.08 % and conforming to I.S. 15622, of approved make, in all colors & shade, in skirting, riser of steps, over 12 mm thick bed of cement mortar 1:3 (1 cement: 3 coarse sand), including grouting the joint with white cement & matching pigments etc. complete. Basic cost of tile Rs. 60/- per sqft				
11.a	Size of Tile 600x600 mm	SQM	20		
	<b>TOTAL AMOUNT OF SECTION -E FLOORING</b>				

## **SECTION F ( ROOFING )**

The rates quoted shall include the following:

1. Cleaning and final preparation of base for laying water proofing
2. Making ridges and valleys over terrace finished surface true in line and slope as per drawing
3. All items of terracing shall be as per CPWD specifications
4. Keeping the roof clean and protecting the terrace water proofing form any damage during progress of work at site

<b>S.N o.</b>	<b>DESCRIPTION OF ITEM</b>	<b>UNIT</b>	<b>QTY</b>	<b>RATE</b>	<b>AMOUNT</b>
	<b>SECTION F: ROOFING</b>				
1	Providing gola 75x75 mm in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 stone aggregate 10mm and down gauge) including finishing with cement mortar 1:3 (1 cement : 3 fine sand) as per standard design :				
1.a	In 75x75mm deep chase	Metre	55		
2	Making khurras 45x45 cm with average minimum thickness of 5 cm cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm nominal size) over P.V.C. sheet 1m x 1m x 400 micron, finished with 12mm cement plaster 1:3 (1 cement :3 coarse sand) and a coat of neat cement, rounding the edges and making and finishing the outlet complete.	EACH	6		
3	Providing and Fixing 15 mm thick densified tegular edged eco- friendly light weight calcium silicate false ceiling tiles of approved texture spintone/ cosmos / Hexa or equivalent of size 595 x 595 mm in true horizontal level, suspended on inter locking metal grid of hot dipped galvanised steel sections (galvanising @ 120 grams per sqm including both side) consisting of main 'T' runner suitably spaced at joints to get required length and of size 24x38 mm made from 0.33 mm thick (minimum) sheet, spaced 1200 mm centre to centre, and cross "T" of size 24x28 mm made out of 0.33	SQM	450		

S.N o.	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
	<b>SECTION F: ROOFING</b>				
	<p>mm (Minimum) sheet, 1200 mm long spaced between main 'T' at 600 mm centre to centre to form a grid of 1200x600 mm and secondary cross 'T' of length 600 mm and size 24 x28 mm made of 0.33 mm thick (Minimum) sheet to be inter locked at middle of the 1200x 600 mm panel to form grid of size 600x600 mm, resting on periphery walls /partitions on a Perimeter wall angle pre-coated steel of size(24x24X3000 mm made of 0.40 mm thick (minimum) sheet with the help of rawl plugs at 450 mm centre to centre with 25 mm long dry wall screws @ 230 mm interval and laying 15 mm thick densified edges calcium silicate ceiling tiles of approved texture (Spintone / Cosmos/hexa) in the grid, including, cutting/ making opening for services like diffusers, grills, light fittings, fixtures, smoke detectors etc., wherever required. Main 'T' runners to be suspended from ceiling using G.I. slotted cleats of size 25x35x1.6 mm fixed to ceiling with 12.5 mm dia and 50 mm long dash fasteners, 4 mm G.I. adjustable rods with galvanised steel level clips of size 85 x 30 x 0.8 mm, spaced at 1200 mm centre to centre along main 'T', bottom exposed with 24 mm of all T sections shall be pre-painted with polyester baked paint, for all heights, as per specifications, drawings and as directed by engineer-in-charge.</p> <p>Note :- Only calcium silicate false ceiling area will be measured from wall to wall. No deduction shall be made for exposed frames/opening (cut outs) having area less than 0.30 sqm. The calcium silicate ceiling tile shall have NRC value of 0.50 (Minimum), light reflection &gt; 85%, non-combustible as per B.S. 476 part IV, 100% humidity resistance and also having thermal conductivity &lt;0.043 w/m 0 KC.</p> <p>Contractor will get approved samples and makes of all the items from the architect before execution of item</p>				

S.N o.	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
	<b>SECTION F: ROOFING</b>				
4	<p>Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following Operations: a) Applying a slurry coat of neat cement using 2.75 kg/sqm of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300 mm height including cleaning the surface before treatment. b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115 mm size with 50% of cement mortar 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement :5 coarse sand ) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs c) After two days of proper curing applying a second coat of cement slurry using 2.75 kg/sqm of cement admixed jointless cement mortar of mix 1:4 (1 cement :4 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge including laying glass fibre cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3 mm deep. e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. All above operations to be done in order and as directed and specified by the Engineer in-Charge :</p>				
4.a	With average thickness of 120 mm and minimum thickness at khurra as 65 mm.	SQM	160		
	<b>TOTAL AMOUNT OF SECTION - F ROOFING</b>				

## **SECTION G ( FINISHING )**

The rates quoted below shall include the following:

1. Cleaning and final preparation of base, sub-grade or sub-floors by trimming undulations etc. including applying neat cement slurry.
2. Raking out, joints, cleaning the surface, application of cement slurry and providing and fixing 300 mm wide 24 gauge chicken mesh tightly secured at the junctions of brickwork and RCC work, electrical conduits, plumbing conduits before applying plaster skirting and dados treatment.
3. Work in patches, narrow widths, small quantities, curved surfaces, projected bands, set backs, offsets corbels, architrave's etc.
4. Repairing and finishing the junctions of skirting and dados with plaster
5. Finishing the edge of electrical fittings and boxes etc.
6. Use of scaffolding, cradles etc., dust sheets and other coverings for the protections of fixtures, fittings, furniture, floors etc.
7. Junctions of all RCC and brick shall be provided with chicken wire mesh of 150 mm width on either side of the junction before plastering.

S.No.	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
	<b>SECTION-G ( FINISHING )</b>				
1	12 mm cement plaster of mix  (Junctions of all RCC and brick shall be provided with chicken wire mesh of 150 mm width on either side of the junction before plastering)				
1.a	1:3:3 (1 cement: 3course sand: 3 fine sand)	SQM	300		
2	20 mm cement plaster of mix :  (Junctions of all RCC and brick shall be provided with chicken wire mesh of 150 mm width on either side of the junction before plastering)				
2.a	1:3:3 (1 cement: 3course sand: 3 fine sand)	SQM	70		
3	6mm cement plaster to ceiling of mix 1:3 (1cement:3fine sand)				
3.a	1:3 (1 cement: 3 fine sand)	SQM	10		
4	Repairs to plaster of thickness 12 mm to 20 mm in patches of area 2.5 sq.meters and under, including cutting the patch in proper shape, raking out joints and preparing and plastering the surface of the walls complete, including disposal of rubbish to the dumping ground within 50 metres lead : in cement plaster 1:4 ( 1 cement : 2 fine sand : 2 coarse sand)	SQM	100		
5	<b>External painting works:</b> External painting works at all heights and levels as per procedure mentioned including  1) Surface preparation (scrapping, sanding, cleaning) 2) A liberal coat of Wall Primer as per manufacturers specification 3) Painting 2 or more coats of Exterior Weather Proof Paint in various colors (Asian/ ICI /Shalimar/ Berger/ Nerolac)	SQM	100		

S.No.	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
	<b>SECTION-G ( FINISHING )</b>				
	<p>4) Horizontal surfaces like the tops of chajjas and parapets must be given an additional coat for greater protection</p> <p>Contractor's scope includes all materials, tools &amp; plants, paint brushes &amp; rollers of approved makes, ropes, lifts, ladders, safety equipment and all other equipment's as may be required to complete the works successfully. (The rates include all labour, materials and items of work required to complete the work successfully up to the satisfaction of the owner</p>				
6	<p><b>Internal painting works:</b> Internal painting works at all heights and levels as per procedure mentioned including</p> <p>1) Surface preparation (scrapping, sanding, cleaning)</p> <p>2) One coat of Wall Primer as per manufacturers specification</p> <p>3) Coat of White cement based putty (JK/BIRLA)</p> <p>4) One liberal coat of wall primer over wall putty</p> <p>5) Painting 2 or more coats of Premium acrylic emulsion of interior grade, having VOC content less than 50 grams/ litre in various colors (Asian/ ICI /Shalimar/ Berger/ Nerolac)</p> <p>Contractor's scope includes all materials, tools &amp; plants, paint brushes &amp; rollers of approved makes, ropes, lifts, ladders, safety equipment's, scaffolding and all other equipment's as may be required to complete the works successfully. (The rates include all labour, materials and items of work required to complete the work successfully up to the satisfaction of the owner)</p>	SQM	1500		
7	<p>Melamine polishing of Woodwork Chowkhats : Including sanding, filling, base preparation, staining in the desired shade, machine coating</p>	Meter	24		

<b>S.No.</b>	<b>DESCRIPTION OF ITEM</b>	<b>UNIT</b>	<b>QTY</b>	<b>RATE</b>	<b>AMOUNT</b>
	<b>SECTION-G ( FINISHING )</b>				
	in matt finish with 2 or more coats and machine buffing to achieve the desired finish				
8	Providing and fixing double scaffolding system (cup lock type) on the exterior side and interior side, up to seven story height made with 40 mm dia M.S. tube 1.5 m centre to centre, horizontal & vertical tubes joining with cup & lock system with M.S. tubes, M.S. tube challies, M.S. clamps and M.S. staircase system in the scaffolding for working platform etc. and maintaining it in a serviceable condition for the required duration as approved and removing it there after .The scaffolding system shall be stiffened with bracings, runners, connection with the building etc wherever required for inspection of work at required locations with essential safety features for the workmen etc. complete as per directions and approval of Engineer-in-charge .The elevational area of the scaffolding shall be measured for payment purpose .The payment will be made once irrespective of duration of scaffolding.	SQM	600		
	<b>TOTAL AMOUNT OF SECTION – G FINISHING</b>				



**SECTION H – SAFTEY, PAVING AND HANDICAP ACCESS**

S.No.	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
	<b>SECTION - H : SAFTEY, PAVING AND HANDICAP ACCESS</b>				
1	Providing and laying factory made colored chamfered edge Cement Concrete paver blocks of required strength, thickness & size/shape, made by table vibratory method using PU mould, laid in required colour & pattern over 50mm thick compacted bed of fine sand, compacting and proper embedding/laying of inter locking paver blocks into the sand bedding layer through vibratory compaction by using plate vibrator, filling the joints with jamuna sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand in footpath, parks, lawns, drive ways or light traffic parking etc. complete as per manufacturer's specifications & direction of Engineer-in-Charge. 60mm thick C.C. paver block of M-35 grade with approved colour, design & pattern.	SQM	150		
2	Providing and erecting 2.00 metre high temporary barricading at site as per drawing/direction of Engineer-in-Charge which includes writing and painting, arrangement for traffic diversion such as traffic signals during construction at site for day and night, glow lamps, reflective signs, marking, flags, caution tape as directed by the Engineer-in- Charge. The barricading provided shall be retained in position at site continuously i/c shifting of barricading from one location to another location as many times as required during the execution of the entire work till its completion. Rate include its maintenance for damages, painting, all incidentals, labour materials, equipments and works required to execute the job. The barricading shall not be removed without prior approval of Engineer-in-Charge. (Note: - Onetime payment shall be made for providing barricading from start of work till completion of work i/c shifting. The barricading provided shall remain to be the property of the contractor on completion of the	metre	100		

S.No.	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
	<b>SECTION - H : SAFTEY, PAVING AND HANDICAP ACCESS</b>				
	work).				
3	Providing and laying tactile tile (for vision impaired persons as per standards) of size 300x300x9.8mm having with water absorption less than 0.5% and conforming to IS: 15622 of approved make in all colours and shades in for outdoor floors such as footpath, court yard, multi modals location etc., laid on 20mm thick base of cement mortar 1:4 (1cement : 4 coarse sand) in all shapes & patterns including grouting the joints with white cement mixed with matching pigments etc. complete as per direction of Engineer-in-Charge.	SQM	25		
	<b>TOTAL AMOUNT OF SECTION - H SAFTEY, PAVING AND HANDICAP ACCESS</b>				

<b>SUMMARY OF PART I : CIVIL WORKS</b>		
<b>S.NO.</b>	<b>DESCRIPTION</b>	<b>AMOUNT</b>
<b>1</b>	<b>SECTION A : EARTH WORK</b>	<b>Rs.</b>
<b>2</b>	<b>SECTION B : PLAIN AND REINFORCED CEMENT CONCRETE</b>	<b>Rs.</b>
<b>3</b>	<b>SECTION C : MASONARY WORK</b>	<b>Rs.</b>
<b>4</b>	<b>SECTION D : ALUMINIUM , GLASS AND WOOD WORK</b>	<b>Rs.</b>
<b>5</b>	<b>SECTION E : FLOORING</b>	<b>Rs.</b>
<b>6</b>	<b>SECTION F : ROOFING</b>	<b>Rs.</b>
<b>7</b>	<b>SECTION G : FINISHING</b>	<b>Rs.</b>
<b>8</b>	<b>SECTION H : SAFTEY, PAVING AND HANDICAP ACCESS</b>	<b>Rs.</b>
	<b>TOTAL AMOUNT OF PART I: CIVIL WORKS</b>	<b>Rs.</b>

**Approved Make Of Materials**

(applicable wherever the make is not listed in the item)

