	TELANGANA GRAMEENA BANK Scheduled Bank Owned by Government HEADOFFICE: HYDERABAD
	#2-1-520, 2 nd Floor, Vijaya Sri Sai Celestia, Street No.9, Shankermuth Road, Nallakunta, Hyderabad, Telangana-500044. Website: www.tgb.bank.in Email: hod.snfa@tgb.bank.in

INVITATION OF TENDERS IN A TWO BID SYSTEM THROUGH E-TENDERING PROCESS

FOR

PROPOSED CONSTRUCTION OF TELANGANA GRAMEENA BANK HEAD OFFICE BUILDING (TWO CELLARS + STILT FLOOR + FIVE UPPER FLOORS) ON BANKS OWN PLOT SITUATED IN SY NO. 417 AND 420, PLOT NO.79, UPPAL BHAGAYATH LAYOUT, UPPAL, HYDERABAD, TELANGANA. (CIVIL AND LANDSCAPE WORKS)

PART I

TECHNICAL BID.

**(Last Date &Time for Submission: on or before 08.06.2026 by 2.00PM
Opening of Technical bids on 08.06.2026 at 4.00 PM (IST))**

CONSULTANTS:



M/S abhikram-s
architects, interior designers, urban planners
valuers & project managers
#3-6-134 FLAT NO 302
SVC ROYAL DM APARTMENTS
STREET NO 18, HIMAYATNAGAR
HYDERABAD-500029, ph.no 040-35561296
abhikramarchitects@gmail.com

Name of The Tenderer:
Address:
GSTIN:

NOTICE INVITING TENDER (NIT)

TGB, invites **Percentage E-Tender** for **PROPOSED CONSTRUCTION OF HEAD OFFICE BUILDING (TWO CELLARS + STILT FLOOR + FIVE UPPER FLOORS) FOR TELANGANA GRAMEENA BANK ON BANK'S OWN PLOT SITUATED IN SY NO. 417 AND 420, PLOT NO.79, UPPAL BHAGAYATH LAYOUT, UPPAL, HYDERABAD, TELANGANA. (CIVIL AND LANDSCAPE WORKS)**

1.	Name of the work	PROPOSED CONSTRUCTION OF HEAD OFFICE BUILDING (TWO CELLARS + STILT FLOOR + FIVE UPPER FLOORS) FOR TELANGANA GRAMEENA BANK ON BANK'S OWN PLOT SITUATED IN SY NO. 417 AND 420, PLOT NO 79, UPPAL BHAGAYATH LAYOUT, UPPAL, HYDERABAD, TELANGANA. (CIVIL AND SOFT LANDSCAPING WORKS)
2.	Estimated cost	₹ 18,09,64,369.40 /- plus GST
3.	Time allowed for Completion	18 Months (refer clause-13 of Notice to contractor)
4.	Quantum of Earnest Money Deposit (EMD)	₹ 18,10,000 /- (DEMAND DRAFT) Drawn In favor of Telangana Grameena Bank Payable at Hyderabad.
5.	Date and Time where tender forms are available	From 11.00AM on 18.05.2026. Web site details: www.tgb.bank.in , http://etender.sbi/SBI
6.	Last date and time of submission of online Tender	08.06.2026 up to 02:00PM
7.	Place, date & time for submission of e tender Contact details /telephone no/ email address.	a) Online submission up to 08.06.2026 up to 02:00PM The tender has to be submitted Through E-TENDERING PROCESS E-Procurement technologies Ltd., Ahmedabad Web site: https://etender.sbi/SBI. Contact details: M/s e-Procurement Technologies Ltd, Ahmedabad Ph No.: 7859800609 / 9081000427 Email: etender.support@eptl.in
8.	Date, Time and Place of opening of e-Tenders	08.06.2026 , at 4.00 PM THROUGH E-TENDERING PROCESS E-Procurement Technologies Ltd. Website: http://etender.sbi/SBI Bank officials contact details: Name: B. HAREESH KUMAR Contact No: 9491041951/9704150301.
9.	Quantum of Security Deposit (percentage)	1. Initial Security Deposit (ISD) - 2% of the Tender value including EMD. 2. Retention Money- 10 % of the running bills but not exceeding total deduction of 5% of value of work including ISD.
10.	Terms of payment of Bills, if any (specify the minimum value of work for payment of running account bills)	Each running bill of ₹ 100.00 Lacs and above
11.	(Penalty clause) Liquidated Damages	@ 0.5% of the value of work per week of delay subject to a

		maximum penalty of 5% of the value of work would be strictly imposed.
12.	Validity period of the tender.	Three (3) Months
13.	Defect Liability Period	Twelve (12) Months from the date of issue of virtual completion certificate.
14.	Eligible Taxes	<p>A) Income Tax & GST IT will be deducted at source as per Govt. Guidelines.</p> <p>B) Reimbursement of GST will be made only on submission of proper GST invoice (E-Invoice) as per applicable GST provision. The contractor should comply with the following;</p> <ol style="list-style-type: none"> 1. Contractor should have GST Registration Number. 2. E-Invoice should specifically/separately disclose the amount of GST levied at applicable rate as per GST provision. 3. In case of Correction in the bills after scrutiny, contractor should submit fresh bills for payment. 4. Contractor should timely file his GST return in accordance with GST provisions to enable the bank to claim the credit of GST paid to the contractor. 5. The GST Number of TGB is -36AAAD3893M2ZB
15.	Electronic Payment	Payment shall be made by way of electronic fund transfer and the bill will be paid by the Bank. Firm should furnish details of the bank, a/c no, IFSC code.
16.	Agency for arranging online bidding	<p>E-Procurement technologies Limited, Ahmedabad. for any technical queries: <u>e-mail id:</u> etender.support@eptl.in <u>Contact details:</u></p> <ol style="list-style-type: none"> 1. 7859800624 2. 9081000427 3. 7859800609
17.	Price quoted by bidder.	<ol style="list-style-type: none"> 1. The Contractor should quote + / - % Percentage on the given estimated cost. 2. The given rates are inclusive of Cost of materials, all taxes (excluding GST), wastages, Octroi, machinery, temporary works such as scaffolding, cleaning, overheads, profit, statutory expenses, incidental charges i.e., insurances, Cost of labour and all related expenses required for the completion of the work. 3. Additional claims other than the quoted amount will not be entertained. 4. The given rates shall be firm throughout the completion of the project.

<p>18.</p>	<p>EVALUATION OF PRICE BIDS AND FINALIZATION</p>	<ol style="list-style-type: none"> 1. Only those bidders who qualify in the technical evaluation shall be shortlisted, and their online price bids will be opened. 2. The L1 Bidder will be selected on the basis of net total of the price evaluation as quoted in the Online bidding. 3. In case the L1 amount quoted by two or more contractors is the same, such bidders shall be required to submit sealed/online “Revised Percentage Offers” based on the original estimated cost of the tender. However, the revised percentage shall, in no case, be higher than the percentage quoted in their initial offer for the project. The L1 bidder shall thereafter be determined based on the revised offers submitted. 4. The process of online rebidding amongst the two or more contractors offering same rates shall continue till L1 bidder is discovered. If required, Bank shall conduct reverse auction to discover the L1 bidder. 5. In case, any of such contractors or all contractors (who have quoted same tender amount in the initial bidding or subsequent bidding) refuse to submit revised offer, it shall be treated as “Withdrawal of tender” by the Contractor before acceptance by The Bank and the EMD of such contractors shall be forfeited and they shall not be allowed to participate in the re-tendering process for the work. 6. If the final L1 bid is below 7.5% of the estimated cost then the L-1 contractor has to submit Additional Security Deposit (ASD)/Additional Performance Guarantee (APG). The amount of such ASD / APG shall be the difference between 92.5 % of estimated cost put to tender and the quoted price. 7. Bank Guarantee or FDR receipt favoring TELANGANA GRAMEENA BANK payable at Hyderabad but drawn on any other Nationalized Bank may also be accepted as ASD / APG. 8. If the L1 bidder refuses to give the ASD, then the EMD will be forfeited and the tender will be re-invited or the Bank may consider the price quoted by the next L1 bidder as per the sole discretion of the Bank. The L1 bidder will not be allowed to participate in the retendering process.
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19.	Pre-Bid Meeting	Will be held on 25.05.2026 @ 3.00 PM at Telangana Grameena Bank, Head Office, # 2-1-520, 2nd Floor, Vijaya SriSai Celestia, Street No.9, Shankermuth Road, Nallakunta, Hyderabad, Telangana -500044.
20.	The tender will be summarily rejected if the Bidder.	<ol style="list-style-type: none"> 1. Failed to submit the original EMD/DD at TGB Head office before due date and time. 2. Failed to upload Entire signed tender document, which is downloaded from the website as a proof of accepting the terms and conditions. 3. Failed to upload the scan and signed copy of declaration. 4. Failed to up load the Scan copy of required documents as mentioned in the documents to be uploaded. 5. Partly or fully Modifies, alters or corrects the tender document uploaded by TGB.
21.	Bank reserves the right to accept or reject any or all bids without assigning any reasons thereof, even after opening of the bids.	

Special instructions to Contractors -

1. Scanned copy of EMD must be uploaded and the same needs to be submitted at given address within due date of tender.
2. Firm should visit the websites <https://etender.sbi> or www.tgb.bank.in till last date of submission for changes. Corrigendum if any will be published only in the above websites.
3. **L-1 Tenderer shall submit the original signed copy of entire tender document within 3 days from date of tender opening.**
4. In case the date of opening of tenders is declared as a holiday, the tenders will be opened on the next working day at the same time.

PROCESS OF THE TENDER

1. Bidding Process - ON-LINE PERCENTAGE E-TENDERING PROCESS

1.1 RFP and Bid Submission

The bidder shall have to submit the tender ON-LINE downloaded either from our website www.tgb.bank.in or from the following e-procurement portal: <https://etender.sbi/SBI>.

Contact details of M/s e-Procurement Technologies Ltd, Ahmedabad

1. 7859800624
2. 9081000427
3. 7859800609

Email: etender.support@eptl.in

The Bank shall not consider any request for date-extension for bid-submission on account of late receiving / downloading of RFP by any bidder. But, however, any suggestion or advice of value addition from the vendors to the tender or rectification of any short comings in tender may entail in issue of Corrigenda before the last date or postpone the tender as the Bank may deem necessary.

1.2 Mode of submission of tender – ON-LINE:

Tenders are to be submitted ON-LINE by uploading in the portal advised above.

1. **Earnest Money Deposit – The DDs should be scanned and uploaded.**
2. **Non-financial /Technical Bid – Should be signed on all pages and uploaded.**
3. **Financial Bid / Price Bids - The Contractor should quote + / - % Percentage on the estimated cost.**

1.3 Procedure of opening of tender

After the last date of submission of the tenders, the Bank will open the technical bids **ON-LINE** and evaluate by verifying the eligibility documents submitted in the portal:

1. The Earnest Money Deposit (EMD) shall be verified first. Bidders who do not submit the EMD Demand Draft (in original) drawn in favour of TGB shall be rejected at the initial stage itself. Subsequently, other eligibility documents shall be verified. Bidders are advised to ensure that all eligibility requirements are duly submitted. It shall be at the sole discretion of the Bank to accept or reject any bid or to seek additional documents for evaluation, if required.
2. Price bids will be considered for only those bidders who have qualified in the technical verification.

Bank reserves the right to, open or not to open the financial bid of any vendor basing on the acceptance/rejection of non-financial bid and past performance.

1.4 Decision of the Bank shall be final:

The decision of the Bank shall be final and binding on the vendor in the matter of interpretation of any clause included in this tender or any dispute arising out of the execution of tender. Bank can also terminate the tender without assigning any reason.

1.5 Address for submission

Bids should be submitted ON-LINE in the website of e-Procurement technologies Ltd., Ahmedabad i.e., <https://etender.sbi>

Contact details of M/s e-Procurement Technologies Ltd, Ahmedabad

1. 7859800624
2. 9081000427
3. 7859800609

Email: etender.support@eptl.in

The tender offer with all necessary documents mentioned is to be submitted on or before

08.06.2026 by 2.00PM.

1.6 Submission of Tender in Case of Bank Holiday:

In the event of the specified last date for bid submission being declared a holiday for the Bank, since it is an online tender, **the date and time for online bid submission shall remain unchanged.** However, the original Demand Draft (DD) of EMD, may be submitted by the same stipulated time on the next working day.

1.7 Cost of Bidding – Vendor to bear:

The bidder shall bear all costs associated with the preparation and submission of its bid and the Bank will, in no case, be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

1.8 Late Bids – Rejection:

Tenders/bids received after the prescribed timelines shall not be accepted under any circumstances.

1.9 Withdrawal / Amendment to RFP Contents:

The bank reserves the right to accept or reject any / all proposal(s), to revise the tender, to request one or more resubmissions or clarifications from one or more vendors, or to cancel the process in part or whole. The Bank also reserves the right to amend the RFP at any time prior to the last date for bid-submission. The Bank may, for any reason, whether at its own initiative or in response to clarification(s) requested by a bidder, modify the RFP contents by amendment. Amendment / Corrigendum will be notified on the Bank's website / portal and will be binding on participating bidders. The Bank shall not be liable for any communication gap. In order to provide prospective bidders, reasonable time to take the amendment into account for preparation of their bid, the Bank may, at its discretion, extend the last date for bid-submission.

1.10 Two Stage Bidding Process

The bidder will have to submit response to the RFP with the documents mentioned in PART-A and PART-B as mentioned below.

PART-A: TECHNICAL BID – PROPOSED CONSTRUCTION OF HEAD OFFICE BUILDING (TWO CELLARS + STILT FLOOR + FIVE UPPER FLOORS) FOR TELANGANA GRAMEENA BANK ON BANK'S OWN PLOT SITUATED IN SY NO. 417 AND 420, PLOT NO 79, UPPAL BHAGAYATH LAYOUT, UPPAL, HYDERABAD, TELANGANA. (CIVIL AND LANDSCAPE WORKS) should include the relevant supporting papers. Contract documents consist of, Notice Inviting Tender, Eligibility criteria, Form of Submission of tender, General Notes, General Conditions of Contract, Special Conditions of Contract, Form of Agreement, Technical Specifications, Schedule of Approximate Quantities and Rates, General Specifications of Materials, safety code Model rules for protection, Abstract of General conditions of contract and Declaration.

Earnest Money Deposit of ₹ 18,10,000 /- in the form of Demand Draft issued by scheduled commercial bank favoring **TELANGANA GRAMEENA BANK, payable at HYDERABAD,** must be part of the Technical Bid by uploading the scanned DDs.

The **original EMD DD should be submitted at below address** before the last date and time of submission of the tender.

Address:

Telangana Grameena Bank,
Head Office,
2-1-520, 2nd Floor, Vijaya Sri Sai Celestia,
Street No.9, Shankermuth Road, Nallakunta,
Hyderabad, Telangana-500044.

If the Demand Draft does not reach the above address before the last date and time of submission, the tender shall not be considered for evaluation.

- **Return of Earnest Money Deposit:** The earnest money of the unsuccessful bidders will be returned after entering into an agreement with successful bidders.
- **Forfeiture of Earnest Money Deposit:** This EMD amount will be forfeited, if the successful bidder refuses to accept work order or having accepted the work order fails to carry out his obligation mentioned therein.

SECURITY DEPOSIT:

The EMD of the successful bidder/s will be held by the Bank throughout the Contract period including defect liability period of the tender as **Security Deposit**. No interest will be payable on the Earnest Money Deposit/Security Deposit.

Technical Bid: The technical bid should **compulsorily** include all the requirements of Technical specifications, Terms & Conditions and the following documents, duly filled in, stamped, signed, filed in the seriatim as below and serially numbered.

Contract documents consist of, Notice Inviting Tender, Eligibility criteria, Form of Submission of tender General Notes, General Conditions of Contract, Special Conditions of Contract, Form Of

Agreement, Technical Specification of Electrical works, Schedule of Approximate Quantities and Rates, General Specifications of Materials ,safety code Model rules for protection, Abstract of General conditions of contract and Declaration,

PART-B (COMMERCIAL/PRICE BID) – PROPOSED CONSTRUCTION OF HEAD OFFICE BUILDING (TWO CELLARS + STILT FLOOR + FIVE UPPER FLOORS) FOR TELANGANA GRAMEENA BANK ON BANK’S OWN PLOT SITUATED IN SY NO. 417 AND 420, PLOT NO 79, UPPAL BHAGAYATH LAYOUT, UPPAL, HYDERABAD, TELANGANA. (CIVIL AND LANDSCAPE WORKS) consisting of:

i. **The Contractor should quote + / - % Percentage on the estimated cost.**

ii. The Bank expects the bidder to carefully examine all instructions, forms, terms & conditions, technical specifications etc., mentioned in this RFP. Failure to furnish all information required for submission of a bid not substantially responsive to the RFP in every respect will be at the bidder’s risk and may result in the rejection of its bid without any further reference to bidder.

1.11 Conditional Bid:

Any conditional bid is not valid and shall be summarily rejected.

1.12 Rates quoted to be EXCLUSIVE of GST:

The RATES quoted should be **EXCLUSIVE of GST**. No condition, such as, + GST will be accepted.

However, the quoted rates should be inclusive of all the charges for shipping, transit insurance and installation at the delivered locations and any other charges as may be incidental to the execution of the contract.

1. TENDER FORM

PROJECT: PROPOSED CONSTRUCTION OF HEAD OFFICE BUILDING (TWO CELLARS + STILT FLOOR + FIVE UPPER FLOORS) FOR TELANGANA GRAMEENA BANK ON BANK'S OWN PLOT SITUATED IN SY NO. 417 AND 420, PLOT NO 79, UPPAL BHAGAYATH LAYOUT, UPPAL, HYDERABAD, TELANGANA. (CIVIL AND LANDSCAPE WORKS)

REF: CIVIL CONSTRUCTION AND LANDSCAPE WORKS

Dear Sir,

I/We the undersigned have carefully gone through and clearly understood after visiting the site and the Tender drawings and tender documents comprising of the tender form, Notice to contractors, and conditions for building contract, Special Conditions, Specifications and Schedule of Probable quantities and terms of agreement enclosed along with this tender document.

I/We hereby undertake to execute and complete the whole or any part of the work (as may be required by you) at the respective rates quoted by me/us for the items contained in the Probable Bill of Quantities and at these rates, the specified items amounts to **₹ 18,09,64,369.40 /-plus applicable GST.**

I/We are depositing as Earnest Money a sum of **₹ 18,10,000 /-** in favor of **TELANGANA GRAMEENA BANK, payable at HYDERABAD** along with this tender for due execution of the work at my/our tendered rates together with any variations which shall be adjusted by the Architects at prices based on our tendered rates. I/We shall deposit further sum equivalent to 2% of tender amount, less EMD paid in the event of my/our tender being accepted, towards initial security deposit.

In the event of this Tender being accepted, I/We agree to enter into an Agreement, as and when required, and to execute the Contract in accordance **with prescribed form of Agreement within 14 DAYS from the date of receipt of the Work Order.** In the event of default, I/We hereby bind myself/ourselves to forfeit the aforesaid Initial Security Deposit.

I/We further agree to complete the work covered in the said schedule of quantities within **18 months** from the 15th day reckoned from the date of issue of the work order to commence the work or on which contractor is instructed to take possession of the site, whichever is later.

I/We agree not to employ Sub-contractors other than those that may be specifically approved by your Architects for this contract work.

I/We agree to pay the Government, General and GST (State and Central), Excise and Octroi duties, Insurance, labour cess and all other taxes including works contract tax and GST etc., as the prevailing from time to time, on such items for which the same are leviable, and to get the work, workers, employees (of contractor, Architect & Bank) engaged on the work at site and all materials at site for execution of the work shall be insured comprehensive insurance including fire/accidents/rain/ floods/riots/CAR policy (contractor's all risk insurance policy) and the insurance shall cover the period from date of start of work to date of actual completion of work plus 3 months. In case part work is taken over by the Bank before final completion of the whole work, such parts may not be covered by the insurance from the date of taking over that part of work by the Bank. Draft Insurance deed will be got vetted by the Architect, before obtaining the same. All the rates quoted

by me/ us are inclusive of the same in full and nothing extra shall be claimed anytime on account of any of these.

I/We agree to pay Income tax, to be deducted at source, at the rate prevailing from time to time on the Gross value of the work done, and the rates quoted by me/we are inclusive of same.

I/We agree to pay works contract tax, seignior age fee to be deducted at source, at the rates prevailing from time to time as per Telangana Govt. Act, as amended and rates quoted by me/us are inclusive of the same.

Yours faithfully,

Contractor's Signature

Address:

Date:

2. NOTICE TO CONTRACTOR

ADDRESS:

PROJECT: PROPOSED CONSTRUCTION OF HEAD OFFICE BUILDING (TWO CELLARS + STILT FLOOR + FIVE UPPER FLOORS) FOR TELANGANA GRAMEENA BANK ON BANK'S OWN PLOT SITUATED IN SY NO. 417 AND 420, PLOT NO 79, UPPAL BHAGAYATH LAYOUT, UPPAL, HYDERABAD, TELANGANA. (CIVIL AND LANDSCAPE WORKS)

REF: CIVIL AND LANDSCAPE WORKS

Dear Sir,

1. **TELANGANA GRAMEENA BANK, The General Manager-Operations TELANGANA GRAMEENA BANK, Head office, 2nd floor, Vijaya Sri Sai Celestia, Nallakunta, Hyderabad – 500044**, we have pleasure in inviting you to E-tender for the aforesaid work.
2. The scope of work broadly as given below is **for PROPOSED CONSTRUCTION OF HEAD OFFICE BUILDING (TWO CELLARS + STILT FLOOR + FIVE UPPER FLOORS) FOR TELANGANA GRAMEENA BANK ON BANK'S OWN PLOT SITUATED IN SY NO. 417 AND 420, PLOT NO 79, UPPAL BHAGAYATH LAYOUT, UPPAL, HYDERABAD, TELANGANA. (CIVIL AND LANDSCAPE WORKS)**
3. Pre bid meeting as per date mentioned in NIT will be conducted at below Address **TELANGANA GRAMEENA BANK, Head office, 2nd floor, Vijaya Sri Sai Celestia, Nallakunta, Hyderabad – 500044.**
4. **Tender Documents should be filled and uploaded on the site of M/S e-procurement Technologies Limited. Website: <https://etender.sbi>**
5. The tenderer must obtain for himself, on his own responsibility and at his own expenses, all the information which may be necessary for the purpose of filling this tender and for entering into a contract for the execution of the same and must examine the drawings and inspect the site of the work and acquaint himself with all local conditions and matters pertaining thereto.
5. Each of the tender document's page is required to be signed by the person or persons submitting the tender in token of his/their having acquainted himself/themselves with the General conditions etc., as laid down. Any tender with any of the documents not so signed will be rejected.
6. The tender documents must be filled in English and all the entries must be made by hand and written in ink. If any of the documents are missing or un-signed, the bid shall be considered invalid.

7. All corrections, including erasures, insertions, and alterations, shall be authenticated by the tenderer's initials. Overwriting of figures must also be attested with the tenderer's initials. Overwriting of words is not permitted. Failure to comply with these conditions shall render the tender liable for rejection.

No advice or modification in rates or conditions shall be entertained after submission of the tender. All rates shall be quoted both in figures and in words. In case of any discrepancy between the rates quoted in figures and words, the rates quoted in words shall prevail and shall be considered final and binding.

8. The tender shall be valid for a period of 90 days from the date of opening.

- 9 TOTAL SECURITY DEPOSIT shall comprise of:

- a. Earnest Money deposit
- b. Initial Security deposit
- c. Retention money

- 9.1 The intending tenderer shall deposit with, **TELANGANA GRAMEENA BANK, payable at HYDERABAD** by Demand Draft a sum of **₹ 18,10,000 /-** as the Earnest Money, as a guarantee of good faith, which amount shall be forfeited as liquidated damages, in the event of any evasive/direct refusal or delay in starting the work and or signing the contract. The deposit of the unsuccessful tenderers will be returned, without interest, immediately after a decision is taken regarding the award of the contract. The Earnest money of the successful tenderer will be adjusted towards Security Deposit. A tender not accompanied by Earnest money deposit will not be considered.

- 9.2 The successful tenderer will have to pay further sum equivalent to 2% of his contract value including EMD, as initial Security Deposit (ISD) by means of a D.D./Banker's cheque in favour of TELANGANA GRAMEENA BANK Payable at Hyderabad within 14 days from the date of issue of work order to commence work. The EMD and Security deposit thus paid shall be held by the TELANGANA GRAMEENA BANK as Security deposit, for due execution and fulfillment of the contract, till the completion of the work and defect liability period in all respects and shall not bear any interest.**

- 9.3 Together with the money paid under clause 9.1 & 9.2 above, further retention of 10% of the value of the work done will be deducted from every running bill, till total retention, including EMD and initial SD paid earlier, comes to 5% of the contract value, and same shall be held by the Bank as Total Security Deposit. On the Architect's certifying the completion of work, 50% of the total security deposit shall be released to the contractor along with the final certificate of payment, and the balance amount will be retained in the manner stated elsewhere for a further period of twelve months after the completion date recorded in completion certificate, issued by the Architects and agreed to by the Bank.