**Civil Works**

<b>Serial No.</b>	<b>Materials</b>	<b>Manufacturer</b>
1)	Commercial Ply And Commercial Board	Duro, Green, Virgo
2)	Teak Ply	Duro, Green, Virgo
3)	Laminate	Greenlam, Decolam, Virgo, Merino
4)	Mirror	Modigaurd, Saint Gobain
5)	Glass	Modi Float, Saint gobain
6)	Flush Door Shutters	Duro, Green, Virgo, Sitapur, Mysore (First Quality) Or Equivalent
7)	Paints	Nerolac, I.C.I, Asian
8)	Mortice Latches And Locks	Godrej, Dorset, Hardwyn
9)	Coarse Sand	As Per Is:383 (Latest Edition) Approved Quarry Or Equivalent
10)	Fine Sand	Do
11)	Stone Aggregate	Do
12)	Aluminum Section	Indal Or Jindal (Heavy Quality) Or Equivalent
13)	Wall and Floor Tiles	Orient, Kajaria, Nitco, Bell, Regency Or Equivalent
14)	Mdf Board	Green Panel Max
15)	Hinges-Ms Oxidised	Heavy Duty
16)	Tower Bolt-Aluminium	Do
17)	Door Stopper-Aluminium	Do
18)	L-Drop – Aluminium	Do
19)	Handle- Aluminium	Do
20)	Pvc Strips/ Hand Rail	Fixo Pan Or Equivalent
21)	Cement	Ultratech, L&T, Ambuja
22)	Steel	Tata, Sail

## PART II - ELECTRICAL WORKS

SNO	DESCRIPTION OF ITEM	UNIT	QTY.	RATE	AMT
	<b>(ELECTRICAL WORKS )</b>				
	<b>SUBHEAD-1</b>				
<b>1</b>	<b>POINT WIRING (Copper wire in PVC conduit)</b>				
1.1	Wiring for Light point/ Fan point/ Exhaust Fan point/ Call Bell point with 1.5 sq.mm FR PVC insulated Copper Conductor Cable in surface/ recessed PVC conduit with modular type switch, modular plate, suitable size PVC/G.I. box etc. as required.(Group-C)	Point	71		
1.2	Wiring for looping light point with 1.5 sq.mm FR PVC insulated Copper Conductor Cable in surface/ recessed PVC Conduit without modular switch, plate & box ( controlled by first switch of item 1.1 as above.	Point	76		
1.3	Wiring for twin controlled Light point with 1.5 sq.mm FR PVC insulated Copper Conductor Cable in surface/ recessed PVC Conduit with 2 way modular type switch, modular plate, suitable size PVC/G.I. box etc. as required.(Stair case)	Point	8		
1.4	Wiring for light plug point with 1.5 Sq.mm FR PVC insulated copper conductor single core Cable in recessed / surface PVC conduit along with 1 no. 1.5 sq. mm copper conductor wire for loop earthing as required.( For light plug)	Each	12		
1.5	Wiring for power plug point with 2x4 Sq.mm FR PVC insulated copper conductor single core Cable in recessed / surface PVC conduit along with 1 no. 4 sq. mm copper conductor wire for loop earthing as required.( For power plug & AC point))	Each	10		
1.6	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess ,including providing and fixing 3 pin 5/6 Amp modular socket outlet and 5/6 amps modular switch, connecions etc. as required ( For general light plugs & UPS plugs in tutorial rooms)	Each	12		

SNO	DESCRIPTION OF ITEM	UNIT	QTY.	RATE	AMT
	<b>(ELECTRICAL WORKS )</b>				
1.7	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess ,including providing and fixing 6 pin 15/16 Amp modular socket outlet and 15/16 amps modular switch, connecions etc. as required.	Each	10		
1.8	Supplying and fixing 20 amps, 240volts, SPN industrial type, socket outlet with 2 pole and earth , metal enclosed plug top alongwith 20 amps "C" curve , SP, MCB, in sheet steel enclosyre, on surface or in recess, with chained metal coverfor the socket outlet and complete with connections, testing and commissioning etc. as required	Each	10		
	<b>SUB TOTAL OF SUBHEAD 1</b>				
	<b>SUBHEAD-2</b>				
<b>2</b>	<b>CIRCUIT &amp; SUBMAIN WIRING</b>				
2.1	Wiring for circuit /submain wiring alongwith earth wire with following sizes of FR PVC insulated, copper conductor, single core cable in surface/recesed medium class PVC conduit as required.				
a)	2x2.5 sq. mm + 1x2.5 sq.mm earth wire -light & light plugs	Mtr.	160		
b)	2x4 sq. mm + 1x4 sq.mm earth wire -Power point & AC points	Mtr.	120		
c)	4x6 sq. mm + 2X6 sq mm earth wire ( for LPDB's)	Mtr.	50		
d)	4x10 sq. mm + 2X10 sq mm earth wire( for AC-PDB's)	Mtr.	30		
	<b>SUB TOTAL OF SUBHEAD 2</b>				
	<b>SUBHEAD-3</b>				
<b>3</b>	<b>CABLE LAYING &amp; TERMINATION</b>				
3.1	Supplying of PVC insulated armoured aluminium conductor cable 1.1 KV grade con. IS:1554, part-1 up to date amendment of following sizes etc. as req.				

SNO	DESCRIPTION OF ITEM	UNIT	QTY.	RATE	AMT
	<b>(ELECTRICAL WORKS )</b>				
a)	4 core 35 sq.mm main incoming to LTP in (from out door feeder to baggage room in library)	Mtr.	50		
b)	Laying of one number PVC insulated and PVC sheathed/XLPE power cable of 1.1 kv grade direct in ground) sizes up to 35 sqmm	Mtr.	10		
3.2	Supply & installing of following sizes of perforaed prepainted MS cable trays with perforation not more than 17.5% , in conenient sections, joined with connectors, susoended from ceiling with MS suspenders including bolts & nuts, painting suspenders as required				
a)	100mm width x 50 mm depth x 1.6 mm thickness	Mtr.	60		
3.3	Supplying & making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed/XLPE aluminium cable conductor cable of 1.1 grade etc. as required. (formain incoming to LTP)				
a)	4 core 35 sq.mm	No	2		
3.4	Laying of one number PVC insulated and PVC sheathed/XLPE power cable of 1.1 kv on existing cable tray	Mtr.	10		
3.5	Supplying of PVC insulated armoured copper conductor cable 1.1 KV grade con. IS:1554, part-1 up to date amendment of following sizes etc. as req.				
a)	4 core 10 sq.mm copper cable outgoing to ODU on terrace.	Mtr.	20		
3.6	Supplying & making end termination with brass compression gland and copper lugs for following size of PVC insulated and PVC sheathed/XLPE aluminium cable conductor cable of 1.1 grade etc. as required. (for ODU of VRV)				
a)	4 core 10sq.mm	No	2		
	<b>SUB TOTAL OF SUBHEAD 3</b>				
	<b>SUBHEAD-4</b>				

SNO	DESCRIPTION OF ITEM	UNIT	QTY.	RATE	AMT
	<b>(ELECTRICAL WORKS )</b>				
<b>4</b>	<b>DISTRIBUTION BOARDS</b>				
4.1	Supplying & fixing of following way, horizontal type three pole and neutral, sheet steel MCB distribution board 240 volts on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar,din bar, hinged front acrylic cover for the MCB knobs, detachable gland plate, interconnections, phosphatized and powder painted earthing etc. as required.(without MCBs / RCCB/ Isolator)				
a)	4 way (4+4), double door( for DP PDB ) AC PDB for GF rooms +Mezz1 &2	Each	3		
b)	6 way (4+6), double door( for DP LPDB ) GF <b>Rack area</b>	Each	1		
c)	8 way (4+6), double door( for DP LPDB ) GF Rooms ,mezz-1 & Mezz-2	Each	3		
d)	12 way (4+12), double door( for DP LPDB ) FF reading area	Each	1		
4.2	Supplying & fixing 5 amps to 32 ampsrating, 240/415 volts,"C" curve, miniature circuit breaker suitable for inductive load of following poles in existing MCB DB complete with connections, testing and commissioning etc as required				
a)	Single pole -25A (For AC Split unit)	Each	12		
b)	Single pole -16A (For power circuit	Each	12		
c)	Single pole -6A (For light circuit indoor casset unit-5)	Each	20		
4.3	Supplying and fixing following rating, two pole, 240 volts, isolator in existing MCB DB complete with connections, testing and commissioning etc. as required. ( for LPDB)				
a)	25 amps	Each	4		
b)	40 amps	Each	2		
c)	50 amps	Each	2		



SNO	DESCRIPTION OF ITEM	UNIT	QTY.	RATE	AMT
	<b>(ELECTRICAL WORKS )</b>				
4.4	Supply & fixing of following rating, two pole (Single phase and one & neutral) 240 volts, residual current circuit breaker (RCCB) ,having sensitivity current up to 300 miliamperes, in existing MCB DB complete with connections ,testing & commissioning etc asrequired				
a)	32 amps	Each	4		
b)	40 amps	Each	2		
c)	50 amps	Each	2		
	<b>SUB TOTAL</b>				
	<b>SUBHEAD-5</b>				
	<b>FIXTURES</b>				
<b>5</b>	<b>SUPPLY OF FIXTURES</b>				
5.1	900 mm sweep A.C. Ceiling Fan complete with double ball bearing Fan motor,blades, canopies and standard down rod Cat no Havells Cat no SS-390-white or equivalent make approved ny Architect/College principal	No	20		
5.2	1200 mm sweep A.C. Ceiling Fan complete with double ball bearing Fan motor,blades, canopies and standard down rod Cat No Havells Cat no SS-390-white or equivalent make approved ny Architect/College principal	No	12		
5.3	450 mm sweep single phase 900 rpm A.C. Exhaust fan with louvers Havells make Turbo force or equivalent make approved ny Architect/College Principal	No	3		
5.4	400 mm sweep single phase Oscillating wall fan of Havells make with built in regulator and cord switch or equivalent make approved ny Architect/College	No	4		
5.5	Supply and fixing of brass holder in Dumb waiter lift well	No	2		

SNO	DESCRIPTION OF ITEM	UNIT	QTY.	RATE	AMT
	<b>(ELECTRICAL WORKS )</b>				
5.6	Supplying of recessed mounted 33 watt LED luminare suitable for 2x2' grid ceiling of Phillips makeeCay No RC366B LED 33 5000 PSU WH or equivalent make as approved by Architect or college with lamp and driver as required ( for grid ceiling on FF reading hall & Mezz -2)	No	71		
5.7	Supplying of surface mount 11 watt disc light round LED luminare powder coated with frosted glass cover Havells make Cat no 76 92 02. 140 with LED lamp or equivalent make as approved by Architect or college with lamp and driver as required ( for stair case )	No	12		
	<b>SUPPLY AND FIXING OF FIXTURES</b>				
5.8	Supplying & fixing of stepped type electronic regulator 300w on existing modular plate switch box including connection but excluding modular plate etc. as required.	No	27		
	NOTE- (All light fixtures & fans supplied and installed as mentioned under this sub head shall be of same make & Catalogue number except on demand by the owner. In case fixture of particular make / cat no is not available & have long delivery period compared to completion time, contractor shall get the alternative/ equivalent make approved by owner /authorised person before installation of the alternative make				
5.9	Supplying & fixing recessed type fan clamp made out of 12 mm dia M.S. rod of required shape in roof slab as required.(as per CPWD specifications)	No	27		
	<b>ERECTION OF LIGHT FIXTURES</b>				
5.10	Erection of wall bracket, bulkhead/ ceiling fitting suitable for all sizes and shapes containing up to two GLS lamps per fitting complete with all accessories including connection etc.as required	Each	12		

SNO	DESCRIPTION OF ITEM	UNIT	QTY.	RATE	AMT
	<b>(ELECTRICAL WORKS )</b>				
5.11	Installation, testing, and commissioning of pre-wired, fluorescent fitting of all types complete with all accessories and tube etc. including supply & fixing ball and socket arrangement , 2 nos down rods of 20mm dia x 1.6mm thick sheet steel conduit up to 30cm length , painting and wiring the down rod and connection with 1.5 sq. mm. FR PVC insulated, copper conductor, single core cable & earthing etc as required	Each	82		
5.12	Installation, testing, and commissioning of pre-wired, fluorescent fitting of all types complete with all accessories and tube etc. directly on ceiling / wall including connections with 1.5 sq.mm. FR PVC insulated copper conductor, single core cable etc. as required.	Each	66		
5.13	Providing and fixing extra conduit down rod of 20 mm dia , 2 nos 60 cm length and wiring the down rods and connection etc. with FR PVC insulated copper conductor, single core cable etc. as required.	Each	134		
5.14	Installation, testing and commissioning of ceiling fan including wiring the down rod of standard length ( 30 cm) with 1.5 sq.mm PVC insulated copper conductor, single core cable including providing and fixing of phenolic laminated sheet cove on the fan box etc. as required.	Each	27		
5.15	Providing and fixing extra down rod of 60 cm length G. I. pipe, 15 mm dia , heavy duty gauge for ceiling fan including painting etc as required .	Each	27		
5.16	Installation, testing and commissioning of ceiling fan regulator in existing switch box including connection with 1.5 sq. mm Fr PVC insulated copper conductor single core cable b, earthing the regulator etc. as required.,	Each	27		
5.17	Installation, of exhaust fan in existing opening including making good the damage , connection testing and commissioning etc. as required				
a)	up to 450 mm sweep	Each	3		
b)	Extra for fixing the louver/shutters complete with frame for exhaust fan of all sizes	Each	3		