10. Within 14 Days of the receipt of intimation from the Architects of the acceptance of his/their tender, the successful tenderer shall be bound to sign an agreement, on a stamp paper in accordance with the Agreement and conditions of contract attached herewith, but the work order or the written acceptance of a tender by the Bank will constitute a binding agreement between the Bank and the person tendering whether such formal contract is or not signed by the contractor.

11. All compensation or other sums of money payable by the contractors to the clients, under the terms of this contract, may be deducted from the Security Deposit or from any sum that may be or may become due to the contractor on any account whatsoever, and in the event of the Security deposit being reduced by reasons of any such deductions, the contractor shall within 15 days of being asked to do so make good in cash or paid into specified bank account or cheque, any sum which have been deducted from his security deposit.
12. The rates quoted by the Contractor shall include all eventualities, such as heavy rain, sudden floods, accidents, fire, riots etc., which may cause damage to the executed work or which may totally wash out the work. Until the completion certificate is issued to the Contractors, neither the Architect nor the Bank will be responsible for such damage or wash out of the construction work.
13. Time is the essence of the contract. The work should be completed **within 18 Months** from the date of commencement which is as mentioned below:

- a) The day two weeks from the date of issue of work order.

Or

- b) The day on which the contractor receives the possession of the site whichever is later.

Or

- c) The contractor is asked in writing to take over the possession of the site.

The successful contractor will have to give a CPM/PERT chart of various activities of work to be done so that the work gets completed within the stipulated time. The chart shall be submitted within 15 days from the date of acceptance of the tender.

14. If the contractor fails to complete the work by the Scheduled date of completion or within any sanctioned extended time, he will have to pay liquidated damages at the rate of 0.5 % of contract amount for each week of delay or part thereof during which the work remains incomplete beyond the completion (Original / extended date), subject to maximum of 5% of the contract value (without extra items) as per clause 32 of the General conditions of contract.
15. The quantities contained in the Schedule are only indicative. The actual work executed will be measured periodically, and payments will be made based on these measurements, subject to the terms and conditions of the contract.
16. The unit prices shall be deemed to be fixed prices. In case of extra items, a record of labor charges paid shall be maintained and shall be presented every month for extra/substituted items regularly to the Architects for checking. The settlement will be made based on figures arrived at jointly and taking into account unit prices of items of work mentioned in the contract assigned to the successful tenderers. In case, of extra items, where similar or comparable items are quoted in the tender, extra rates shall invariably be based on those tender rates to the extent reasonable.
17. **TELANGANA GRAMEENA BANK, The General Manager-Operations, Head office, 2nd floor, Vijaya Sri Sai Celestia, Nallakunta, Hyderabad – 500044, do not bind**

themselves to accept the lowest or any tender and reserve to themselves the right to accept or reject any or all tenders, either in whole or in part, without assigning any reason whatsoever for doing so.

18. No employee of the Telangana Grameena Bank is allowed to work as a contractor for a period of two years of his retirement from bank service, without the previous permission of the bank. This contract is liable to be cancelled, if either the contractor or any of his employees is found at any time to be such a person who had not obtained the permission of the bank as aforesaid before submission of the tender or engagement in the contractor's service.
19. The tenderer, apart from being a competent contractor must associate himself with agencies of the appropriate class as the case may be.

ARCHITECTS:

**M/s Abhikram-S,
architects, interior designers, urban planners
valuers & project managers,**

**#3-6-134, FLAT NO-302,
SVC ROYAL DM APARTMENTS,
STREET NO 18, HIMAYATNAGAR,
HYDERABAD -500029.
Ph.No: 040-35561296, 9866533393.
email: abhikramarchitects@gmail.com.**

ELIGIBILITY CRITERIA

DETAILS OF PROJECT/WORK:

I.	Name of the Work	PROPOSED CONSTRUCTION OF HEAD OFFICE BUILDING (TWO CELLARS + STILT FLOOR + FIVE UPPER FLOORS) FOR TELANGANA GRAMEENA BANK ON BANK'S OWN PLOT SITUATED IN SY NO. 417 AND 420, PLOT NO 79, UPPAL BHAGAYATH LAYOUT, UPPAL, HYDERABAD, TELANGANA. <u>(CIVIL AND LANDSCAPE WORKS)</u>
II.	Scope of work in brief:	The work includes A) CIVIL CONSTRUCTION WORKS AND SOFT LANDSCAPE WORKS: Site clearing, Dismantling, Earth work Excavation for Cellars, Rock Cutting in cellars, RCC Framed Structure (Foundations, Retaining walls, Columns, Beams, Slabs), Brick Work, Internal and External Plastering, UPVC Window Works, Flooring (Granite flooring, VDF Flooring, granite cladding), External Elevation Works, Curtain Wall Glazing, Structural Glazing double glass) Aluminum Composite Cladding, External development works on site, drives ways in Bangalore stone , Landscape works Flower beds, Plantation of trees, Ground covers and Landscape irrigation works etc., with soft electrical works of landscape, Exposed Concrete finishing work, External and Internal painting, External Sanitary and Plumbing works Plumbing Works And Installation of Lifts and Lift shaft Works Etc.,

The Estimated cost of the project of **PROPOSED CONSTRUCTION OF HEAD OFFICE BUILDING (TWO CELLARS + STILT FLOOR + FIVE UPPER FLOORS) FOR TELANGANA GRAMEENA BANK ON BANK'S OWN PLOT SITUATED IN SY NO. 417 AND 420, PLOT NO 79, UPPAL BHAGAYATH LAYOUT, UPPAL, HYDERABAD, TELANGANA. (CIVIL AND LANDSCAPE WORKS)** as described above is **₹ 18,09,64,369.40 /- + GST.**

The intending contractor should comply the following minimum eligibility criteria for pre-qualification for the proposed project: -

- A. EXPERIENCE: The applicant should be a well-established and reputed establishment (for a minimum period of 7 years as on 31.03.2026) engaged in the CIVIL CONSTRUCTION AND LANDSCAPE WORKS, for Banks, Financial Institutions, MNCs, Government Organizations / undertakings etc.**
- B. WORK ELGIBILITY:** - Experience of having successfully completed similar works during last 7 years ending last day of months previous to the one in which applications (31.03.2026) are invited should be either of the following:

S.NO	WORK ELIGIBILITY CRITERIA
	<p>CONSTRUCTION OF HEAD OFFICE BUILDING (TWO CELLARS + STILT FLOOR + FIVE UPPER FLOORS) FOR TELANGANA GRAMEENA BANK ON BANK'S OWN PLOT SITUATED IN SY NO. 417 AND 420, PLOT NO 79, UPPAL BHAGAYATH LAYOUT, UPPAL, HYDERABAD, TELANGANA. <u>(CIVIL AND LANDSCAPE WORKS)</u></p>
1.	<p>Three similar completed works costing not less than the amount equal to 40% of the estimated cost, Should be at least ₹ 7,23,85,747.76 /- of each work. Each Work should contain CIVIL CONSTRUCTION AND LANDSCAPE WORKS.</p>
2.	<p>Or. Two similar completed works costing not less than the amount equal to 50% of the estimated cost, Should be at least ₹ 9,04,82,184.70 /- of each work. Each Work should contain CIVIL CONSTRUCTION AND LANDSCAPE WORKS.</p>
3.	<p>Or. One similar completed work costing not less than the amount equal to 80% of the estimated cost, Should be at least ₹ 14,47,71,495.50 /- of each work. Each Work should contain CIVIL CONSTRUCTION AND LANDSCAPE WORKS.</p>
<p>Note: Vendor experience certificate should specify breakup values of CIVIL CONSTRUCTION, and LANDSCAPE WORKS.</p>	

SIMILAR WORKS MEAN:

A) CIVIL CONSTRUCTION WORKS: Site clearing, Dismantling, Earth work Excavation for Cellars, Rock Cutting in cellars, RCC Framed Structure (Foundations, Retaining walls, Columns, Beams, Slabs), Brick Work, Internal and External Plastering, UPVC Window Works, Flooring (Granite flooring, VDF Flooring, granite cladding), External Elevation Works, Curtain Wall Glazing, Structural Glazing double glass) Aluminum Composite Cladding, External development works on site, drives ways in Bangalore stone , Landscape works Flower beds, Plantation of trees, Ground covers and Landscape irrigation works etc., with soft electrical works of landscape, External and Internal painting, External Sanitary and Plumbing works Plumbing Works And Installation of Lifts and Lift shaft Works Etc.

LANDSCAPE WORKS: Flower beds, Plantation of trees, Ground covers and Landscape irrigation works etc.

All qualitative successful completion of works for Central Govt. Dept./State Govt. Dept./Semi Govt, Dept. /PSU/Public sector Banks/Airport Authority of India are only considered.

Note:

- (1) Soft Civil works (Only Internal civil works) will not be considered for evaluations.
- (2) Residential work will not be considered for evaluations.
- (3) Partial Completion Certificates of the works will not be considered. Even though issued by

the Competent Authorities. Certificates with Booking of Quantities of items of Work will not be entertained.

- B. **AVERAGE ANNUAL TURNOVER:** Should not be less than **₹ 5,42,89,310.82 /-** for the last three financial years as per the audited balance sheet. (Supporting documents to be submitted)
- C. **PROFIT/LOSS:** Bidder should be a Profit-making firm and should not have made losses in the **last two financial years.** (Supporting documents to be submitted)
- D. **SOLVENCY CERTIFICATE:** The contractor should have a solvency of **₹ 5,42,89,310.82 /-** issued by any scheduled Bank in India (as per Form “G”) issued **not Earlier than 31.03.2026.**

EVALUATION CRITERIA FOR PRE-QUALIFICATION:

For the purpose of pre-qualification, applications will be evaluated in the following manner:

1. The eligibility criteria prescribed above (in respect of experience of similar class of works completed) shall be scrutinized first. Based on this evaluation, the applicant's eligibility for pre-qualification for the work will be determined.
2. Only the applicants who meet the initial eligibility criteria specified as above will be further evaluated on the basis of details furnished by them.
3. If necessary, the authorized representatives of TGB and Architect Consultant will visit any projects / sites which are recently executed / being executed by the applicants, in order to evaluate the performance and quality of work of the applicants. In such case, the applicant will be required to obtain/give them the necessary permission/facilities and arrangements for site visit as required.
4. On the basis of the prequalification criteria mentioned above and after the evaluation of the applicants based on the site visit report, credentials submitted by the applicants, confidential reports obtained from various clientele (wherever necessary), applications will be shortlisted.
5. Merely fulfilling the prescribed minimum prequalification criteria does not entitle the applicant for short listing, which is subject to the verification of documents/information furnished by the applicants, inspection of work, quality and timely execution of project, seeking confidential performance reports from the client etc.
6. TGB reserves the right to accept or reject any or all applications without assigning any reason thereof and no correspondence will be entertained in this regard. TGB also reserves the right to restrict the list of prequalified contractors to any number deemed suitably by it. This prequalification is neither an assurance nor binding to TGB to award any job/project to the prequalified contractors.

INSTRUCTIONS TO APPLICANTS

GENERAL INSTRUCTIONS:

1. Please read these instructions carefully before filling up the application form.
2. The application must be submitted strictly in the prescribed proforma, as downloaded from our website, without any modification to the text. Any deviation from this requirement shall render the application liable for rejection.
3. The Application form have to be submitted in the prescribed format with Letter of Transmittal along with all the annexure and necessary documents / details as sought in ONLINE TECHNICAL BID.
4. The applicant shall sign and affix seal on each and every page of the application, including all annexures and supporting documents. Failure to comply with this requirement may result in summary disqualification of the application.
5. While filling application form please ensure following: -
 - All information called for in the enclosed forms should be furnished against the relevant columns in the forms.
 - If for any reason, information is furnished on separate sheet, this fact should be mentioned against the relevant column.
 - Even if no information is to be provided in a column, a “Nil” or “no such case” or “Not Available” entry should be made in that column.
 - If any particulars/queries are not applicable in case of the applicant, it should be stated as “Not Applicable”.
 - The applicants may please note that giving incomplete/unclear information called for in application forms, or making any changes in the prescribed forms, or deliberately suppressing any information in the prescribed formats may result in disqualification of the applicant summarily.
6. Incomplete applications received thus will not be entertained. Delay in submission of any part in postal / courier / hand delivery or any other irregularities at any stage, will not be considered. The TGB will not be responsible for any damage in transit in case of postal / courier / hand delivery.
7. Overwriting and using of correcting fluid should be avoided. Corrections, if any, should be made by neatly crossing out and shall be rewritten with initials and date. Pages of the document have to be numbered. Additional sheets, if any added by the contractor, should also be numbered by him. They should be submitted as a package with signed letter of transmittal.

8. The applicant may furnish any additional information, which he/they thinks is necessary to establish his capabilities to successfully complete the envisaged work. He is, however, advised not to furnish superfluous information. No information shall be entertained after submission of Expression of Interest document unless it is called for by the Bank.
9. References, information and certificates from the respective clients certifying suitability, technical know-how or capability of the applicant should be signed by an officer not below the rank of Superintending Engineer/Chief Project Manager or equivalent.
10. Documents submitted in connection with pre-qualification will be treated as confidential and will not be returned.