SNO	DESCRIPTION OF ITEM	UNIT	QTY.	RATE	AMT
	<b>(ELECTRICAL WORKS )</b>				
	<b>SUB TOTAL OF SUBHEAD 5</b>				
	<b>SUBHEAD-6</b>				
<b>6</b>	<b>TELEPHONE</b>				
6.1	Supplying and fixing of modular telephone socket outlet on the existing modular plate & switch box including connections but excluding modular plate.	Each	8		
6.2	Supplying & drawing 2 pair 0.5 sq.mm. FR PVC insulated copper conductor unarmoured telephone cable through existing surface / recessed PVC conduit including connections, testing etc. as required.	Mtr.	80		
6.3	Supplying & drawing 10 pair 0.5 sq.mm. FR PVC insulated copper conductor unarmoured telephone cable through existing surface / recessed PVC conduit including connections, testing etc. as required.	Mtr.	25		
6.4	Supplying & fixing of 10 pair tag block Krone Type on surface with suitable clamps or in recess including connections etc as required	Each	1		
	<b>SUB TOTAL OF SUBHEAD 6</b>				
	<b>SUBHEAD-7</b>				
<b>7</b>	<b>EARTHING</b>				
	<b>GI Pipe Earthing</b>				
7.1	Earthing with G.I. earth pipe 4.5 metre long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/ coke as required	Each	2		
7.2	Supply & laying of 6 SWG GI Wire in surface or recess	Mtr	30		
	<b>SUBTOTAL OF SUBHEAD 7</b>				
<b>8</b>	<b>SUBHEAD-8</b>				
	<b>MAIN LT PANEL</b>				

SNO	DESCRIPTION OF ITEM	UNIT	QTY.	RATE	AMT
	<b>(ELECTRICAL WORKS )</b>				
8.1	Design, fabrication, supply, erection,connecting, testing and commissioning of the following extensible cubicle, indoor mounting totally enclosed free standing floor mounting dust & vermin proof, made out of 2 mm thick MS sheet suitable for 415V, 3 phase, 4 wire, 50 Hz,AC system of IP-42 protection rating & 35kA rupturing capacity, incoming & outgoing MCCB / MCBs, aluminium busbars, LED indicating lamps, digital metering instruments with inbuilt selector switches, earthing stud, including internal wiring , painted with powder coated paint, etc.as per specifications and approved drawings as required. LT Panel shall have provision for entry of cables from the top only arranged properly in cable trays as required. Live accessible parts shall be supported shrouded with SMC / DMC insulators. The bus bar shall also be insulated with heat shrinkable sleeves, Front doors of switch compartments shall have an arrangement of pad locking on all outgoing feeders.				
	<b><u>Incoming</u></b>				
	1 No -125 Amps MCCB	1			
	<b><u>Metering</u></b>				
	1 Nos - 0 - 500 Voltmeter				
	1 Nos - 0 - 100 Ammeter				
	3 Nos -200/ 5 Amp CT's 1				
	3 Nos.-LED				
	3 Nos-2 Amps MCB's				
	2 Nos.-LED type				
	<b><u>Busbar</u></b>				
	1 set-300A TPN Alm Bus bar				
	<b><u>Outgoing</u></b>				
	1No-100 Amps,TPN, MCB 415V 25KA ( For AC SDB)				
	1No-63 Amps,TPN, MCB 415V 10KA ( For L & P SDB)				
	1No-16 Amps,TPN, MCB 415V 10KA ( For dumb waiter lift)	Set	1		
	<b>SUB TOTAL</b>				

SNO	DESCRIPTION OF ITEM	UNIT	QTY.	RATE	AMT
	<b>(ELECTRICAL WORKS )</b>				
	<b>SDB FOR AC</b>				
8.2	Design, fabrication, supply, erection, connecting, testing and commissioning of the following extensible cubicle, indoor mounting totally enclosed free standing floor mounting dust & vermin proof, made out of 2 mm thick MS sheet suitable for 415V, 3 phase, 4 wire, 50 Hz, AC system of IP-42 protection rating & 35kA rupturing capacity, incoming & outgoing MCCB / MCBs, aluminium busbars, LED indicating lamps, digital metering instruments with inbuilt selector switches, earthing stud, including internal wiring , painted with powder coated paint, etc.as per specifications and approved drawings as required. LT Panel shall have provision for entry of cables from the top only arranged properly in cable trays as required. Live accessible parts shall be supported shrouded with SMC / DMC insulators. The bus bar shall also be insulated with heat shrinkable sleeves, Front doors of switch compartments shall have an arrangement of pad locking on all outgoing feeders.				
	<b><u>Incoming</u></b>				
	1 No -125 Amps MCCB	1			
	<b><u>Metering</u></b>				
	1 Nos - 0 - 500 Voltmeter				
	1 Nos - 0 - 100 Ammeter				
	3 Nos -100/ 5 Amp CT's 1				
	3 Nos.-LED				
	3 Nos-2 Amps MCB's				
	2 Nos.-LED type				
	<b><u>Busbar</u></b>				
	1 set-200A TPN Alm Bus bar				
	<b><u>Outgoing</u></b>				
	1No-50 Amps,TPN, MCB 415V 25KA (for ODU VRV)				
	3No-50 Amps,DP MCB 240V 10KA (for AC - GF rooms+ Mez-1, mez-2,				
	1No-16 Amps, DP MCB 240V 10KA (for first floor Casset units)	Set	1		

SNO	DESCRIPTION OF ITEM	UNIT	QTY.	RATE	AMT
	<b>(ELECTRICAL WORKS )</b>				
	<b>SDB FOR LIGHT &amp; POWER</b>				
8.3	Design, fabrication, supply, erection,connecting, testing and commissioning of the following extensible cubicle, indoor mounting totally enclosed free standing floor mounting dust & vermin proof, made out of 2 mm thick MS sheet suitable for 415V, 3 phase, 4 wire, 50 Hz,AC system of IP-42 protection rating & 35kA rupturing capacity, incoming & outgoing MCCB / MCBs, aluminium busbars, LED indicating lamps, digital metering instruments with inbuilt selector switches, earthing stud, including internal wiring , painted with powder coated paint, etc.as per specifications and approved drawings as required. LT Panel shall have provision for entry of cables from the top only arranged properly in cable trays as required. Live accessible parts shall be supported shrouded with SMC / DMC insulators. The bus bar shall also be insulated with heat shrinkable sleeves, Front doors of switch compartments shall have an arrangement of pad locking on all outgoing feeders.				
	<b><u>Incoming</u></b>				
	1 No -63 Amps MCCB	1			
	<b><u>Metering</u></b>				
	3 Nos.-LED				
	3 Nos-2 Amps MCB's				
	<b>Busbar</b>				
	1 set-100A TPN Alm Bus bar				
	<b>Outgoing</b>				
	3No-32 Amps, DP MCB 240V 10KA )GF rooms+ Mez-1, mez-2,				
	2No-40 Amps,DP MCB 240V 10KA (for GF Rack & FF Reading Area)	Set	1		
	<b>SUBTOTAL OF SUBHEAD 8</b>				
	<b>SUBHEAD-9</b>				
	<b>LAN-WIRING</b>				

SNO	DESCRIPTION OF ITEM	UNIT	QTY.	RATE	AMT
	<b>(ELECTRICAL WORKS )</b>				
9.1	Supplying and fixing of modular telephone socket outlet on the existing modular plate & switch box including connections but excluding modular plate.	Each	8		
9.2	Supplying & fixing of following size of medium class PVC conduit alongwith accessories in surface or recess including cutting the wall and making good the same in case of recessed conduit as required				
a)	25mm dia	Mtr.	80		
9.3	Supplying and drawing of the Cats 6 information outlets that should confirm or exceed component specifications TIA/EIA-568-B.2-1 standards for physical & electrical Specifications, should be fully unshielded type and should have the tool less mechanism with inbuilt crimping tool( Legrand/Systimax/Siemon)	Nos	80		
	<b>SUB TOTAL OF SUBHEAD 9</b>				



**SUMMARY OF PART II : ELECTRICAL WORKS**

<b>S.NO.</b>	<b>DESCRIPTION</b>	<b>AMOUNT</b>
<b>1</b>	<b>SECTION 1 : POINT WIRING</b>	<b>Rs.</b>
<b>2</b>	<b>SECTION 2 : CIRCUIT &amp; SUBMAIN WIRING</b>	<b>Rs.</b>
<b>3</b>	<b>SECTION 3 : CABLE LAYING AND TERMINTATION</b>	<b>Rs.</b>
<b>4</b>	<b>SECTION 4: DISTRIBUTION BOARDS</b>	<b>Rs.</b>
<b>5</b>	<b>SECTION 5 : SUPPLY OF FIXTURES</b>	<b>Rs.</b>
<b>6</b>	<b>SECTION 6 : TELEPHONE</b>	<b>Rs.</b>
<b>7</b>	<b>SECTION 7 : EARTHING</b>	<b>Rs.</b>
<b>8</b>	<b>SECTION 8 : MAIN LT PANEL</b>	<b>Rs.</b>
<b>9</b>	<b>SECTION 9 : LAN WIRING</b>	<b>Rs.</b>
	<b>TOTAL OF PART II : ELECTRICAL WORKS</b>	<b>Rs.</b>

## PART III - SANITARY WORKS

### SECTION A - SANITARY FIXTURES & FITTINGS

S.No.	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT
	<b>SECTION A - SANITARY FIXTURES &amp; FITTINGS:</b>				
1	Providing and fixing white glazed vitreous china wall mounting type (European type) <b>water closet</b> with C.P. bolts, nuts, C.I. Chair or other hanging arrangement, white solid plastic seat with lid, C.P. brass hinges and rubber buffers, white vitreous china dual flushing cistern (6/3 litres) and PVC connector, C.P. brass screws and washers complete, including cutting and making good the walls floors where required.				
1.1	Wall hung EWC (Parry Cascade NXT Wall Hung W.C. Suit Cat. No.0208 , C8300 Seat Cover and C0771 Cistern Set) or approved equivalent including CP brass hinges etc. complete	No.	3		
2	Providing and fixing white vitreous china oval <b>wash basin</b> for top counter mounting with special fabricated brackets painted white, 15 mm C.P. brass central hole lever mixing fitting with pop-up waste, 32 mm C.P. brass bottle trap and pipe to wall with C.P. wall flange and rubber adopter for waste connection complete, including cutting and making good the walls where required.				
2.1	Oval washbasin size 550x445x200 mm Parry Cat No. C0431 Cascade NXT or approved equivalent, CP brass single lever mixing fitting with pop-up waste Jaquar Cat. No. ORM-CHR-10051B or approved equivalent and CP brass bottle trap with pipe to wall and flange Jaquar Cat. No. 773 or approved equivalent.	No.	3		
3	Providing and fixing Salem Stainless Steel A ISI 304 (18/8) <b>kitchen sink</b> as per IS: 13983 with CI brackets and stainless steel waste with plug 40mm including				

S.No.	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT
	<b>SECTION A - SANITARY FIXTURES &amp; FITTINGS:</b>				
	painting of fittings and brackets, cutting and making good the walls wherever required.				
3.1	Kitchen sink with drain board 510x1040 mm bowl depth 178mm. (Neelkanth Make)	No.	1		
4	Providing and fixing toilet <b>paper holder</b> of approved make.				
4.1	Recessed Type-Vitreous China 150 X 150 mm	No.	3		
5	Providing and fixing C.P. cast brass twin coat <b>hooks</b> fixed to wooden cleats with C.P. brass screws Jaquar (Cat. No. 1161) or approved equivalent.	No.	3		
6	Providing and fixing 15mm C.P brass mixing fitting for kitchen sink with swinging spout complete. Including cutting and making good the walls wherever required.				
6.1	C.P. brass mixing fitting Jaquar cat. No. 5319 or approved equivalent.	No.	3		
7	Providing and fixing recess soap dish.	No.	3		
8	Providing and fixing CP brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 grams.				
8.1	15mm nominal bore	No.	3		
9	Providing and fixing CP brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931	No.	5		
9.1	15mm nominal bore				
10	Providing and fixing <b>health faucet</b> with 1 m PVC tube and swivel hook including all fittings (Jaquar	No.	3		

S.No.	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT
	<b>SECTION A - SANITARY FIXTURES &amp; FITTINGS:</b>				
	Cat No.563) complete				
11	Fixing CP <b>towel Rack</b> rail with screw and rawal plug etc.	No.	3		
13	Providing & Fixing of <b>Hand Towel Ring</b> Including all fitting & accessories	No.	3		
15	Providing & Fixing, testing, commissioning, receiving, storing, handling, shifting of adjustable type <b>wash basin for handicap</b> toilet complete with brackets, tracks, waste pipes and other accessories complete as required including cutting and making good the wall and floor as required.	No.	1		
16	Providing and fixing 100% stainless steel "cockroach" trap of approved make and quality on top of floor trap. The rate includes the cost of all ancillary works as required to complete the work.	No.	5		
17	Providing & Fixing, testing, commissioning, receiving, storing, handling, shifting of 2 Nos. support arms and backrest to mounted on the track (vertically and laterally) for handicap toilet complete as required.	No.	1		
18	Fixing, testing, commissioning, receiving, storing, handling, shifting of raised toilet seat with cover for handicap toilet.	No.	1		
	<b>TOTAL OF SECTION A - SANITARY FIXTURES &amp; FITTINGS</b>				

**SECTION B - INTERNAL DRAINAGE (SOIL, WASTE, VENT PIPES & FITTINGS)**

S.No.	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT
<b>B.</b>	<b>SECTION B - INTERNAL DRAINAGE (SOIL, WASTE, VENT PIPES &amp; FITTINGS):</b>				
1	Providing fixing & testing cast iron centrifugally spun soil & waste & vent pipes (IS: 3989 - 1984) including all fittings such as bends, junctions, inspection doors, with 3 mm thick rubber washer; offsets, cowls, access pieces /plugs etc clamps/structural steel supports as required/directed at site, jointing with refined pig lead with deep lead joints/spun yarn or drip joint including cutting holes in walls and making good and testing complete.				
1.1	75 mm dia (IS: 3989-1984)	RM	10		
1.2	100 mm dia (IS: 3989-1984)	RM	20		
2	Painting cast iron/cast iron spun soil, waste pipes and fittings with synthetic enamel paint of any colour as per pipe colour code over a coat of primer (of approved quality).				
2.1	75 mm dia (IS: 3989-1984)	RM	10		
2.20	100 mm dia (IS: 3989-1984)	RM	20		
3.00	Providing and fixing cast iron centrifugally spun 'P' or 'S' trap of self cleansing design without vent arm conforming to IS: 3989-1984 complete in all respects including cutting and making good the walls, floors & RCC work.				
3.1	100 mm inlet & 100 mm outlet.	No.	4		
4	Providing and fixing cast brass clean out plug with suitable insert keys for opening in brass cap, male threaded joint/reducer with G.I. socket caulked to Pipe/fittings of HCI pipe including cost of lead joints drip seal joint etc. complete in all				

S.No.	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT
<b>B.</b>	<b>SECTION B - INTERNAL DRAINAGE (SOIL, WASTE, VENT PIPES &amp; FITTINGS):</b>				
	respect.				
4.1	100 mm dia.	No.	4		
5.0	Providing and fixing 100 mm dia G.I. inlet fitting approximately 300 mm long with maximum 3 inlets 32, 40 or 50 mm size fabricated from G.I pipes and welded G.I sockets, fixed to CI trap with lead caulked joint drip seal joint and set in cement concrete as per standard drawing complete including cost of Bitumastic paint.	No	4		
6	Providing & fixing 6 mm thick CP brass hinged grating with rim of approved design including setting in floor with cement mortar. (For floor trap/ urinal trap/floor drain).				
6.1	125 mm dia	No.	4		
	<b>TOTAL OF SECTION B : INTERNAL DRAINAGE (SOIL, WASTE, VENT PIPES &amp; FITTINGS)</b>				

## SECTION C - WATER SUPPLY

S.No.	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT
<b>C</b>	<b>SECTION C - WATER SUPPLY</b>				
1	Providing and fixing chlorinated Polyvinyl chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.0m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge.				
1.1	20 mm nominal outer dia pipes	RM	25		
1.2	25 mm nominal outer dia pipes	RM	15		
1.3	32 mm nominal outer dia pipes	RM	10		
2	Providing and fixing G.I. pipes (IS: 1239-medium) with G.I. fittings and clamps/brick masonry pedestal supports, including cutting and making good the walls/floors where necessary.				
2.1	15mm dia nominal bore	RM	10		
2.2	20mm dia nominal bore	RM	10		
2.3	25mm dia nominal bore	RM	10		
2.4	32mm dia nominal bore	RM	10		
2.5	40mm dia nominal bore	RM	15		
2.6	50mm dia nominal bore	RM	15		
3	Painting GI pipes and fittings with enamel paint over a ready mixed priming coat, both of approved quality for new work.				
3.1	15mm dia nominal bore	RM	1		

S.No.	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT
<b>C</b>	<b>SECTION C - WATER SUPPLY</b>				
3.2	20mm dia nominal bore	RM	10		
3.3	25mm dia nominal bore	RM	10		
3.4	32mm dia nominal bore	RM	10		
3.5	40mm dia nominal bore	RM	15		
3.6	50mm dia nominal bore	RM	15		
4	Providing and fixing gun metal gate valve with CI wheel of approved quality (screwed end).				
4.1	25 mm dia	Nos	10		
5	Providing & Fixing forged brass ball valves with brass ball/stem, union/fange, washer, nuts & bolts, rated to temperature of 85 deg. C and tested to a pressure not less than 10 kg/sq.cm. Including coating against mechanical damage as per manufactures sepcification .				
5.1	15 mm dia	Nos	4		
5.2	20 mm dia	Nos	2		
5.3	25 mm dia	Nos	1		
6	Providing, fixing, testing & commissioning of C.I butterfly valve tested to a pressure not less than 10 Kg/Sq.cm. Including rubber gasket, flanges, nuts, bolts, washers & painting complete as required.				
6.1	50 mm dia	Nos	1		
7	Providing and fixing forged brass Auto Air Vent Valve (PN 10) for water supply system /suitbale for pressure not less than 10.0 kg/sqcm.				



S.No.	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT
<b>C</b>	<b>SECTION C - WATER SUPPLY</b>				
7.1	25 mm dia	Nos	1		
8	Providing, fixing, testing & commissioning of gun metal horizontal / vertical non return valve conforming to IS: 778 and tested to a pressure not less than 15 Kg/Sqcm, Including rubber gasket, flanges, union, nuts, bolts & washers complete as required.				
8.1	50 mm dia	Nos	1		
	<b>TOTAL OF SECTION C :</b>  <b>WATER SUPPLY</b>				

## SECTION D - RAIN WATER PIPES

S.No.	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT
<b>D</b>	<b>SECTION D - RAIN WATER PIPES</b>				
1	Providing and laying uPVC pressure pipes as per IS:4985 of 6 Kg/Sqcm pressure rating including all fittings, solvent weld joints, cutting and making good the walls etc. (For rain water pipes)				
1.1	110 mm nominal dia	RM	20		
1.2	160 mm nominal dia	RM	30		
2	Providing and fixing to the inlet mouth of rain water pipe cast iron grating 25cm diameter and weighing not less than 587 grams.	No.	5		
3	Providing and fixing unplasticised-PVC pipe clips of approved design to unplasticised-PVC rain water pipes by means of 50x50x50 mm hard wood plugs, screwed with MS screws of required length including cutting brick work and fixing in cement mortar 1:4 (1 cement : 4 coarse sand) and making good the wall etc. complete.				
3.1	110mm	Nos	25		
	<b>TOTAL OF SECTION D: RAIN WATER PIPES</b>				

## SECTION E - SEWER & DRAIN

S.No.	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT
<b>E</b>	<b>SECTION E - SEWER &amp; DRAIN</b>				
1	Excavating trenches of required width for pipes, cables etc. including excavation for sockets and dressing of sides, ramming of bottoms, depth upto 1.5m including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20cm in depth including consolidating each deposited layer by ramming, watering etc. and disposing of surplus excavated soil as directed, within a lead of 50m.				
1.1	All kinds of soil	RM	10		
1.2	Pipes, cables etc. exceeding 80mm dia but not exceeding 300mm dia.	RM	5		
2	Earth work in excavation over areas (exceeding 30cm in depth. 1.5m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m; disposed earth to be levelled and neatly dressed. ( For manholes)				
3	All kinds of soil	RM	15		
3.1	Extra for every additional lift of 1.5m or part thereof in:				
4	Providing, laying and jointing glazed stoneware pipes grade 'A' with stiff mixture of cement mortar in the proportion of 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete.				
4.1	100mm diameter	RM	10		
4.2	150mm diameter	RM	20		
5	Providing and laying cement concrete 1:5:10 (1 cement: 5 coarse sand : 10 graded stone aggregate 40mm nominal size) all round S.W. pipes including				

S.No.	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT
<b>E</b>	<b>SECTION E - SEWER &amp; DRAIN</b>				
	bed concrete as per standard design				
5.1	100mm dia SW pipe	RM	10		
5.2	150mm dia SW pipe	RM	20		
6	Constructing brick masonry manhole in cement mortar 1:4 (1 cement :4 coarse sand) RCC top slab with 1:2:4 mix (1 cement :2 coarse sand :4 graded stone aggregate 20mm nominal size), foundation concrete 1:4:8 mix (1 cement :4 coarse sand :8 graded stone aggregate 40mm nominal size) inside plastering 12mm thick with cement mortar 1:3 (1 cement :3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement :2 coarse sand :4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement complete as per standard design.				
6.1	Inside size 90x80cms and 45cms deep including CI cover with frame (light duty) 455x610mm internal dimensions total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15kg).				
6.2	With FPS bricks of class designation 7.5	Nos	2		
7	15mm thick cement plaster on rough side of single or half brick wall of mix: (for external surface of manhole)	SQM	10		
8	Providing and fixing square mouth SW gully trap grade 'A' complete with CI grating brick masonry chamber with water tight CI cover with frame of 300x300mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design.				
8.1	100x100mm size P type with FPS 1st Class bricks.	Nos	2		

S.No.	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT
<b>E</b>	<b>SECTION E - SEWER &amp; DRAIN</b>				
9	Providing and laying non pressure NP2 class (light duty) RCC pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement: 2 fine sand) including testing of joints etc. complete.				
9.1	300mm dia RCC pipe	RM	20		
10	Providing and laying cement concrete 1:5:10 (1 cement: 5 coarse sand : 10 graded stone aggregate 40mm nominal size) upto haunches of RCC/ PVC pipes including bed concrete as per standard design				
10.1	300mm dia RCC pipe	RM	20		
11	Constructing brick masonry road gully chamber 50x45x60 cm with bricks of 1st class in cement mortar 1:5 (1 cement : 5 fine sand) including 500x450mm precast R.C.C. horizontal grating with frame complete as per standard design:				
11.1	With FPS bricks (1st Class)	Nos	1		
12	Constructing brick masonry open surface drain with bricks of class designation 75 in cement mortar 1:4 (1 cement : 4 fine sand) including earth excavation, 10 cm thick bed concrete 1:5:10 (1 cement:5 fine sand : 10 graded stone aggregate 40 mm nominal size) and 25 mm thick cement concrete 1:2:4 (1 cement : c coarse sand : 4 graded stone aggregate 12.5 mm nominal bore size) for filling haunches including 12 mm cement plaster 1:4 (1 cement : 4 coarse sand) with a floating coat of neat cement inside the drain, its top and exposed side including disposal of surplus earth complete as per standard design:				
12.1	15 cm drain 20 cm average depth with F.P.S bricks	RM	30		
13	Providing and fixing cast iron grating in lengths of				

<b>S.No.</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>QTY.</b>	<b>RATE</b>	<b>AMOUNT</b>
<b>E</b>	<b>SECTION E - SEWER &amp; DRAIN</b>				
	0.6 to 1 meter with angle iron frame				
13.1	a) 300 mm wide 40 mm thick	RM	10		
	<b>TOTAL OF SECTION E - SEWER &amp; DRAIN</b>				

**SECTION G - OVER HEAD TANKS**

<b>S.No.</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>QTY.</b>	<b>RATE</b>	<b>AMOUNT</b>
<b>G</b>	<b>SECTION G - OVER HEAD TANKS</b>				
1	Providing hoisting and fixing HDPE water storage tanks with inlet, outlet, scour and overflow connections lockable type manhole cover including cost of brass coupling etc., complete(necessary supports as required shall be paid extra)				
1.2	CAPACITY 2500 Liters each	No.	2		
	<b>TOTAL OF SECTION G : OVER HEAD TANKS</b>				

**SUMMARY OF PART III****SANITARY WORKS**

<b>S.NO.</b>	<b>DESCRIPTION</b>	<b>AMOUNT</b>
<b>1</b>	<b>SECTION A : SANITARY FIXTURES &amp; FITTINGS</b>	<b>Rs.</b>
<b>2</b>	<b>SECTION B : INTERNAL DRAINAGE (SOIL, WASTE, VENT PIPES &amp; FITTINGS</b>	<b>Rs.</b>
<b>3</b>	<b>SECTION C : WATER SUPPLY</b>	<b>Rs.</b>
<b>4</b>	<b>SECTION D : RAIN WATER PIPES</b>	<b>Rs.</b>
<b>5</b>	<b>SECTION E : SEWER &amp; DRAIN</b>	<b>Rs.</b>
<b>6</b>	<b>SECTION F : OVER HEAD TANKS</b>	<b>Rs.</b>
	<b>GRAND TOTAL OF PART III SANITARY WORKS</b>	<b>Rs.</b>



**SUMMARY OF CIVIL, ELECTRICAL AND SANITARY WORKS**

<b>S.NO.</b>	<b>DESCRIPTION</b>	<b>AMOUNT</b>
<b>1</b>	<b>TOTAL AMOUNT OF PART I – CIVIL WORKS</b>	<b>Rs.</b>
<b>2</b>	<b>TOTAL AMOUNT OF PART II – ELECTRICAL WORKS</b>	<b>Rs.</b>
<b>3</b>	<b>TOTAL AMOUNT OF PART III – SANTARY WORKS</b>	<b>Rs.</b>
	<b>GRAND TOTAL</b>	<b>Rs.</b>

<b>LIST OF APPROVED MAKES FOR ELECTRICAL WORKS</b>		
<b>S.No.</b>	<b>Details of Materials / Equipment</b>	<b>Manufacturer's Name</b>
1	LT Panel , Main Distribution Panel, Sub- Main Distribution Panel and Motor Control Centre	Tricolite industries Ltd.
		Adlec Control System
		SPC Electro Tech Pvt. Ltd.
		Ambit Switchgear
		Milestone
2	Sandwiched Construction Bus ducts	Control & Switchgear
		Henikwon (L&T)
		GE
		Schneider Electric
3	Final Distribution Board	Legrand
		Hager
		ABB
		Siemens
		Schneider Electric (MG)
4	Air Circuit Breaker ( 3/4 Pole )	Schneider Electric (MVS)
		Larsen & Toubro (C-Power)
		ABB( E-Max)
		Siemens
5	Moulded Case Circuit Breaker (MCCB)	Larsen & Toubro
		ABB
		Schneider Electric (CVS)
		Siemens
6	Motor Protection Circuit Breaker(MPCB)	Hager
		ABB
		Schneider Electric
		Siemens
7	Miniature Circuit Breakers (MCB)	Hager
		ABB
		Schneider Electric
		Siemens
8	Residual Current Circuit Breaker (RCCB)	Hager
		ABB
		Schneider Electric
		Siemens
9	Power/Aux. Contactor / Capacitor	Schneider Electric (MG)
	Duty Contactor	Hager (L&T)
		ABB
		Siemens
10	Change Over Switch	Larsen & Toubro