11. **LETTER OF TRANSMITTAL**

The applicant should submit the letter of transmittal on the letter head of the applicant attached/appended with Application form along with annexure of pre-qualification document as mentioned / necessitated.

12. **ORGANISATIONAL INFORMATION – BIODATA:**

Applicant is required to submit the information in respect of his organization (in Application form) and Biodata of the Directors / Partners / Key associates.

13. **FINANCIAL INFORMATION:**

Applicant should furnish the following financial information as per the format as mentioned in Form 'A'.

14. **Banker's Details, Chartered Accountant, Annual financial statement for the last five years (in Form 'A') should be supported by audited balance sheets and profit and loss accounts duly certified by a Chartered Accountant, as submitted by the applicant to the Income Tax Department.**

15. Name and address of the banker's identification of individuals familiar with the applicant's financial standing and a banker's statement on availability of credit.

16. **EXPERIENCE IN SIMILAR WORKS HIGHLIGHTING MAJOR PROJECTS:**

Applicant should furnish the following:

- i. List of all similar works successfully completed during the last Seven years (in Form "B").

This list is to be substantiated with the documentary evidences such as copies of work orders, certified final bill copy, satisfactory completion certificate obtained from client etc. without which, the projects mentioned in the format may not be considered for scrutiny. List of works completed before seven years may be

mentioned in separate sheet if the applicant intends to do so. Form B-1 may be submitted project wise as supplementary information for the major projects only executed during the last seven years ending 31.03.2026.

- ii. List of the 'similar' projects under execution or awarded (in Form "C").
- iii. Particulars of 'Similar' Major completed works mentioned in "Form-B1" indicating the performance of the applicant duly authenticated/certified by an officer not below the rank of Superintending Engineer/Chief Project Manager or equivalent should be furnished separately for each major work completed. (in "Form-D1")

17. **ORGANISATIONAL INFORMATION –OTHERS:**

Number of Technical and Administrative Employees in the organization and how they would be involved in this work (in Form "E")

18. **CONSTRUCTION PLANT AND EQUIPMENTS:**

The applicant should furnish the list of tools, plant and equipment (in Form "F"). The applicant shall also furnish the particulars of steel shuttering, centering and scaffolding (ply wood)which he proposes to use for carrying out the work on FAST TRACK basis.

19. **TENDER SUBMISSION:**

After evaluation of applications for pre-qualification, based on the evaluation criteria, list of qualified / shortlisted contractors will be prepared.

The Bank reserves the right to:-

- (a) Amend the scope and value of contract to the applicant.
- (b) Reject any or all of the applications without assigning any reason.

20. The TGB reserves the right to verify the particulars furnished by the applicant independently. If any information furnished by the applicant is found incorrect at a later date, he/they shall be liable to be debarred from tendering/taking up of work in TGB and the tender/work will be cancelled, whenever it is so noticed. The Bank will not pay any damages to the Company or firm or the concerned person. The Company or Firm or the person will be also debarred for further participation in any tender in the TGB Further, any breach of this condition by the applicant would also render him liable to be debarred from participating in the future tenders of the Bank.

21. (a) TGB reserves the right to reject any application without assigning any reason and to restrict the list of pre-qualified contractors to any number deemed suitable by it, if too many applications are received satisfying the basic Pre-Qualification criteria.

(b) Even though an applicant may satisfy the above requirements, he would be liable to disqualification if he has:

- (i) Made misleading or false representation or deliberately suppressed the information in the forms, statements and enclosures required in the pre-qualification document.
 - (ii) Record of poor performance such as, abandoning work, not properly completing the contract, or financial failures/ weaknesses etc.
22. The Company or firm or any other person shall not be permitted to seek pre-qualification for the work in case his near relative(s) (directly recruited or on deputation in TGB is / are posted in any capacity either non-executive or executive employee in Hyderabad. Near relative(s) for this purpose is/are defined as–
- i) Member of Hindu Undivided family (HUF)
 - ii) They are Husband and wife
 - iii) The one is related to other in the manner as father, mother, son(s) & son's wife (daughter-in-law), Daughters(s), Daughter's husband (son-in-law), brother(s), brother's wife, sister(s), sister's husband(brother-in-law)

The applicant (principal contractor) shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him or who are near relative to any executive employee/ officer in the TGB.

23. Efforts on the part of the applicant or his agent to exercise influence or to pressurize the Bank would result in rejection of application. Canvassing of any kind is prohibited.

LETTER OF TRANSMITTAL

(Proforma to be typed on the letter head of the Applicant)

To

The General Manager-Operations

TELANGANA GRAMEENA BANK

2-1-520, 2nd Floor, Vijaya Sri Sai Celestia,
Street No.9, Shankrmuth Road, Nallakunta,
Hyderabad, Telangana , 500044.

Sub: Submission of Expression of Interest (EOI) for PROPOSED CONSTRUCTION OF HEAD OFFICE BUILDING (TWO CELLARS + STILT FLOOR + FIVE UPPER FLOORS) FOR TELANGANA GRAMEENA BANK ON BANK'S OWN PLOT SITUATED IN SY NO. 417 AND 420, PLOT NO 79, UPPAL BHAGAYATH LAYOUT, UPPAL, HYDERABAD, TELANGANA. (CIVIL AND LANDSCAPE WORKS).

Dear Sir,

I/We have read, understood & examined the Prequalification documents, along with other details / formats, the receipt of which is hereby duly acknowledged, including subsequent pre-Bid clarifications/ modifications / revisions, if any, furnished by the TGB and we submit our application/offer for the pre-qualification of contractor for construction of Head office building. The undersigned is authorized to sign the documents/papers, on behalf of the firm and the document delegating this authority is enclosed with this letter.

2. We certify that we have not made any changes in the contents of the pre-qualification document submitted by us, including its amendments/clarifications provided by TGB. We shall abide by the terms & conditions spelt out in the TGB/ bank's notice/pre-qualification invitation.
3. It is further certified that the contents of our Bid are factually correct. We also accept that in the event of any information/ data / particulars proving to be incorrect, TGB will have the right to disqualify us from any or all bidding process.
4. I/We also understand if any false information is detected at a later stage, including in any future contact made between us and Telangana Grameena Bank, on the basis of the information given by me/us will be treated as invalid by the Bank. The Bank reserves the right to declare my/our application/ bid/contract invalid, and the bidder/ contractor shall be liable for forfeiture of the EMD/Security Deposit, without prejudice to any other rights or remedies available to the Bank under the terms of the tender/contract or applicable law.
5. We confirm that we have not induced or attempted to induce any other applicants to submit or not to submit an offer/application for restricting competition. Also, we undertake that we will not resort to canvassing with any official of the Bank, connected directly or indirectly with the pre-qualification process to derive any undue advantage. We also understand that any violation in this regard, will result in disqualification of the applicant from further pre-qualification process.

6. We undertake that we will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the Bank, connected directly or indirectly with the pre-qualification process, or to any person, organization or third party related to the contract in exchange for any advantage in the pre-qualification, Bidding, evaluation, contracting and implementation of the contract. We shall abide by all the laws/rules/regulations pertaining to prevention of corruption in force.

7. We understand that the Bank is not bound to accept any particular or all the offers, Bank may receive. Bank may reject all or any offer/proposal/application without assigning any reason or giving any explanation whatsoever. I/We agree that the decision of the Telangana Grameena Bank in selection of the contractors will be final and binding on me/us.

8. We hereby undertake that our name does not appear in any "Caution" list of RBI / IBA or any other regulatory body.

9. We confirm that we do not have any litigation / cases pending against us in any Bank / PSU / State or Central Govt departments. We also confirm that we have not been blacklisted by any Bank / PSU / State or Central Govt Office/ departments for any reasons, except the undernoted (details should be mentioned along with period and reasons thereof).

10. If commercial bidding is done through the reverse auction process by the Bank, our authorized representative who would participate in the reverse auction process would possess a valid digital certificate for the purpose, on behalf of the firm.

11. I/We hereby certify that none of our relatives as per Bank's instructions are employed in Telangana Grameena Bank. In case at any stage, it is found that information given by me is false/incorrect, Telangana Grameena Bank shall have absolute right to take any action as deemed fit, without prior intimation to me.

12. I/We also agree that I/We have no objection if inquiries are made about the works listed by me/us in the accompanying sheets or any other inquiry on the information furnished herewith in the accompanying sheets or in respect of papers/documents submitted.

(Signature)

Stamp

Name:

Date:

In the capacity of (for and on behalf of):

- Enclosed: 1. Duly completed application with all enclosures
1. Letter of authority for delegation of signing power

APPLICATION FORM

1.	Name of the contractor Firm/ company:	
2.	Type of Organisation (Whether Sole Proprietorship, Partnership, private Limited or Co-op. body etc.)	
3.	Year of establishment of the Firm/company	
4.	Whether registered with the registrar of companies / registrar of firms (if so, mention number & date of registration, and submit supporting documents)	
5.	Year since the firm/ company is in the line of business/ activity of construction of multi storied residential buildings	
6.	Official/ registered address of the firm/ company	
7.	Correspondence address of the firm/company	
8.	Email-ID of the firm/company	
9.	Landline number (with STD code) of the office/ firm	
10.	Mobile number of the office/ firm/ company	
11.	Name, mobile number & email ID of contact person	
12.	Name/s of partners / proprietor/ directors/ key person of the firm (Details of address, contact number, qualification etc to be submitted at Annexure-I)	
13.	Address of office in Hyderabad/ Secunderabad if available.	
14.	Whether Firm is having ISO Certification? Mention details	
15.	Whether member of any professional body/association. Please give details & enclose certificate viz. IGBC	

16.	GST Registration number (Photocopy to be attached)	
17.	PAN No.	
18.	Registration for EPF/ RPFC	
19.	Registration for ESIC	
20.	Registration under the The Occupational Safety, Health and Working Conditions Code, 2020.	
21.	Registration number under Labour Welfare Act	
22.	Professional Tax registration no.	
23.	Educational qualification of the proprietor/ partner/ director/key person	
24.	Average annual turnover of the Company as per Audited Balance Sheets as on 31st March 2023, 2024, 2025. (details of turnover during previous F.Y. to be submitted as per format given in Annexure A)	2022-23: 2023-24: 2024-25: ----- Average:
25.	Total number of Civil works of Commercial/ Office project completed.	
26.	Details of Similar works completed during the last 7 years for Central Govt. Dept./State Govt. Dept./ Semi Govt. Dept. /PSU/Public sector Banks/Airport Authority of India as per format given in annexure (Copies of work orders & completion certificates must be enclosed)	As per format Form B & B1
27.	Value of Single Largest Project for Similar Work for Office/ Commercial project completed in the last 7 years for Central Govt. Dept./State Govt. Dept./ Semi Govt. Dept. /PSU/Public sector Banks/Airport Authority of India.	
28.	Details of Similar work under execution for Central Govt. Dept./State Govt. Dept./ Semi Govt. Dept. /PSU/Public sector Banks/Airport Authority of India.	As per format Form C
29.	Financial Information as per format given at Annexure A (Enclose copies of audited balance sheet and profit & loss statements and CA Certificate)	As per format Form A

30.	Number of years of experience in the Civil, landscape works of commercial/ office buildings for Central Govt. Dept./State Govt. Dept./ Semi Govt. Dept. /PSU/Public sector Banks/Airport Authority of India.	
31.	Name and address of Bankers and position of financial soundness (Enclose solvency certificate or other relevant papers/documents, refer Form G)	As per Form G
32.	Details of skilled work force provided.	As per format Form E
33.	Details of equipment available with the firm –	As per format Form F
34.	Mention if black listed and / or blacklisting proceedings pending with any client. Details of the same, with reasons, to be furnished.	
35.	Details of disputes /litigations, if any, during the period of last 07 years	
36.	Whether any penalty imposed by law enforcing agencies such as labour department, sale tax, GST, etc.	
37.	Details of penalty / liquidated damage imposed by any client for defective /delayed/non-completion of work or violation of terms of the contract, during the last 7 years, ended on 31.03.2026 . If yes, please provide details thereof, with reasons.	
38.	Whether firm had been barred from participating in the bidding process or kept in cooling period/under suspension by any client, during the last 7 years, ended on 31.03.2026 . If yes, please provide details thereof, with reasons.	
39.	Please indicate details of any bankruptcy/winding up of proceedings at any point of time in past	

BIO-DATA OF THE DIRECTORS/PARTNERS/ KEY ASSOCIATES

1. Name :
2. Date of Birth :
3. Associates with the organization since :
4. Professional Qualification :
5. Professional Experience :
6. Professional Affiliation :
7. Membership in :
8. Details of Published papers in Magazine / Journals (if any) :
9. Details of cost-effective methods/ innovative techniques adopted **in the projects** :
10. Exposure to new materials/ Technology :

Signature of Applicant

FINANCIAL INFORMATIONI. Banker Details

Name of the Bank :

Branch with Address :

City :

Contact person in the Bank :

Contact Details :

II. Details of Chartered Accountant

Name :

Address :

Registration details of accountant :

Contact Number :

E-mail address :

III. Financial Analysis – Details to be furnished duly supported by figures in Balance Sheet/Profit and Loss Account for the last Five years duly certified by the Chartered Accountant, as submitted by the applicant to the Income-Tax Department (Copies to be attached).