<b>LIST OF APPROVED MAKES FOR ELECTRICAL WORKS</b>			
<b>S.No.</b>	<b>Details of Materials / Equipment</b>		<b>Manufacturer's Name</b>
			C & S
			HPL – Socomec
11	Control Transformer/Potential Transformers		Automatic Electric
			Matrix
			Pragati
			Precise
12	Current Transformer (Epoxy Cast Resin)		Automatic Electric
			Matrix
			Pragati
			Precise
13	Protection Relay		
	a. Numeric Type		ABB
			Areva
			Larsen&Toubro
			Siemens
	b. Electromagnetic Type		ABB
			Areva
			Larsen&Toubro
14	Indicating Lamps LED type and Push Button		Vaishno Electricals
			Larsen & Toubro (ESBEE)
			Schneider Electric Siemens
15	Overload relays with built in Single Phase preventer		ABB
			Larsen & Toubro
			Schneider Electric
			Siemens
16	a. Electronic Digital Meters (A/V/PF/Hz/KW/KWH) with LED Display		Conzerv
			Schneider Electric
			Secure
	b. ISI Marked Dual Energy Meter with centralized metering & billing system		Secure
			Radius
17	Static Power Meter & Logger (SPML)		Conzerv
	With RS 485 port		Schneider Electric
			Secure
18	Power Capacitor		Matrix
			Ducati
			EPCOS
			Meher

<b>LIST OF APPROVED MAKES FOR ELECTRICAL WORKS</b>			
<b>S.No.</b>	<b>Details of Materials / Equipment</b>		<b>Manufacturer's Name</b>
19	Autoamtic Power Factor Correction Relay		Areva
	(Numeric Type)		BELUK (Germany)
			Siemens
20	PVC insulated XLPE aluminium/copper conductor		Cable corporation of India
	armoured MV Cables upto 1100 V grade		Skytone
			Ravin Cable
			Polycab
			KEI
			Dimond
21	LT Jointing Kit / Termination		Birla-3M
			Raychem
			REPL
			Safe Kit
22	Cable Glands Double Compression with earthing links		Baliga Lighting
			Comet
			Cosmos
23	Bimettalic Cable Lug		Comet
			Dowell's (Biller India)
			Hax Brass (Copper Alloy India)
24	PVC insulated copper conductor stranded flexible wires		Finolex
			R RKabel
			Skytone
			KEI
			Polycab
			BatraHenlay
25	Mettalic / GI Conduit (ISI approved)		AKG
			BEC
			NIC
26	Lead Coated Flexible GI Conduit		PLICA India Pvt. Ltd.
			Flexicon
27	PVC Conduit &Accessories (ISI approved)		AKG
			BEC
			Precision
			Polypack
			Ravindra
28	Industrial Socket		
	a. Splash Proof		Clipsal

<b>LIST OF APPROVED MAKES FOR ELECTRICAL WORKS</b>			
<b>S.No.</b>	<b>Details of Materials / Equipment</b>		<b>Manufacturer's Name</b>
			Gewiss
			Legrand
			Neptune Balls
			Schneider Electric
	b. Metal Clad		BCH
			MDS
29	Switch & Socket		Clipsal (Opal Series)
			Crabtree
			M K India (Wraparound)
			Idoasian-simon
			Legrand (Mosaic)
			Wipro (NorthWest)
			Havells –crownos
			ABB – Lumina
			Anchor Roma
			Siemens
			L&T
30	Ceiling Fan		Crompton Greaves
			Havells
			Orient
			Usha
31	Lighting Fxiture		
	a. Incandescent / Halogen / PL / Metal Halide) / Fluorescent		Philips
			Wipro
			GE
	b. External Lighting Fixture		Bajaj Electricals Ltd.
			Keslec
			LIGMAN
			Philips
			Wipro
	b. Aviation Obstruction Light(LED Type)		Actos
			Bajaj
			Binay
32	Electronic Ballast for Fluorescent		Osram
	(To be selected as per fixtures' manufacturer)		Opal
			Philips
			Thorn
			Wipro (APF)
33	Selector Switch, Toggle switch		Kaycee

LIST OF APPROVED MAKES FOR ELECTRICAL WORKS		
S.No.	Details of Materials / Equipment	Manufacturer's Name
		Salzer (Larsen & Toubro)
34	Cable Trays (Factory Fabricated) / Raceways	Profab Engineer
		Ricco Steel
		Needo
		MaheshwariElectrtricals
35	Sealed Maintenance Free Batteries	Amar Raja
		Exide
		Global (Rocket)
		Hitachi
		Shinkobe
36	Battery Charger	Caldyne
		ChhabiElectricals
		Joshi Electricals
		Max Power
		Volstat
37	Invertor	Autopro (Professional Lighting)
		Luminous
		Megatech
		Microtek
38	Lightning Protection System	Erico
	(Early Streamer Emission Type)	LPI
39	Timer	ABB
		Larsen & Toubro
		Legrand
		Schneider Electric
		Siemens
40	50 W Halogen Light Transformer (Encapsulated Transformer)	Gemini Global
		Opal
		Philips
		Reiz
41	Tap off / splitters complete with gasketed G.I. boxes	Catvision
		CE
		DX
		Powerage
		Vision Hire
<b>B.</b>	<b><u>TELELEPHONE / DATA</u></b>	
1	Tag Block	Krone
		TVSE
2	Telephone armoured / unarmoured cable / wire	Delton

<b>LIST OF APPROVED MAKES FOR ELECTRICAL WORKS</b>		
<b>S.No.</b>	<b>Details of Materials / Equipment</b>	<b>Manufacturer's Name</b>
		Finolex
		Skytone
		Fusion Polymer
		Polycab
3	Coaxial Cable	Beldon
		Comm-Scope (US Imported)
		Fusion Polymer

<b>LIST OF APPROVED MAKES FOR SANITARY WORKS</b>			
<b>S.No.</b>	<b>Details of Materials / Equipment</b>		<b>Manufacturer's Name</b>
1	a. Vitreous China Sanitaryware		Cera
			Neycer
			Parryware
2	W.C Seat Covers		Admiral
			Tara
3	Low level Flushing cisterns		Commander
			Duralite
	b. WC Connectors		Multiwik
			Viega
2	Bath Tub and Shower Tray		Aquaplus
			Parryware
3	Stainless Steel Sink		Cobra
			Jayna
			Nirali
6	Cistern		Commandor
			Champion
			Parryware
7	CP Brass Fittings		Crabtree
			Ess-Ess
			Gem
			Jaguar
			Kingston
			Parko
			Parryware
			Marc
			Plumber
8	Flow Control Devices		Jaquar
			RST
9	Storage Type Geyser / Heat Pump		Racold
			AO Smith
			Venus
10	Floor Drain Fixture, Rain Water Outlets		ACO
			GMGR
			Neer
11	Urinal Trap		Chilly
			Neer
12	ULTRA LOW FLOW FIXTURES-		M.N. Padia
	(Flush valves, Faucets, Bib taps)		Schell



**LIST OF APPROVED MAKES FOR SANITARY WORKS**

<b>S.No.</b>	<b>Details of Materials / Equipment</b>	<b>Manufacturer's Name</b>
	Low Flow C.P Fittings	
13	Macerating systems	Grundfos
		Sanitop
14	Shower Channel / PP – car parking channel	ACO
		Kessel
		Viega
15	C.P. Grating for Floor Trap	Chilly
		GMGR
		Neer
		Viega
16	GI / M.S Pipes (IS : 1239 and IS : 3589)	AST Pipes
		Hitech
		Swastik
		Zenith
17	GI pipes fittings	Crescent Engg Corp. Jalandhar
		KS Engg
		RM Engg works, ahmedabad
		Zoloto
18	GI/MS Pipe Protection Wrapping & Coating	IWL - Pypkote
		Neotape
		Rustech – Coatek
		STP Ltd.
19	Pipe clamp & supports	Diamond
		Easyflex
		Intellotech
20	Pipe Hangers	Hitech
		OM fasteners
21	D. I. Pipes	Jindal
		NECO
22	UPVC Pipe	Finolex
		Jain
		Kisan
		Prince
		Crescent Engg Corp. Jalandhar
		KS Engg
		RM Engg works, ahmedabad
		Zoloto
23	CPVC pipes & fittings	Ajay

**LIST OF APPROVED MAKES FOR SANITARY WORKS**

<b>S.No.</b>	<b>Details of Materials / Equipment</b>	<b>Manufacturer's Name</b>
		Ashirwad
		Astral
		Prince
24	Teflon Tape	
25	Toilet Accessories	Akoi
		Parko
26	P.P.R Pipes	Prince
		Reliance
		Supreme
27	P.E.X pipes	Itap
		Giacomini
		Henco
		Viega
28	FRP/GRP Manhole covers	Everlast
		Thermoset
29	HDPE Pipe & fitting	Duraline
		Kimplas
		Reliance
30	RCC Pipe	Dhere
		K K
		INDIAN HUME PIPE
		Pranali
31	Stoneware Pipes	Anand
		Burn & Co.
		Perfect potteries
		Rajura
32	GM / Forged Brass Ball Valves	Jayhiwa
		Leader
		RB
		Sant
33	Sluice Valves	Advance
		Kirloskar
		Marck-Cair
		SANT
		Zoloto
34	Butterfly Valve	Audco
		Jayhiwa
		Keystone
		Marck-Cair
35	Check Valve – WaferType	Kirloskar

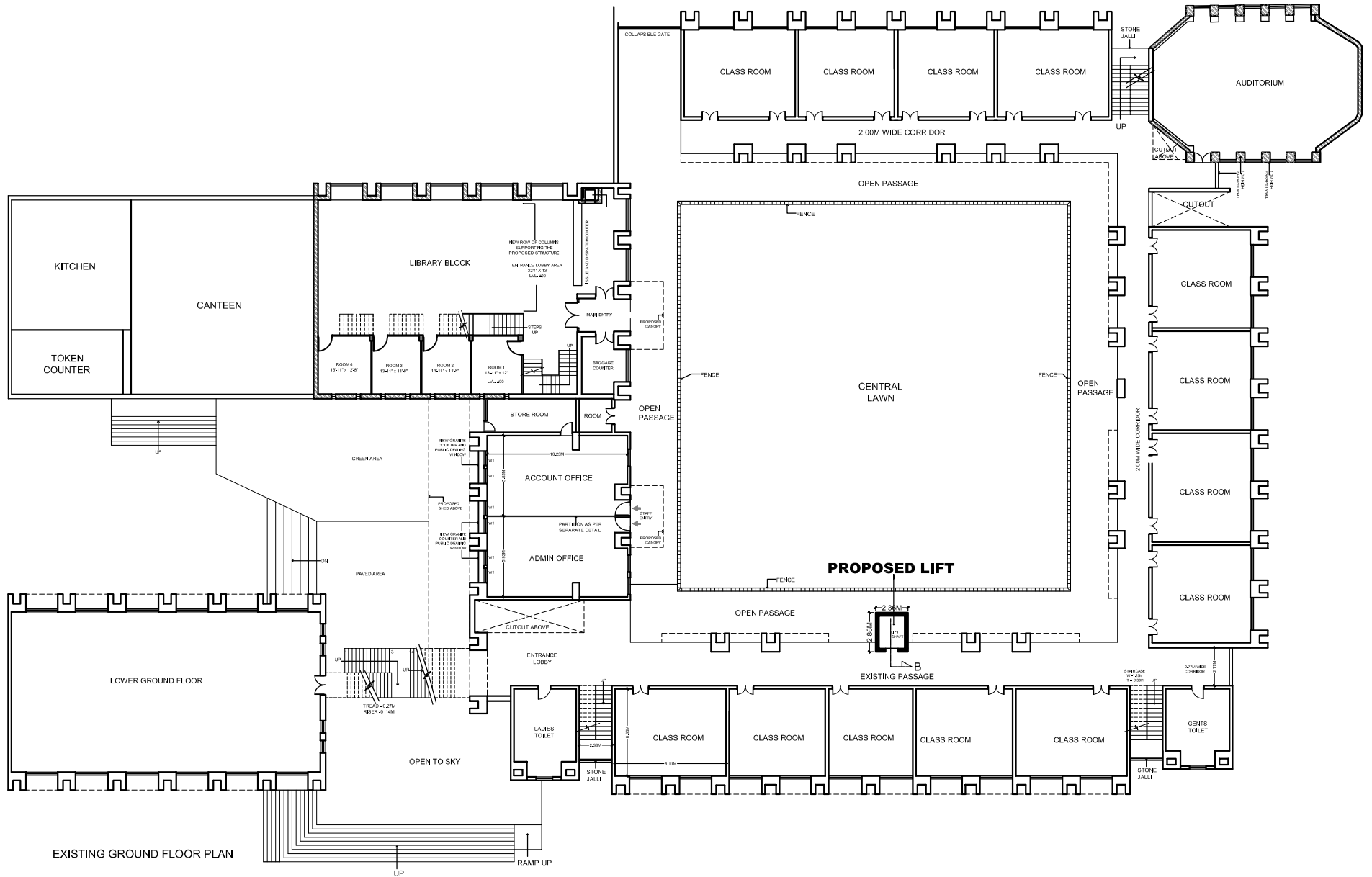
**LIST OF APPROVED MAKES FOR SANITARY WORKS**

<b>S.No.</b>	<b>Details of Materials / Equipment</b>		<b>Manufacturer's Name</b>
			Jayhiwa
			Marck-Cair
			Normex
36	Check Valve – Dual Plate		Marck-Cair
			Normex
			Sant
37	Cast Iron Non Return valve		Leader
			Zoloto
38	Check Valve Forged Screwed		Leader
			RB
			Zoloto
39	Pressure Reducing Valve		Marck-Suzhik
			RB
			OR
			Zoloto
40	Solenoid Valve		Avcon
			Aira
			Danfoss
41	Thermostatic mixing valve		Danfoss
			Overtrop
42	Air Release Valve		Marck
			OR
			RB
			Studor
			Zoloto
43	Ball Float Valve		Prayag
			Zoloto
44	NRV – Ball type – Sewage application		Danfoss
			Silverspark
			Normex
45	Backflow preventor		Normex
46	Foot valve		Kirloskar
			Normex
47	HDPE Tanks		Sintex
			Ashish
48	Air Vent Inlet Valve		Studor
49	Food Crusher for Sink		Enviro
			Venus
			Zach- Rajguru
50	FRP/GRP- SMC water tank		Devi Polymers pvt. Ltd.