YEARS	2020-21	2021-22	2022-23	2023-24	2024-25
(i) Gross Annual turn-over in Similar works					
(ii) Profit/Loss					
(iii) Financial position:					
(a)Cash					
(b)Current Assets					
(c) Current Liabilities					
(d) Working capital (b-c)					
(e) Current Ratio: (Current Assets/Current Liabilities (b/c))					
(f) Acid Test Ratio: (Quick Assets/Current Liabilities (a/c))					

IV. Income Tax Clearance Certificate

V. Solvency certificate from Bankers (Schedule Bank) of Applicant.

VI. Financial arrangements for carrying out the proposed work

Signature of Chartered Accountant
With seal

Signature of Applicant(s)
with Seal

DETAILS OF ALL 'SIMILAR' WORKS COMPLETED DURING THE LAST SEVEN YEARS ENDING BY 31.03.2026.

1	2	3	4	5	6	7	8	9	10	11	12
S. No.	Name of work/ project & location	Owner or sponsoring organizations	Date of Agreement with the owner	Scope of work executed	Built up area of the project in sqm.	Cost of project work in Crores	Date of commencement as per contract & actual date of commencement	Stipulated Date of completion & Actual date of completion	Litigation/ Arbitration pending/ In progress with details (if any)	Name and address with contact No. of Officer of client to whom reference shall be made	Remarks

Signature of Applicant

Note:

Actual date of completion of the project should be within 7 years ending 31.03.2026 for taking into eligibility consideration. The projects mentioned in the above format shall be sorted in the order of cost of the project (Descending order)

SUPPLEMENTARY INFORMATION ON COMPLETED MAJOR WORKS

1. Name of work
2. Location
3. Client's name and address
4. Consultants name and address.
5. Scope of work.
 - a. Civil Construction works.
 - Landscape works
6. Type of power supply system.
7. Type of equipment in substation & for Civil works.
8. Time taken for
 - i. Substation.
 - ii. Internal works.
 - iii. Total Project.
9. Specialized service, if any, provided, with cost details,
10. Specialized Tools & Plant deployed for the project.
11. Project Management organization structure.
12. Number of shift and its duration adopted in execution.
13. Systems adopted for timely completion of the project.

Signature of Applicant

FORM 'C'

'SIMILAR' PROJECTS ON HAND - UNDER EXECUTION OR AWARDED

1	2	3	4	5	6	7	8	9	10	11	12	13
Sl. No.	Name of work/project & location	Client / Owner or sponsoring organisations	Type of Client / Owner (Mention Govt/ / Semi Govt / PSU / Autonomous / Private)	Date of Agreement with the owner	Built up area of the project in sqm	Cost of project in Crores	Date of commencement as per contract & actual date of commencement	Stipulated Date of completion	Up to date percentage of progress of work completed	Delay in progress (if any) and reasons thereof	Name and address with contact No. of Officer of client to whom reference shall be made	Remarks (Indicate whether any show-cause notice issued or Arbitration initiated during the progress work)

Signature of Applicant

Note: The projects mentioned in the above format shall be sorted in the order of cost of the project (Descending order)

**PERFORMANCE REPORT FOR 'SIMILAR' MAJOR COMPLETED WORKS
(REFERRED TO IN FORM 'B')**

1. Name of the work/
Project & Location.
2. Scope of work.
3. Agreement No & Date.
4. Estimated Cost / Tendered Cost
5. Actual Value of work done
6. Date of commencement
 - a. Stipulated date of commencement.
 - b. Actual date of commencement.
7. Date of completion
 - a. Stipulated date of completion.
 - b. Actual date of completion.
8. Amount of compensation levied for delayed completion if any.
9. Performance report based on

Quality of Work,	: Very Good / Good / Fair / Poor
Time Management,	: Very Good / Good / Fair / Poor
Resourcefulness	: Very Good / Good / Fair / Poor
Financial Soundness	: Very Good / Good / Fair / Poor
Technical Proficiency	: Very Good / Good / Fair / Poor

**Superintending Engineer / Chief
Project Manager or Equivalent &
(Name of Organization), Date**

Note:

1. The performance report is to be submitted separately for all major works mentioned in Form 'B'.
2. The performance report preferably be submitted in the above Performa. In case, different Performa is used, the applicant shall ensure that the report / certificate shall contain all the above information / details.

CIVIL CONSTRUCTION (INCLUDING INTERNAL AND EXTERNAL PLUMBING AND SANITARY WORKS) AND LANDSCAPE WORKS.

NAME AND VALUE OF MAJOR WORKS COMPLETED DURING THE LAST 7 YEARS

Sl. No.	Name of Work /project with address	Name & full postal address of the owner. Specify whether Govt. Under taking along with name, address and contact Nos. of -2-persons (Executive Engineers or top officials of the organization).	Contract amount (Rs.) with copy of work order & completion certificate from project in-charge)	Stipulated time of completion (months) Enclose clients certificate for satisfactory completion	Actual time of completion (Months)	All the details to pertaining to one work.					If the work is left incomplete or terminated (reasons) furnish	Remarks
						Actual amount of the project cost, if increased, give reasons	Cost of Civil Work	Cost of Landscape work				

Notes:

1. Information has to be filled up specifically in this format only. Please do not write remark "As indicated in Brochure /Attached Documents".
2. Date shall be reckoned as on **31.03.2026**.
3. For certificates, the issuing authority shall not be less than an Executive Engineer or equivalent in charge of the relevant work /project.
4. Partial Completion Certificates works will not be considered.

Furnish the names of three responsible clients/persons to whom the highest value of three major works carried out by the applicant with address and telephone number who will be a position to certify about the quality as well as past performance of your organization.		
NAME OF THE OFFICIAL	ORGANISATION & ADDRESS	CONTACT NUMBERS

DETAILS OF KEY TECHNICAL AND ADMINISTRATIVE PERSONNEL EMPLOYED IN THE ORGANIZATION

Sr. No.	Designation	Total Number	Names	Educational Qualification	Professional Experience	Length of continuous service with Employer in years
1	2	3	4	5	6	7

Signature of Applicant

Note:

1. Details of Technical personnel shall be provided qualification-wise
2. Organization chart of the company, additional information about Technical and administrative personnel, if any, may be submitted on separate sheet

**DETAILS OF PLANT & MACHINERY, MANUFACTURING UNITS, TOOLS AND EQUIPMENTS
LIKELY TO BE USED IN CARRYING OUT THE WORK.**

Sr. No	Name of the Tools / Machinery / Equipment	Unit	Make / Model / Capacity or Type	Age in years	Condition of the unit	Ownership Status (mention the quantity)			Current location	Remarks
						Presently owned	To be purchased	Leased		
1	2	3	4	5	6	7	8	9	10	11

Signature of Applicant

Note

- : 1. Use extra sheet if required

SOLVENCY CERTIFICATE WITH BANK'S DETAIL

This is to certify that M/s _____ address _____ is a customer of our bank and banking with us for the last years. Presently, the firm has availed undernoted banking facility/ies:

Sl. no.	Facility	Type of a/c	Present balance	Average balance during last 6 months

2. The conduct of firm's & key person's account has found to be satisfactory. As per the basis of credit facilities provided to the firm/ turnover in the accounts/ details available with us, the firm can be treated as good for any engagement up to a limit of Rs. _____ (Rupees _____).

3. This certificate is issued on the basis of bank's record/ transactions with the bank, without any guarantee or responsibility on the bank or any of the officers, with confirmation that facts mentioned herein as per our record.

(Signature of Branch Manager with Seal)

Note:

1. Banker's certificate should be on the letter head of the scheduled commercial bank.
2. In case of partnership firm, certificate to include names of all partners as recorded with the bank.

Signature of Applicant

CHECK LIST
Details of Enclosures.

Sl. No.	Information	Confirmation of Submission
1.	Signed tender document (Pages-1 to 202)	Yes/No
2	Proof of constitution	Yes/No
	(a) In case of sole proprietorship/HUF: an affidavit executed before a 1 st Class Magistrate that the applicant is the sole proprietor of the firm/Karta of HUF	
	(b) In case of partnership firm: (Submit attested copies)	
	In case of private/Public Ltd. Co. Article of Association duly attested by Notary Public	
	Power of attorney, if any, attested by Notary Public	
3	Certificate of Registration as contractor	Yes/No
4	Certificate of Registration with taxation authorities	Yes/No
5	Certificate of Tax Clearance (ITCC, GST& Other Tax etc.)	Yes/No
6	Details of requisite licenses	Yes/No
7	Registration with EPF	Yes/No
8	Proof of eligibility of essential criteria	Yes/No
9	Proof of eligibility of electrical service work	Yes/No
10	Tender Form	Yes/No
11	Letter of Transmittal on the Letter Head of the Applicant	Yes/No
12	Application Form	Yes/No
13	Bio-data of the directors / partners / key associates – Annexure-I	Yes/No
14	Financial Information as per FORM A	Yes/No
	A) Balance sheets of last 5 years	Yes/No
	B) Calculation sheets of net worth	Yes/No
	C) Solvency Certificate in original	Yes/No
15	Details of all “similar” works completed during the last Seven years ending by 31.03.2026 – FORM B	Yes/No
16	Attested copies of Award Letters/Work Orders/LOI for completed work.	Yes/No
17	Original or attested copies of certificate for works done, from concerned clients	Yes/No
18	Performance report for each “similar” major completed work (referred to in form “B”)- FORM D-1	Yes/No
19	“Similar” projects on hand – under execution or awarded – FORM C	Yes/No
20	Attested copies of award letters/work orders/LOI for ongoing projects / Works on Hand	Yes/No
21	Details of key personnel as given in Form E	Yes/No
22	Details of plant and machinery etc. as given in Form F	Yes/No
23	Solvency certificate with bank’s details – FORM G	
24	Pre contract Integrity Pact with Applicable Stamping (to be stamped as an Agreement)	Yes/No
25	Scanned Copy of EMD DD	Yes/No

3. ARTICLES OF AGREEMENT

This agreement made on theday of between Telangana Grameena Bank, Schedule bank Owned by Government and Constituted under Regional Rural Bank Act, 1976, having its Head Office at Nallakunta, Hyderabad- 500044, Telangana, India represented by Sri/Smt. General Manager - Operations, (hereinafter called the Bank or TGB) which expression shall include the successors and assigns) of the one part and M/s. company / partnership for registered under the Indian Companies Act/ Partnership Act having its registered office..... (hereinafter called 'the Contractors' which expression shall include the present directors / partners and also the directors / partners from time to time as also their respective heirs, legal representatives, administrators and assigns) of the other part.

WHEREAS the Bank is desirous of execution of _____(**Name of work**)_____ and has caused drawings and specifications describing the works to be done prepared by Project **Architects M/s Abhikram-S** _____ having their offices at _____ (hereinafter called "the Architect")

AND WHEREAS THE SAID Drawings numbered as mentioned in the tender documents hereinafter mentioned and to be issued from time to time, the specifications and the Schedule of items and quantities have been signed by or on behalf of the parties hereto.

AND whereas the contractors have agreed to execute upon and subject to the condition set forth herein and Schedule of items and quantities, General & special Conditions of Contract, specification etc. contained in the tendered documents including all correspondences exchanged by or between the parties from the submission of tender till the award of work, both letters inclusive, (all of which are collectively hereinafter referred to as "the said conditions"). The works shown upon the said drawing and /or described in the said specification and included in the schedule of Items and Quantities at the respective rates therein set forth amounting to the sum of **Rs**_____ (Rupees _____in words_____) as there in arrived at or such other sum as shall become payable there under (hereinafter referred to as " the said Contract Amount").

NOW IT IS HEREBY AGREED AS FOLLOWS:

1. In consideration of the said Contract amount to be paid at the times and the manner set forth in the said Conditions, the Contractors shall upon and subject to the said conditions execute and complete the work shown upon the said drawings and described in the said specifications and the schedule of items and quantities.