<b>LIST OF APPROVED MAKES FOR SANITARY WORKS</b>			
<b>S.No.</b>	<b>Details of Materials / Equipment</b>		<b>Manufacturer's Name</b>
			Smartage
			Binani
51	FRP/GRP storage tanks		Sintex
52	Y Strainer CI		Leader
			Marck-Cair
			Zoloto
53	Hydropneumatic System		Aquasub Engineering
			CRI Pumps
			Dharani pumps
			Grundfos
			Kirloskar
			Nocchi
			Nanfang
			Willo – Mather & Platt
54	Storm Water Drainage & Sewage Sump Pumps (Submersible)		Aquasub Engineering
			CRI Pumps
			Darling
			Dharani
			Grundfos
			Kirloskar
			KSB
			Kishor
			Nocchi
			Mody
			Willo – Mather & Platt
55	Transfer Pumps		Aquasub Engineering
			CRI Pumps
			Dharani
			Grundfos
			Kirloskar
			KSB
			Nanfang
			Nocchi
			Willo - Mather & Platt
56	Self-Priming Pumps		Aquasub Engineering
			CRI Pumps
			Johnson
			Kirloskar
57	Borewell Pump		Aquasub Engineering
			CRI Pumps

LIST OF APPROVED MAKES FOR SANITARY WORKS			
S.No.	Details of Materials / Equipment		Manufacturer's Name
			Grundfos
			Kirloskar
58	Anti Vibration Mounting & Flexible Connections		Cori
			Dunlop
			Flexionics
			Easyflex
			Resistoflex
			VIMPA
59	Pressure Gauge		Fiebig
			H Guru
60	Water Meter (Mechanical Type)		Dasmesh
			Kranti
			Kent
61	Level Controller & Indicator (Water)		Pumptrol
			RM Engg. Works, Ahmedabad
62	Paints		Asian Paints
			Berger
			ICI
			Shalimar Paints
63	MH / Water Tank Plastic Steps		KGM
			Patel
			Pranali Industries
64	Insulation for Hot Water Pipes		Armacell – Armaflex
			K-Flex
			Thermafex
65	Electric Hot Water Generator / Heat Pump		A.O. Smith
			Spherehot
			Venus
			Riello
66	Solar Heating		A.O Smith
			Ecotherm
			Megason (Greece)
			Overtrap
			Solinteks
			Tata BP Solar
			Vijay Solar
67	Grease Trap/Separator		ACO
			Wade
68	Welding Rods		Ador

<b>LIST OF APPROVED MAKES FOR SANITARY WORKS</b>			
<b>S.No.</b>	<b>Details of Materials / Equipment</b>		<b>Manufacturer's Name</b>
			Cosmos
			Prima (S)
			Super Bond (S)
69	Fastener		Fisher
			Hilti
			Mungo
			Powers
70	Fire Sealant		Birla 3 M
			Hilti
			Powers
			Promat
			STI (USA)/ Fire master
71	Manhole (prefabricated)		OK Play
			Supreme
72	Temperature Sensor / Gauge		Forbes Marshall
			Danfoss
			Wika
73	Vacuum Sewer System		Roediger Vacuum
74	Syphonic Roof Drainage System		Geberit
			George Fisher
			Neuva Terrain
			Saint Gobian



PROJECT:

## CONSTRUCTION OF NEW LIFT AT RAM LAL ANAND COLLEGE

Delhi University South Campus  
Benito Juarez Road, New Delhi- 110 021

Date : 18/03/2016

Scale : NTS

Drawn By : SHYAM

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Sheet No.

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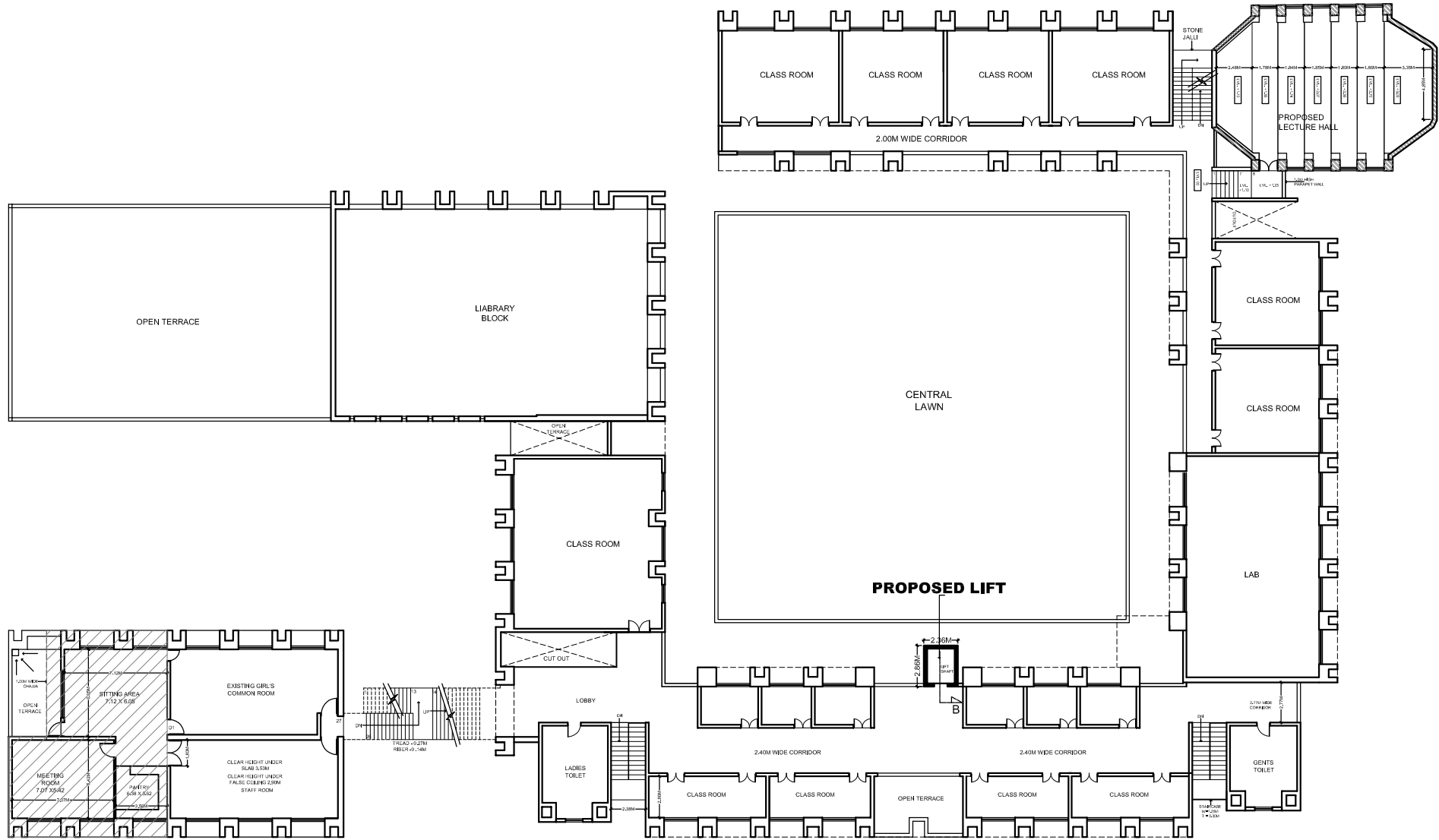
### GROUND FLOOR PLAN

## RANJIT SINGH & ASSOCIATES

1206 Surya Kiran Building, 19 K.G. Marg, New Delhi 110001  
Ph.23312688 Fax: 41510129 Email: rsa1206@msn.com



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EXISTING FIRST FLOOR PLAN

PROJECT:

## CONSTRUCTION OF NEW LIFT AT RAM LAL ANAND COLLEGE

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Benito Juarez Road, New Delhi- 110 021

Date : 18/03/2016

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Sheet Title

FIRST FLOOR PLAN

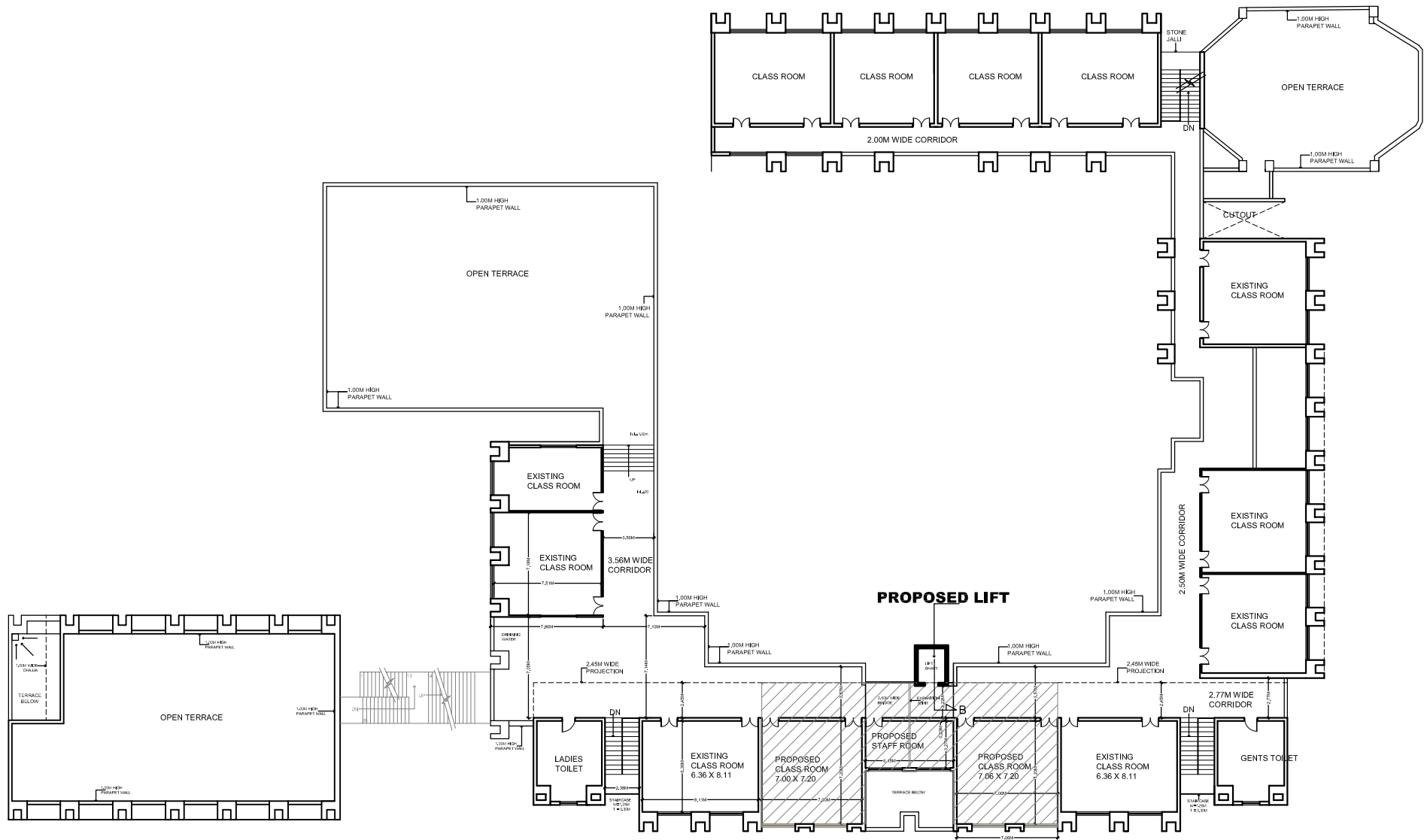
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EXISTING SECOND FLOOR PLAN

PROJECT:  
**CONSTRUCTION OF NEW LIFT  
 AT RAM LAL ANAND COLLEGE**  
 Delhi University South Campus  
 Benito Juarez Road, New Delhi- 110 021