2. The Bank shall pay the Contractors the amount or such other sum as shall become payable, at the times and in the manner specified in the said conditions.
3. The term “the Architect” in the said condition shall mean the said “M/s Abhikram-S” or in the event of their ceasing to be the Architect for the purpose of this contract for whatever reason, such other person or persons as shall be nominated for that purpose by the Bank, not being a person to whom the Contractor shall object for reasons considered to be sufficient by the Bank provided always that no person or persons subsequently appointed to be Architect under this contract shall be entitled to disregard or over rule any previous decisions or approval or direction given or expressed in writing by the architect for the time being.
4. The said conditions and appendix thereto shall be read and construed as forming part of this agreement, and the parties hereto shall respectively abide by / submit themselves to the said conditions and perform the agreements on their part respectively in the said conditions contained.
5. The plans, agreement and documents mentioned herein shall form the basis of this contract.
6. This contract is neither a fixed Lump sum contract nor a piece work contract but is a contract to carry out the work in respect of the entire project on item rate basis to be paid for according to actual measured quantities at the rates contained in the schedule of quantities and rates or as provided in the said conditions.
7. The Bank reserves to itself the rights of altering the specifications and nature of work by adding to or omitting any item of work or having portions of the same carried out without prejudice to the contract.
8. Time shall be considered as the essence of this contract and the contractor here by agrees to commence the work soon after the site is handed over to him or from the 14th day after date of issue of formal work order as provided for in the said conditions of contractor whichever is later and to complete the entire work within 18 (period of contract) months subject never the less to the provisions for extension of time.
9. All payments by the Bank under this contract will be made only at _____.
10. Any dispute arising under this Agreement shall be referred to arbitration in accordance with the stipulations laid down in the tender.
11. That all the parts of this contract have been read by the contractor and fully understood by the contractor. They further agree to complete the said work to fullest satisfaction of architect / Bank.

12. IN WITNESS WHEREOF the Bank and the contractors have set their respective hands to these presents through their duly authorized official and the said two duplicates hereof to be executed on its behalf of the day and year first herein above written.

Signed on behalf of the

Signed-on behalf of the

TELANGANA GRAMEENA BANK

CONTRACTORS

In the presence of:

In the presence of:

1. Signature :

1. Signature :

Name:

Name:

Address:

Address:

In the presence of:

In the presence of:

2. Signature:

2. Signature:

Name:

Name:

4. APPENDIX TO GENERAL CONDITIONS OF CONTRACT

1. Earnest Money Deposit (EMD) : **₹ 18,10,000 /-**
2. Initial Security Deposit (ISD) : 2% of contract value including EMD.
3. Period of completion : 18 Months.
4. Defects Liability period : 12 months from the day of Virtual Completion.
5. Agreed Liquidated Damages : 0.5% of contract amount per week of delay subjected to a maximum of 5% of contract value.
6. Period of final measurement : Three months after completion as recorded in the completion certificate.
7. Minimum value of work to be Executed for issue of interim Certificates for making payment : Minimum Rs.100.00 Lakhs
- 8.a) Retention money from each bill : 10% of gross value of each interim bill, subject to 8(b) below.
- b) Total retention money including Earnest money and initial security Deposit : 5% of the contract value.
9. Release of Security deposit after Virtual completion. : 50% of the total security to be released along with final certificate of payment, but only after removing all his materials, equipment, labour, huts/force, temporary sheds/stores, all his installations, machinery etc., from the site. Balance payment to be released on submission of Bank Guarantee on any Scheduled Bank, Other than **TGB**, and its associated banks in the prescribed manner and valid till the completion of defects liability period of 12 months.
10. Period for honoring certificate : 15 working days from date of Architects certificate of payment for interim bills and 45 working days for final certificate.
11. Price Variation Adjustment : **APPLICABLE**

WITNESS :

DATE :

SIGNATURE OF THE CONTRACTOR WITH DATE

5. INDEX TO GENERAL CONDITIONS OF CONTRACT

1. Interpretations
2. Scope of Contract
3. Special Drawings and Specifications
4. Schedule of Quantities
5. Sufficiency of Schedule of Quantities
6. Errors in schedule of Quantities
7. Contractor to provide everything necessary
8. Authorities, Notices, Patent rights and royalties
9. Segniorage charges.
10. Materials and workmanship to confirm description.
11. The setting out
12. Removal of all offensive matters
13. Opening up works
14. Contractor's superintendence and representative on the work
15. Dismissal of workmen
16. Access to works
17. Bank's representative/PMC
18. Assignment of sub-letting
19. Sub contractors
20. Variations not to vitiate contract
21. Measurement to works
22. Prices of Extras etc., Ascertainment of
23. Unfixed materials

24. Removal of improper work and materials
25. Defects after completion
26. Certificate of virtual completion
27. Other persons engaged by the Bank
28. Insurance in respect of damage to persons and property
29. Contractor's All risk policy
30. Minimum amount of third party Insurance
31. Commencement and completion
32. Delay and extension of time
33. Damages for Non-completion
34. Failure by contractor to comply with Architect's instructions
35. Architect's delay in progress.
36. Supervision of works
37. Prime cost and provisional sums
38. Certificates and payments
39. Notices
40. Termination of contract by the Bank.
41. Termination of contract by the contractor.
42. Matters to be finally determined by the Architects
43. Settlement of disputes (Arbitration)

GENERAL CONDITIONS OF CONTRACT

1. INTERPRETATIONS:

In constructing these conditions and the specifications, schedule of quantities and contract agreement, the following words shall have the meaning herein assigned to them except where the subject or context otherwise required:

- a. “Bank” shall mean **TELANGANA GRAMEENA BANK, 2nd floor, Head office, Vijaya Sri Sai Celestia, Nallakunta, Hyderabad – 500044**, and shall include his/their heirs, legal representatives, assignees and successors.
- b. “Contractor” shall mean _____
_____ and shall include his/their heirs, legal representatives, assignees and successors.
- c. “Banks Engineer” shall mean any Engineer who is employed by **TELANGANA GRAMEENA BANK** or any other Engineer appointed from time to time by the Bank, and certified in writing to the Architect and the contractor, to act as Engineer for the purpose of the Contract in place of the said engineer.
- d. “Bank’s Representative” shall mean Project Management Consultants employed by the Bank/any assistant of the Engineer or any site engineer/ PMC appointed from time to time by the Bank to perform the duties set forth in clause 17 hereof whose authority shall be notified in writing to the Architect and Contractor by the Bank.
- e. “Architects” shall mean any Engineer/ representative appointed by **M/S ABHIKRAM-S Architects, Interior Designers, Urban Planners, Valuers & Project Managers. #3-6-134, Flat No-302, SVC Royal DM Apartments, Street No-18, Himayat Nagar, Hyderabad-500029**.
- f. “Works” shall mean the works to be executed in accordance with contract specifications, quantities etc.
- g. “Contract” shall mean the Articles of Agreement, the General Conditions, Special Conditions, the Appendix, the Schedule of Quantities, Specifications and drawings, work order etc., attached hereto and duly signed.
- h. “Contract Price” shall mean the sum named in the Tender, subject to such amount additions thereto or deductions there from as may be made under the provisions, hereinafter contained.
- i. “Site” shall mean the lands and other places as shown on the site plan, on which the works are to be, provided, by the Bank or Architect for the purpose of the Contract.

- j. “Drawings” shall mean the drawings referred to in the contract etc., and any modifications of such drawings approved in writing by the Architect and the Bank and such other drawings as may from time to time be furnished or approved in writing by the Architect and Bank.
- k. “Notice in Writing” or written notice shall mean a notice in writing, typed or printed characters sent (unless delivered personally or otherwise provided to have been received) by registered post to the last known private or business address or registered office of the address and shall be deemed to have been received, when in the ordinary course of post, it would have been delivered.
- l. “Act of Insolvency” shall mean any Act of Insolvency As defined under the Insolvency and Bankruptcy Code, 2016 or any statutory modification thereof.
- m. “Net Prices” if in arriving at the Contract Amount, the contractor has added to or deducted from the total of the items of the Tender any sum, either as a percentage or otherwise, then the net price of any items, in the tender, shall be the sum arrived at by adding to or deducting from the actual figure appearing in the Tender, as the price of that item, a similar percentage or proportionate sum. Provided always that in determining the percentage or proportion of the sum so added or deducted by the contractor, the total amount of any Prime cost items and provisional sums of money shall be deducted from the total amount of the Tender. The expression “net rates” or “net prices” when used with reference to the contract or account shall be held to mean rates or prices so arrived at.
- n. “Virtual Completion” shall mean that the building is in the opinion of the Architect and Bank, sufficiently completed for occupation by the Bank, in relation to the scope of work of this contract.
- o. Words importing persons include firms and corporations. Words importing the singular only, also include the plural and vice versa, where the context requires.

2. **SCOPE OF CONTRACT:**

The contractor shall carry out and complete the said work in every respect in accordance with this contract with the directions of and to the satisfaction of the Architect and Bank. Architect, with the approval of the Bank, may issue further drawings and/or written instructions, details, directions and explanations, which are hereafter collectively referred to as “Architect’s Instructions” in regard to:

- a. The variations or modifications of the designs, quality or quantity of works or the addition or omission or substitution of any work.
- b. Any discrepancy in the drawings or between the Schedule of Quantities/ or drawings and/or specifications etc.
- c. The removal and/or re-execution or any works executed by the contractor.

- d. The removal from the site of any material brought there on by the contractor, and the substitution of any other material there from.
- e. The dismissal from the works of any person employed thereupon.
- f. The opening up for inspection of any work covered up.
- g. The amending and making good of any defects under clause 24 "Removal of Improper works and Materials".

The contractor shall forthwith comply and fully execute any work comprised in such Architect's instruction, provided always that instructions, directions and explanations given to the contractor or his representative upon the works by the Architect shall, if involving a variation, be confirmed in writing by the contractor or within 7 days, and if not dissented from in writing within further 7 days by the Architect, such shall be deemed to be the Architects instructions within the scope of contract.

If compliance with the Architect's instructions as aforesaid involved work and/or expense and/or loss beyond that contemplated by the contract, then unless the same were issued owing to some breach of this contract by the contractors, the Bank shall pay to the Contractor on the Architect's certificate, the price of the said work (as an extra to be valued as herein after provided) and/or expense and/or loss. The Contractor shall be entitled only to reasonable and demonstrable additional cost directly attributable to such instruction, supported by documentary evidence and pre-approved in writing by the Employer.

3. **DRAWINGS AND SPECIFICATIONS:**

The works shall be carried out to the entire satisfaction of the Bank and the Architect, in accordance with the signed contract document, drawings and specifications and such further drawings and details as may be provided by the Architect, and in accordance with such written instructions, directions and explanations, as may from time to time be given by the Architect and the bank, whose decision as to the sufficiency and quality of the work and materials shall be final and binding on the contractor. If the work shown on any such further drawings or work that may be necessary to comply with any such instructions, directions or explanations, be in the opinion of the contractor outside the scope of work or reasonably could not be inferred from the contract, he shall before proceeding with such work, give notice in writing to this effect to the Architect and the Bank, and in the event of the Architects and the Bank agreeing to the same in writing, the contractor shall be entitled to an allowance in respect of such extra work as an authorized extra. If the Architect and the contractor fail to agree, as to whether or not there is an extra, then, if the Architect decided that the contractor is to carry out the said work, the contractor shall do so, and the question whether or not there is any extra and if so, the amount thereof, shall failing agreement be settled by Arbitration as hereinafter provided, but such reference shall in no way delay the fulfillment of this contract.

No drawing shall be taken as in itself an order for variation, unless in addition to the Architect's signature, it bears express works stating that it is intended to be such an order or bears a remark "VALID FOR CONSTRUCTION". No claim for payment for extra work shall be allowed, unless the said work shall have been executed under the provisions of clause 8 (Authorities,

notices, patents, rights and royalties) or by the authorities, of directions in drawing of the Architect as herein mentioned.

One complete set of the signed drawings and a copy of contract document (specifications and schedule of quantities etc) shall be furnished by the Architect to the contractor. The Architect shall furnish within such time as he may consider reasonable, one copy of any additional drawings, which in his opinion may be necessary for the execution of any part of the work. Such copies shall be kept at the works, and the Architect or his representatives shall, at all reasonable times have access to the same and shall be returned to the Architect by the Contractor, before the issue of the final certificate. The original contract documents shall remain in the custody of Bank.

Please refer clause 36 of Special conditions of contract.

4. **SCHEDULE OF QUANTITIES:**

The Schedule of Quantities unless otherwise stated shall be deemed to have been prepared in accordance with the Standard Procedure of the Architects and shall be considered to be approximate and no liability shall attach to the Architect for any error/variations that may be discovered therein.

Please refer Clause 5, 6 and 40 of Special conditions of contract.

5. **SUFFICIENCY OF SCHEDULE OF QUANTITIES:**

The contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the prices stated in the schedule of Quantities and/or the Schedule of Rates and Prices, which rates and prices shall cover all things necessary for the proper completion of the works.

Please refer clauses 5, 6 and 40 of Special Conditions of Contract.

6. **ERRORS IN SCHEDULE OF QUANTITIES:**

Should any error appear in the Schedule of Quantities, other than in the Contractor's prices and calculations, it shall be rectified and such rectification shall not vitiate the contract but shall constitute a variation of the contract and be dealt with as an authorized extra or deduction. Contractor shall not be entitled to any additional payment for errors apparent at time of tender.

7. **CONTRACTOR TO PROVIDE EVERYTHING NECESSARY:**

The contractor shall provide everything necessary for the proper execution of works according to the true intent and meaning of the drawings, specifications and the Schedule of Quantities etc., taken together, whether the same may or may not be particularly shown or described there in, provided the same can be inferred there from. The several document forming the contract are to be taken as mutually explanatory to one another; detailed drawings and figured dimensions in preference to scale, and special conditions in preference to General conditions and particular specifications in preference to General specifications.

In case of discrepancy between the Schedule of Quantities, the specifications and/or the drawings, the following order of preference shall be observed:-

- i) Description of Schedule of Quantities.
- ii) Particular specifications and special condition, if any.
- iii) Drawings.
- iv) C.P.W.D. specifications.
- v) Indian Standard specifications of B.I.S.

If there are varying or conflicting provisions made in any document forming part of the contract, the Bank shall be the deciding authority after consulting the architect, with regard to the intention of the document and such decision shall be final and binding on the contractor.

Any error in description, quantity or rate in schedule of quantities or any omission there from shall not vitiate the contract or release the contractor from the execution of the whole or any part of the works expressed therein according to drawings and specifications or from any of his obligations under the contract.

The contractor shall make his own arrangements for providing water, for carrying out the work, at his own cost. If water from any source other than Municipal main is to be used for construction, the same shall be tested at the contractor's cost, and a report submitted to the Architect for his approval, before such water is used for the works. Temporary Electrical connections shall be obtained by the contractor to facilitate execution and completion of work at their cost and all the charges there of should be borne by them.

The contractor shall supply, fix and maintain at his cost, during the execution of any works, all the necessary centering, scaffolding, staging, planking, timbering, strutting, shoring, pumping, fencing, hoarding, watching and lighting during nights as well as by day required not only for the proper execution and protection of the said works, but also for the protection of the public and the safety of any adjacent road, streets, cellars, vaults, pavements, walls, houses, buildings and all other erections, matters or things. The Contractor shall take down and remove any or all such centering, scaffolding, staging, planking, strutting, shoring etc., as occasion shall require or when ordered or so to do, and shall fully reinstate at his own cost and make good all the matters and things disturbed during the execution of the works to the satisfaction of the Architects.

Please refer clause 7 of Special conditions of contract.

8. **AUTHORITIES, NOTICES, PATENT RIGHTS AND ROYALTIES:**

The contractor shall conform to the provisions of the statutes relating to the works, and to the regulation and by laws of any local authority, and of any water, lighting and other companies or authorities, with whose systems the structures are proposed to be connected; and shall before making any variation from the drawings or specifications, that may be necessitated by so conforming, give to the Architects a written notice, specifying the variations proposed to be made and the reason for making it and apply for instruction thereon. In case, the contractor shall not within ten days receive such instructions, he shall proceed with the work conforming with the provisions, regulations or by laws in question.

The contractor shall bring to the attention of the Architect all notices required by the said acts, regulations or bylaws to be given to any authority, and pay to such authority or to any Public Officer all fees that may be properly chargeable in respect of the works, and lodge the receipts with the Architects.

The contractor shall indemnify the Bank against all claims in respect of patent rights, designs, trademarks or name or other protected rights in respect of any constructional plant, machine, work or material used for or in connection with works or temporary works and from and against all claims, demands, proceedings, damages, costs, charges, and expenses whatsoever in respect thereof or in relation thereto. The Contractor shall defend all actions arising from such claims, unless he has informed the Architects, before any such infringement and received their permission to proceed, and shall himself pay all royalties, licence fees, damages, cost and changes of all and every sort that may be legally incurred in respect thereof.
Please refer clause 23 of special conditions of contract.

Contractor shall indemnify the Bank against all claims arising out of non-compliance of labour laws, GST, PF, ESI, Minimum Wages Act, Building and Other Construction Workers Act and any other law in this regard

9. **SEIGNIORAGE CHARGES:**

The Seignior age charges will be recovered from contractor's bill as per the rates prescribed in the contract documents for the materials used on the work only. The Seigniorage charges to be deducted at source at the rates prevailing from time to time as per Telangana Govt gazette.

RATES OF SEIGNIORAGE FEE

Sl.No	Name of the Minor Mineral	Unit	Rate of Seigniorage fee (in rupees)
1	Building stone, rough stone / boulders , road metal and ballast	MT	78/MT
2	Dimensional Stone used for Kerbs & Cubes	MT	156/MT
3	Lime Kankar / Limestone	MT	The rate of royalty as applicable to Limestone (other than LD grade) in respect of major minerals as per the 2 nd schedule of the Mines & Minerals (D&R) Act, 1957
4	Marble	MT	156/MT
5	Mosaic chips	MT	156/MT
6	Morrum / Gravel & ordinary earth	MT	26/MT
8	Shingle	MT	26/MT
9	Chalcedoney pebbles	MT	78/MT
10	Fullers / earth / bentonite	MT	195/MT
12	Rehmatti	MT	38/MT
13	Limestone slabs	MT	130/MT
14	Brick earth used in the manufacture of		9360/MT

	bricks including Mangalore tiles			
15	Granite useful for cutting and polishing	Gangsaw above 270 x above 150	Below 270 x below 150	
a	Black granite	1633/MT	1252/MT	
b	Colour granite	1354/MT	1176/MT	

- Or as per the actual. No additional payment will be made.

SCHEDULE II: Rates of Deed Rent

Sl.No	Name of the Mineral	Rate of Deed Rent per hectare per Annum (in Rs.)
1	Black Granite	1,00,000
2	Colour Granite	80,000
3	Limestone other than classified as major minerals used for lime burning or building construction purposes, marble, boulders, building stone including stone used for road, metal, fullers Earth, Ballast Concrete and other constructions purposes, slate and pyllites	50,000
4	Gravel Moorum, Shingle, Limestone Slabs, used for flooring purposes, Chalcedeny pebbles used in the building purposes, Limeshell for burning used for building purposes and rehmatti.	40,000

10. **MATERIALS AND WORKMANSHIP TO CONFORM DESCRIPTION:**

All materials and workmanship shall, so far as procurable be of the respective kinds specified in the Schedule of Quantities and/or specifications and in accordance with the Architect's instructions and the contractor shall on the request of the Architects furnish to them all invoices, accounts, receipts and the other vouchers to prove that the materials comply therewith. The contractor shall at his own cost arrange for and/or carry any test of any materials, which the Architect & Bank may require. The costs of materials used for testing, packing, transportation and testing shall be borne by the contractor and his quoted rates/amounts shall include all such expenses/contingencies.

10a. In case of non-availability of specified Make/brand of any material including steel and cement the alternate make/brand will be given by the Bank /Architect.

11. **THE SETTING OUT:**

The Contractor shall at his own expense, set out the works accurately in accordance with the plans and to the complete satisfaction of the Architect. The Contractor shall be solely responsible for the true and perfect setting out of the same and for the correctness of the positions, levels, dimensions and alignment of all parts thereof. If at any time any error shall appear during the progress or on completion of any part of the work, the contractor shall at his cost rectify such error if called upon to the satisfaction of the Architects/ Bank. The work shall from time to time be inspected by the Architect and/or his representatives, but such inspections shall not exonerate the contractor in any way from his obligation to remedy any defects, which may be found to exist at any stage of the work or after the same is completed, at his own cost.

12. **REMOVAL OF ALL OFFENSIVE MATTERS:**

All soil, filth or other matter of an offensive nature, taken out of any trench, sewer, drain, cesspool or other place shall not be deposited on the surface, but shall at once be carried out away by the contractor to some pits or place provided by them and shall be disposed off as per the rules and regulations of the Local authorities concerned.

13. **OPENING UP WORKS:**

The contractor shall notify the Architect in writing immediately, the trenches or excavation as shown on the drawings are get ready or as soon as any ground is cut into which, from unexpected causes, appears need for immediate attention. After notifying the Architect, he shall await instructions, which shall be given within ten days of receipt of such notice. If the contractor put in any parts of the foundations before he has so notified the Architect and received instructions, he shall be liable to reinstate all such work that may be subsequently, at any time, damaged on account of any defect or insufficiency of the foundations. The Contractor shall at the request of the Architect, within such time as the Architect so desires, open for inspection any work, and should the contractor refuse or neglect, to comply with such request, the Bank, through the Architect may employ other workmen to open up the same. If the said work has been covered up in contravention of the Architect's instructions, or if, on being opened up, it be found in accordance with the drawings and specifications, or the instructions of the Architect or otherwise, the expenses of such other workmen shall be borne by and recoverable from the contractor, or may be deducted from any money due or which may become due to the contractor. If the work has not been covered up in contravention of such instruction, and be found in accordance with the said drawings and specifications and instructions, then the expenses aforesaid shall be borne by the Bank and be added to the contract sum, provided always that in the case of foundations or of any other urgent work so opened up and requiring immediate attention, the Architect shall within seven days after receipt of the written notice from the contractor that the work has been opened, make or cause the inspection thereof to be made, and at the expiration of such time, if such inspection shall not have been made, the contractor may cover the same and shall not be required to open it up again, except at the expenses of Bank.

Refer clause 7 & 24 of special conditions of contract.

14. **CONTRACTOR'S SUPERINTENDENCE & REPRESENTATIVE ON THE WORKS:**

The contractor shall give all necessary personal superintendence during the execution of the works and as long thereafter as the Architect may consider it necessary until the expiration of the "Defects Liability Period" stated in clause 25. The Contractor shall meet the Architect or his representative, whenever required and so informed by the Architect.

The Contractor shall maintain and be represented at site at all times, while the work is in progress, by a responsible and efficient foreman, approved by the Architect and who must thoroughly understand all the trades entailed and be constantly in attendance while the men are at work. Any directions, explanations, instructions or notices give by the Architect & Bank to such foreman shall be deemed to have been given to the contractor and shall be binding as such on the contractor. The Foreman shall be thoroughly conversant with the English as well as local language and should be able to read, write and speak English.

15. **DISMISSAL OF WORKMEN:**

The contractor shall on the request of the Architect and Bank immediately dismiss from the works any person employed thereon who may, in the opinion of the Architect and Bank be unsuitable or incompetent or who may misconduct himself and such person shall not again be employed or allowed on the works without the permission of the Architect & Bank.

16. **ACCESS TO WORKS:**

The Architect, the Bank and any person authorized by them shall at all reasonable times have free access to the works and to the workshops, factories or other places where materials are being prepared or constructed by the contract and also to any place where the materials are lying or from which they are being obtained. The Contractor shall give every facility to the Architect and the Bank and their representatives for inspection and examination and test of the materials and workmanship. No person, unless authorized by the Architect or the Bank, except the representatives of Public authorities, shall be allowed on the works at any time. If any work is to be done at a place other than the site of works, the contractor shall obtain the written permission of the Architect for doing so.

17. **BANK'S REPRESENTATIVE/PMC:**

The Bank may appoint an assistant to the Engineer, any Site Engineer or Project Management Consultant (PMC), who shall be the representative of the Bank. The duties of the Bank's representatives are to watch and supervise the works and to test any materials to be used and of workmanship employed in connection with the works. He shall have no authority either to relieve the contractor of any of his duties or obligations under the contract, or except those expressly provided hereunder, to order any work involving delay or any extra payment by the Bank or any variation of or in the works.

The contractor shall afford the Bank's representative every facility and assistance for examining the works and materials and checking and measuring item and materials. Neither the Bank's representative nor any assistant to the Architect shall have power to revoke, alter, enlarge or relax the requirements of this contract, or to sanction any new-work, additions, alterations,

deviations or omissions unless such an authority may be specially conferred by a written order of the Architect and Bank.

The Bank's representative shall have to give notice to the Contractor or his representative about the non-approval of any work or materials and such works shall be suspended or the use of such materials should be discontinued until the decision of the Architect is obtained. The work will from time to time be examined by the Architect or the Bank's representative, but such examinations shall not in any way exonerate the contractor from the obligation to remedy any defects, which may be found to exist at any stage of the work or after the same is completed. Subject to the limitations of the clause, the contractor shall take instructions only from the Architect and Bank.

18. **ASSIGNMENT OF SUB-LETTING:**

The works included in the contract shall be executed by the contractor and the contractor shall not directly or indirectly transfer, assign or underlet the contract or any part/share thereof or interest therein without the written consent of the Architect and Bank, and no undertaking shall relieve the contractor from the full and entire responsibility of the contract or from active superintendence of the works during their progress.