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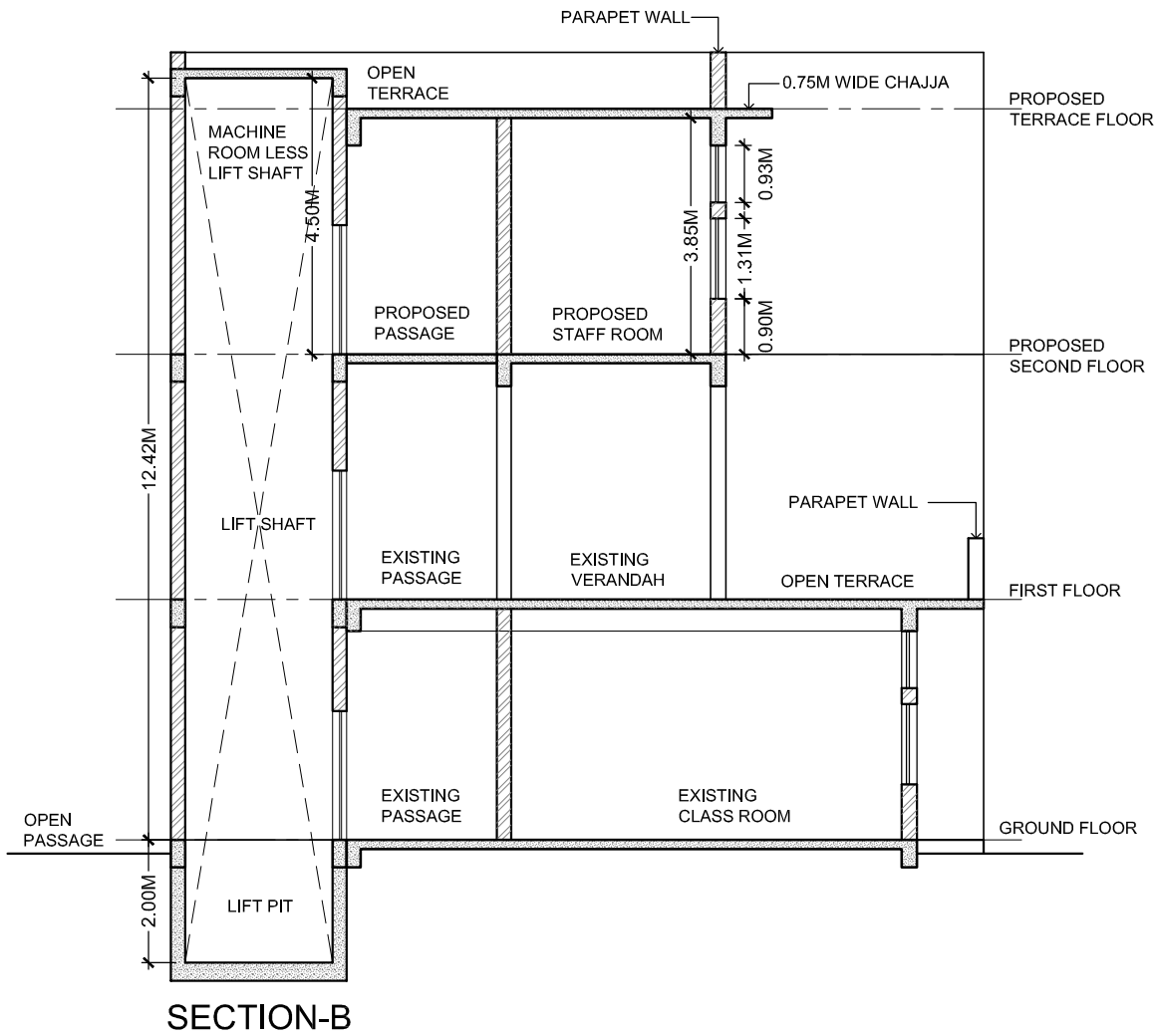
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Sheet Title  
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PROJECT:

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Delhi University South Campus  
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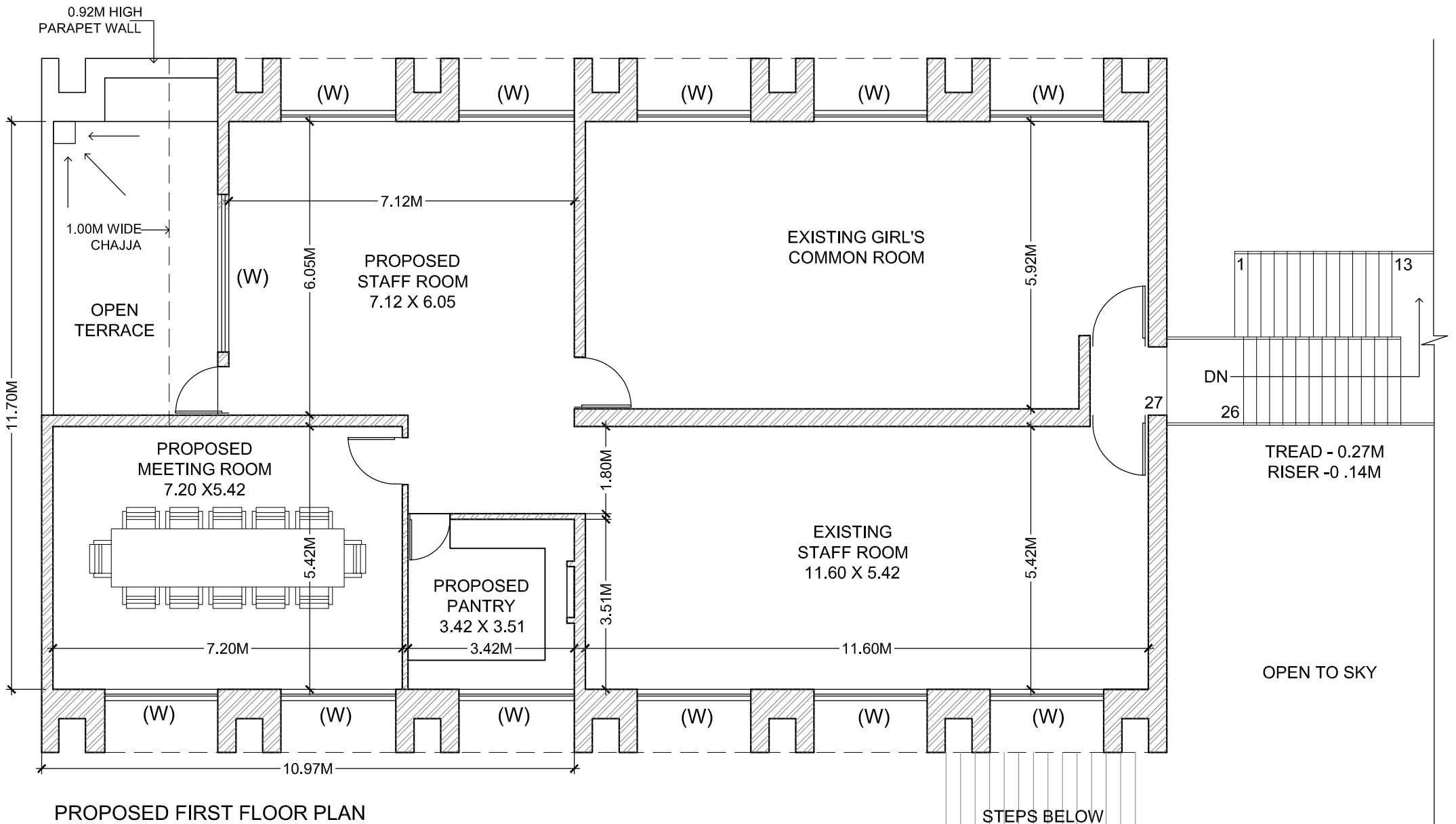
**SECTION-B**

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PROPOSED FIRST FLOOR PLAN

PROJECT:  
**EXTENSION OF STAFF ROOM  
 AT RAM LAL ANAND COLLEGE**  
 Delhi University South Campus  
 Benito Juarez Road, New Delhi- 110 021

Date : 18/03/2016  
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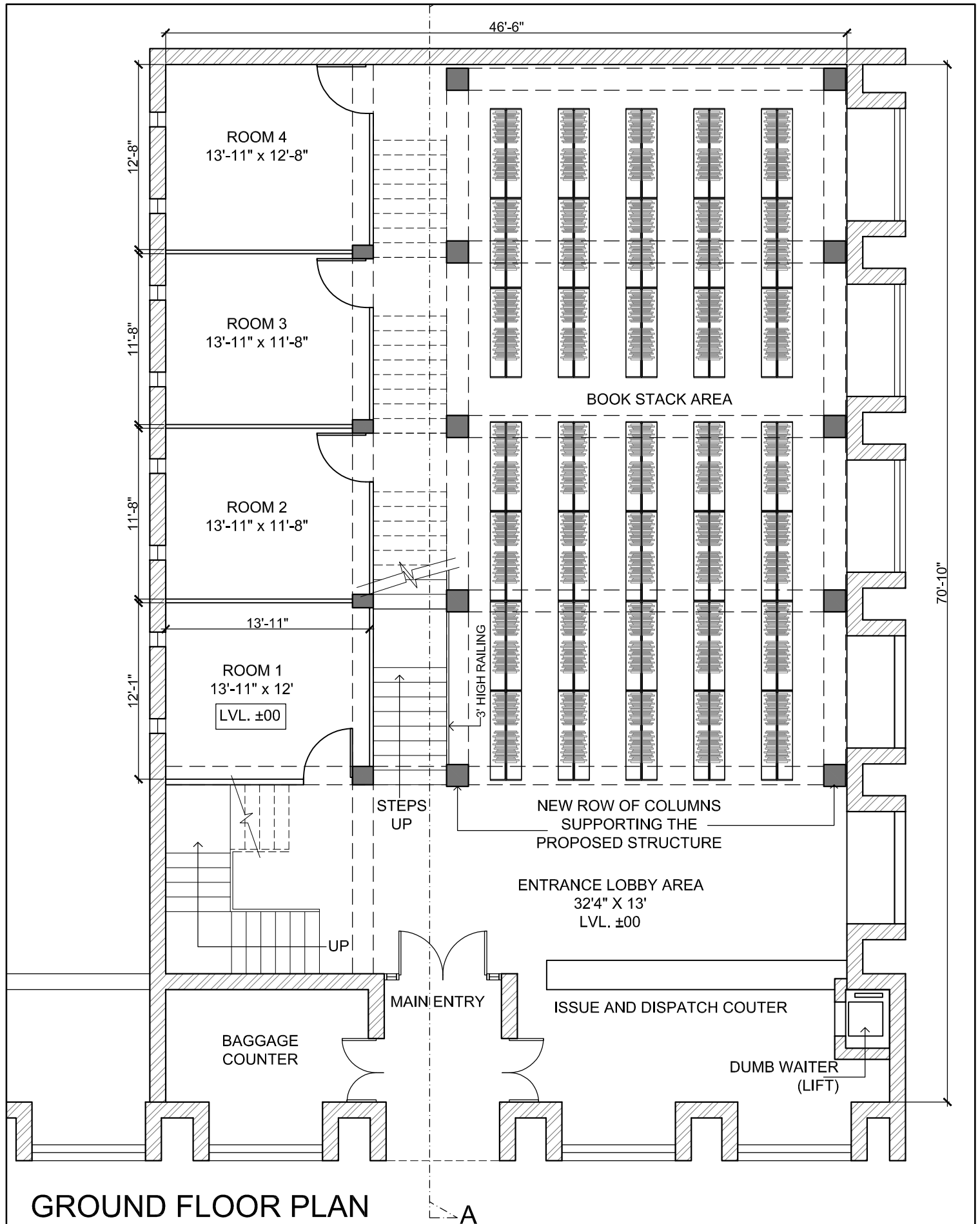
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**PROPOSED FLOOR PLAN**

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# GROUND FLOOR PLAN

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**LIBRARY RENOVATION AND REDESIGN**  
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**RAM LAL ANAND COLLEGE UNIVERSITY OF DELHI**

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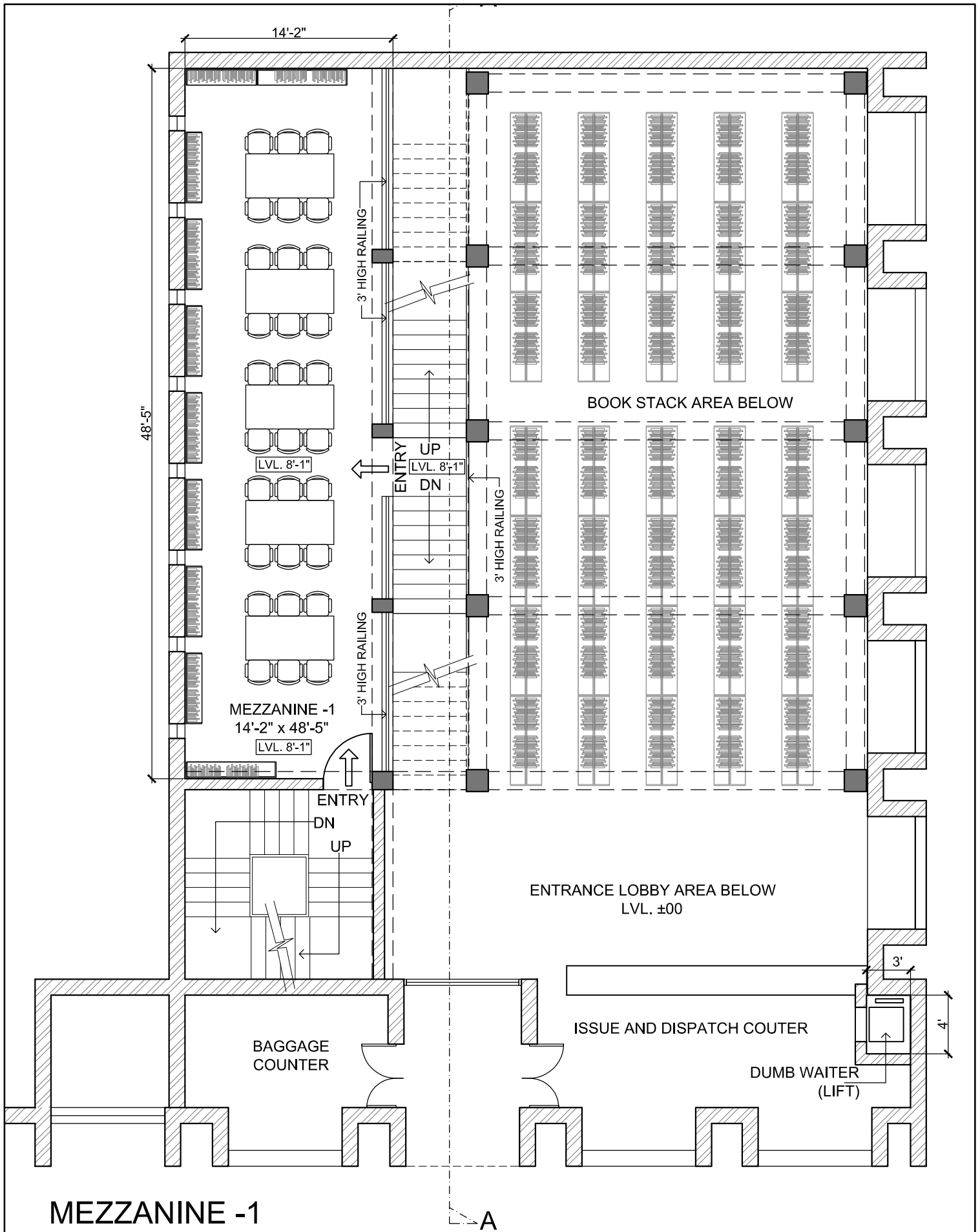
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**GROUND FLOOR PLAN**

**RANJIT SINGH & ASSOCIATES**  
 1206 Surya Kiran Building, 19 K.G.Marg, New Delhi 110001  
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**MEZZANINE -1**

**A**

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**MEZZANINE 1 FLOOR PLAN**

Sheet no.

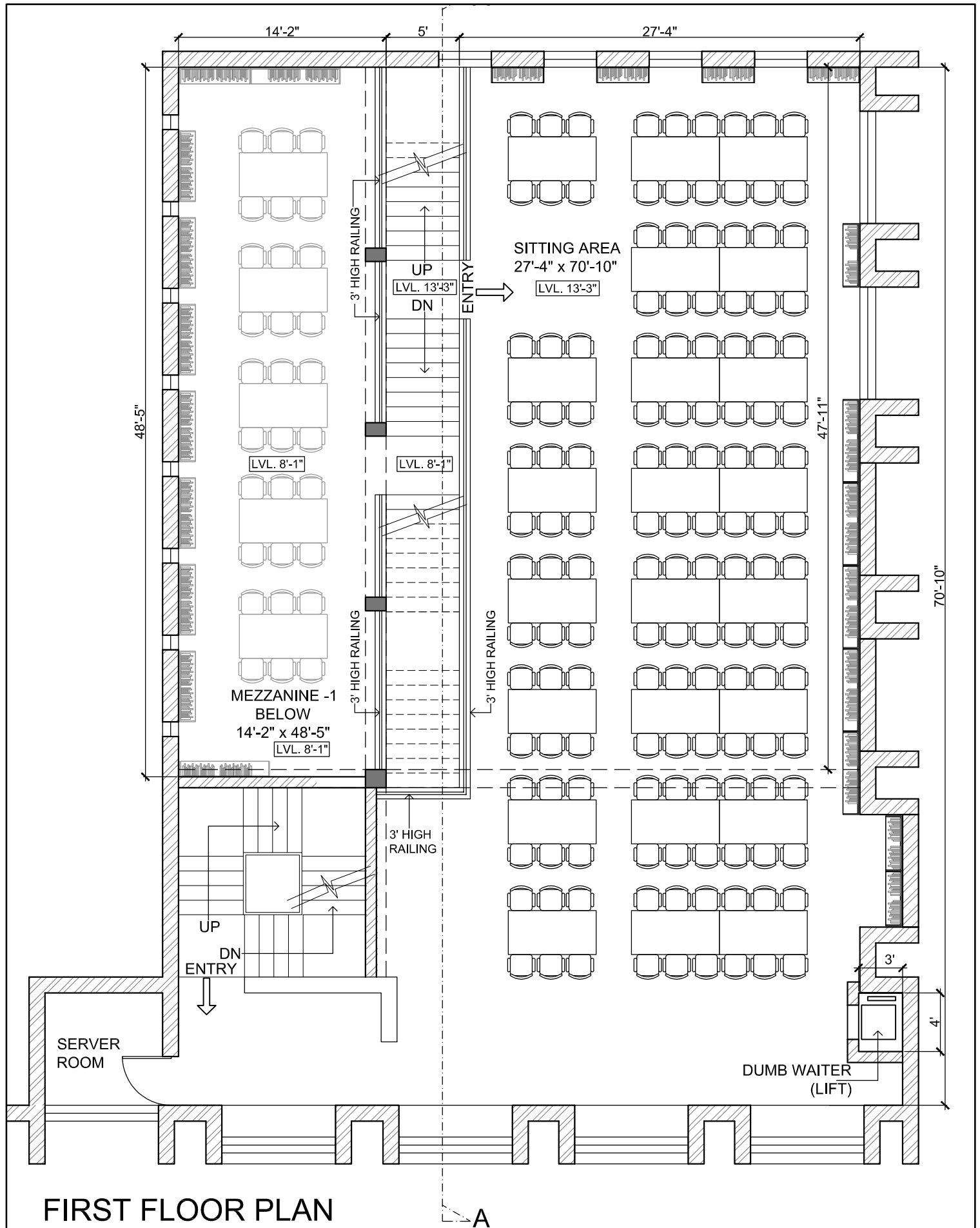


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# FIRST FLOOR PLAN

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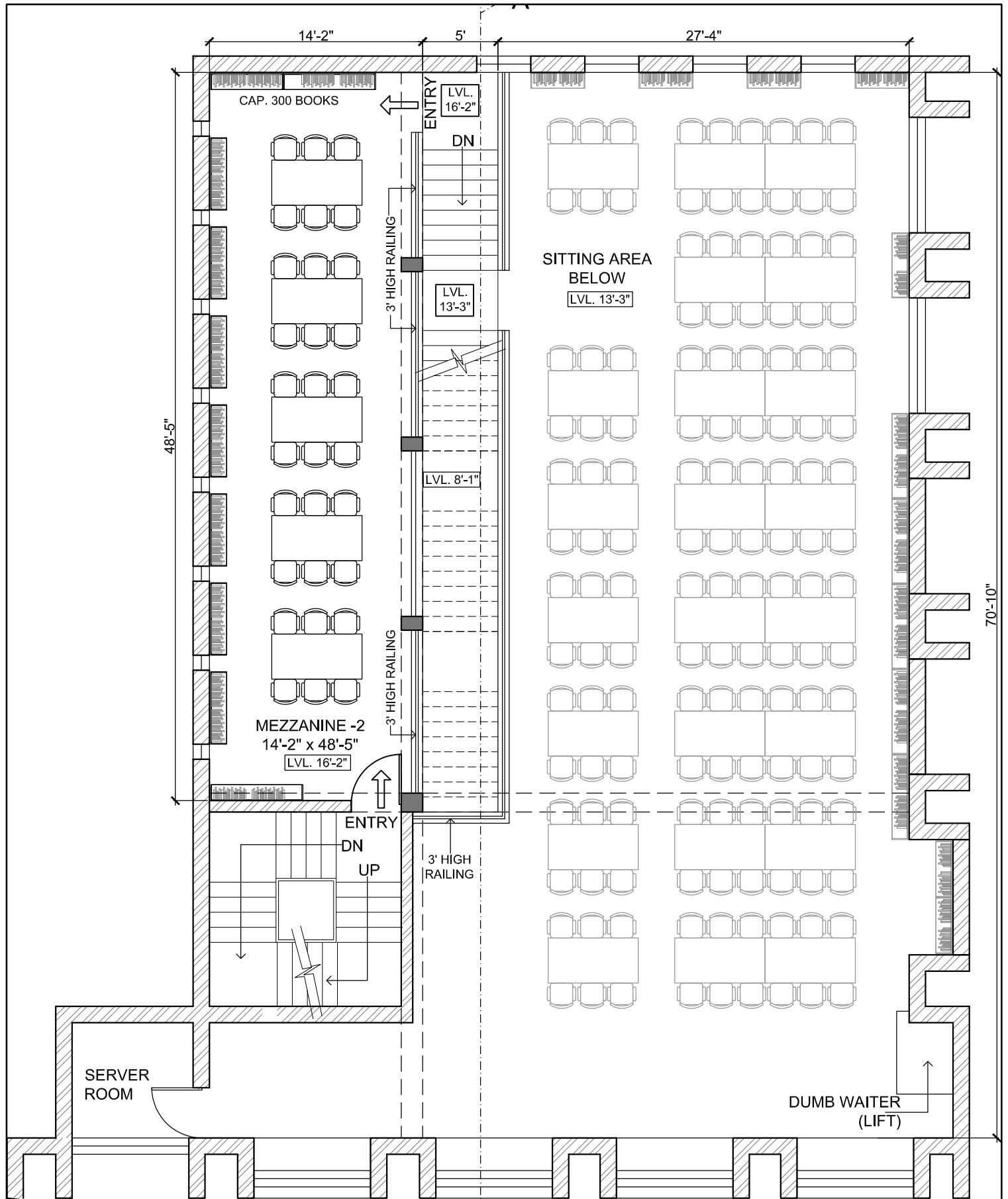
**FIRST FLOOR PLAN**

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**MEZZANINE -2**

A

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**MEZZANINE -2 PLAN**

Sheet no.

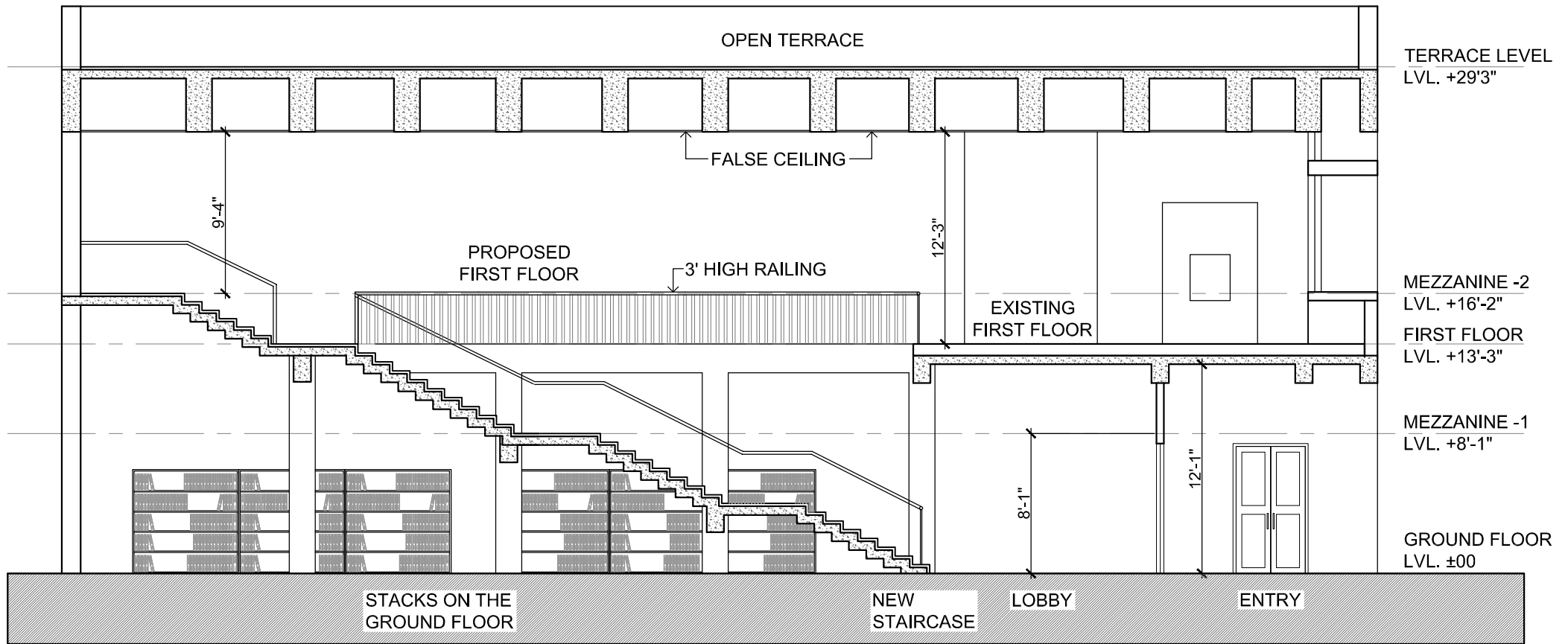


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## SECTION AA

Project  
**LIBRARY RENOVATION AND REDESIGN**  
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 UNIVERSITY OF DELHI**

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**SECTION AA**

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