19. **SUB-CONTRACTORS:**

All specialists, merchants, tradesmen, and others, executing any work or supply and fixing any goods for which prime cost prices or provisional sums are included in the Schedule of Quantities and/or specifications, who may be nominated or selected by the Architect and Bank and hereby declared to be sub-contractors employed by the Contractor, are herein referred to as nominated sub-contractors. No nominated sub-contractors shall be employed on or in connection with the works, against whom the contractor shall make reasonable objection or (see where the Architect and contractor shall otherwise agree), who will not enter into a contract provided.

- a. The nominated sub-contractors shall indemnify the contractor against the same obligations in respect of the sub-contract as the contractor is under, in respect of this contract.
- b. The nominated sub-contractors shall indemnify the contractor against claims in respect of any negligence by the sub-contractor, his servants or agents or any misuse by him or them of any scaffolding or other plant, the property of the contractor or under any Workman's Compensation Act in force.
- c. Payment shall be made by the contractor to the nominated sub-contractor, within 14 days of receipt of the Architect's certificate, provided that before any certificate is issued, the contractor shall upon request furnish to the Architect proof that all nominated sub-contractor's account included in the previous certificates have been duly discharged; in default whereof the Bank may pay the same upon a certificate of the Architect and deduct the amount thereof from any sums due to the contractor. The exercise of this power shall not create any contract between Bank and Sub-contractor.
- d. Contractor remains solely liable for performance of nominated subcontractors.

20. **VARIATIONS NOT TO VITIATE CONTRACT:**

The contractor shall when directed in writing by the Architect, omit from or vary works shown upon the drawings or described in the specifications or included in the priced schedule of quantities, but the contractor shall not make any alterations or additions to or omissions from the works or any deviations from the provisions of the Contract without such authorizations or direction in writing from the Architect and Bank.

No claim for any extra item or deviations shall be allowed, unless it shall have been executed by the Authority of the Architect and Bank as herein mentioned. Any such extra item or deviation is hereinafter referred to as an authorized extra item or deviation. No variations i.e., additions, omissions or substitutions shall vitiate the contract.

The rate of items not included in the bill of quantities shall be settled by the Architect and Bank in accordance with the provisions of clause 21, hereof.

21. **MEASUREMENTS OF WORKS:**

The Architect/PMC may from time to time intimate the Contractor that he requires the works to be measured and the contractor shall forthwith attend or send a qualified agent to assist PMC/Architect's representative in taking measurements and calculations, and to furnish all particulars or give all assistance required by either of them.

Should the contractor not attend or neglect or omit to send such an agent, then the measurements and the calculations taken by the PMC/Architects representative shall be deemed to be correct and binding on the Contractor. The mode of measurements wherever not mentioned in contract documents be taken in accordance with the Indian Standard of Method of measurements of building works (I.S.1200 – 1958) and its revisions, if any. In case of any discrepancy between various contract documents on mode of measurements, the mode given in Bill of Quantities will take precedence over others.

The contractor or his agent may at the time of measurement take such notes and measurements as he may require.

All authorized extra works, omissions and all variations made without the Architect's and Bank's knowledge or approval, if substantially sanctioned and ratified by them in writing shall be included in such measurements.

22. **PRICES FOR SUBSTITUTIONS/EXTRA ETC., ASCERTAINMENT OF:**

Should it be found after the completion of the works from measurements taken (in accordance with the previous paragraph) that any of the quantities or amounts specified for the works in the priced schedule of quantities of work thus ascertained are less or greater than the amounts and/or tender or that any variations, is made, and any substituted/ extra (new) items have been executed, the valuation of such quantities/items, amounts or variations, unless previously or otherwise agreed upon, shall be made in accordance with the following rules:

- a. The net rates or prices in the original tender shall determine the valuation of the extra (additional quantities and or extra/substituted item of work), where that work is of a similar character and executed under similar conditions of the work priced therein. This applied to extra and substituted items of work to the extent, they are similar in nature to the items in the contract.
- b. The net prices given in the original tender shall determine the value of the items omitted, provided if omissions vary the conditions under which any remaining items of work are carried out, the prices for the same shall be valued under thereof.
- c. Where extra/substituted item of works are not of similar character (either partly & fully) and/or executed under similar conditions as aforesaid or where the omissions vary the conditions under which any remaining items of works are carried out or if the amount of any omission or additions relative to the amount of the whole of the contract works or to be any part thereof shall be such that in the opinion of the Architects the net rate or price contained in the priced schedule of quantities or tender or for any item of the work involves less or more beyond that reasonably contemplated by the Contractor or is by reason of such omission or addition rendered unreasonable for in-applicable, the Architect shall fix in consultation with the Bank such other rates or prices as in the circumstances he shall think reasonable and proper, which shall be final and binding on the contractor. For extra and substituted items this will apply for portions of the items for which, items of similar nature are not available in the contract.
- d. Where extra and or substituted items of work cannot be properly measured or valued, the contractor shall be allowed based on the net local day work rates and wages for the district and prevalent market rates for materials etc., at the time of ordering that item; provided that in either case vouchers for wages paid specifying the daily time (and if required by the Architect, the workmen's name) and materials employed at or before the end of the week following that in which the work has been executed.

The measurements and valuations in respect of the extra and substituted items of work shall be completed within the "Period of final measurement" or within 3 (three) months from the completion of the contract works as defined under clause No.26 (certificate of virtual completion).

See Special Conditions of Contract Clause 45.

23. **UNFIXED MATERIALS:**

When any materials intended for the works shall have been placed at site by the contractor, such materials shall not be removed there from (except for the purposes of being used on the works) without the written authority of the Architect and Bank and when the contractor shall have received payment in respect of any certificate in which the architect shall have stated that he has taken into account the value of such unfixed materials on the works such materials shall become the property of the Bank and the Contractor shall be liable for any loss or damage to any such materials.

24. **REMOVAL OF IMPROPER WORK AND MATERIALS:**

The Architect shall, during the progress of the works, have power to order in writing from time to time the removal from the works, within such reasonable times as may be specified in the order, of any materials which in the opinion of the Architect and Bank are not in accordance with the specifications or the instructions of the Architect and Bank; and the substitution with proper materials and the removal and proper re-execution of any work, which has been executed with materials or workmanship, not in accordance with the contract/drawings and specifications or instructions etc., the contractor shall forthwith carry out such orders at his own cost. In case of default on the part of the contractor to carry out such orders, the Bank shall have the power to employ and pay other persons to carry out the same and all expenses consequent thereon or incidental thereto shall be borne by the Contractor, and shall be recoverable from the contractor by the Bank, or may be deducted by the Architect, from any money due or may become due to the contractor for this work or on any other account.

Instead of this procedure for work not done in accordance with the contract, the Architect and Bank may allow such work to remain, and in that case may make allowance for the difference in value together with such further allowance for damages to the Bank, as in his opinion may be reasonable. This allowance shall be recoverable from the contractor by the Bank, or may be deducted by the Architect, from any money due or may become due to the contractor for this work or on any other accounts. The decision of Architects as well as Bank in these matters shall be final and binding on the contractor.

25. **DEFECTS AFTER COMPLETION:**

Any defect, shrinkage, settlement or other faults which may appear within the “Defects Liability Period” stated in the Appendix on Page 10 i.e. within 12 months after the virtual completion of the works arising in the opinion of the Architect and the Bank, from materials or workmanship not in accordance with the contract, shall upon the directions and writing of the Architect and Bank and within such reasonable time (48 hours in emergency cases) as shall be specified therein, be rectified and made good by the Contractor at his own cost. In case of default, the Bank may employ any other person to amend and make good such defects, shrinkage, settlements or other faults. All damages, loss and expenses consequent therein or incidental thereto shall be made good and borne by the contractor and such damage, loss and expenses shall be recoverable from him by the Bank or may be deducted by the Bank, the damages, loss and expenses from any sums that may be due to the contractor or amount retained under condition 38 (Certificate and payment) and in event of the amount retained being insufficient recover the balance from the amount held against EMD & Security deposit under **clause 9.1 & 9.2 of Notice to contractor** or any other amounts due or may become due later.

26. **CERTIFICATE OF VIRTUAL COMPLETION:**

The contractors shall intimate in writing to the Architects, as and when the works are complete in all respects in order to enable the Architect to intimate the Bank to take possession of the same. The works shall not be considered as virtually completed, until the Architect has certified in writing that the same have been “Virtually completed” and accepted by the Bank. Virtual completion shall not be issued unless all statutory approvals and clearances are obtained. Occupation by Bank shall not constitute deemed completion. The defects liability period shall commence, only from the date of such virtual completion certificate.

27. **OTHER PERSONS ENGAGED BY THE BANK:**

The Bank reserves the right to use the premises and any portions of the site for the execution of any work not included in this contract which he may desire to carry out through other persons, and the contractor is to allow all reasonable facilities for the execution of such work, except by special arrangement with the Bank. 3Such work shall be carried out in such a manner not to impede the progress of the works included in the contract.

28. **INSURANCE IN RESPECT OF DAMAGE TO PERSONS AND PROPERTY:**

The contractor shall be fully responsible for all injury to persons, animals or things and for all structural and decorative damage to any property, arising out of or in the course of the execution of the Works, including but not limited to any act, omission, negligence, or default of the Contractor, his employees, agents, or Sub-Contractors. This clause shall be held to include, inter alia any damage to buildings, whether immediately adjacent or otherwise, any damage to roads, utilities, or other public or private property, Damage arising from weather conditions, including frost or other inclement weather; and any other damage directly or indirectly connected with the execution of the Contract. The contractor shall indemnify the Bank and hold him harmless in respect of all and any expenses arising from any such injury or damage to persons or property as aforesaid and also in respect of any claim made in respect of injury or damage under any acts of government or otherwise, and also in respect of any award of compensation or damages consequent upon such claim.

The Contractor shall promptly reinstate, repair, or make good all damages of every sort mentioned in this clause, so as to deliver up the whole of the contract works complete and perfect in every respect and so as to make good or otherwise satisfy all claims arising from damage to the property of third parties.

The contractor shall indemnify the Bank against all claims which may be made against the Bank, by any member of the Public or other party, in respect of anything which may arise in respect of the works or in consequence thereof and shall at his own cost, effect and maintain until one month after the works are taken over by the Bank or three months after the date of completion of the contract with an approved office, a Third-Party Liability Insurance Policy in the joint names of the Bank and the contractor covering all liabilities arising out of injury or damage to persons (other than employees covered under statutory insurance) and property in connection with the execution of the Works. The contract shall also indemnify the Bank against all claims which may be made upon the Bank whether under the labour codes or any other statute in force during the currency of this contract or at common law in respect of any employees of the contractor or of any sub-contractor and shall at his own expense effect and maintain until one month beyond the virtual completion of the contract an Insurance policy in the joint names of the Bank and the Contractor against such risks and deposit such policy or policies with the Architects Or Bank and premium receipts shall be deposited with the Architects or Bank and kept valid from time to time, during the currency of the contract. In default of the contractor insuring as provided above, the Architect or Bank on behalf of the Bank may so insure and may deduct the premiums paid from any money due or which may become due to the contractor.

The contractor shall be responsible for anything which may be excluded from the Insurance Policies above referred to and also for all other damages to any property arising out of and

incidental to the negligent or defective carrying out of this contract however, such damage shall be caused.

The Contractor shall also indemnify the Bank in respect of any costs, charges or expenses arising out of any claim or proceedings and also in respect of any Award of or compensation of damages arising there from.

The Contractor shall indemnify, defend, and hold harmless the Bank, its directors, officers, employees, and agents from and against any and all claims, demands, liabilities, losses, penalties, damages, costs, or proceedings (including legal fees) arising out of or relating to any non-compliance, delay, or failure in implementation of the Labour Codes or any other labour laws, including claims by contract labour, statutory authorities, or courts, notwithstanding anything to the contrary in this Agreement. Without prejudice to the foregoing, the Bank shall be entitled to withhold, adjust, or recover any amounts payable or paid to the Contractor under this Agreement or otherwise, towards satisfaction of any such claim, demand, penalty, or liability, and this clause shall survive termination or expiry of the Agreement.

The Bank with the concurrence of the Architect shall be at liberty and is hereby empowered to deduct the amount of any damages, compensations, costs, charges and expenses arising or occurring from or in respect of any such claims of damages from any sums due or to become due to the contractor.

29. **CONTRACTOR'S ALL RISK POLICY:**

The contractor shall within 14 days from the date of commencement of the work insure the works at his own cost and keep them insured until one month after the works are taken over by the Bank or three months after the date of completion whichever is earlier, against loss or damage by fire and usual risks other than fire against which insurers generally provide cover in a CONTRACTOR'S ALL RISK POLICY, with an insurer to be approved the Architects, in the joint names of the Bank and contractor (the name of the former being placed first in the policy), progressively for the full amount of the contract, in three stages, beginning with 1/3 of the contract value, and for any further sum as called upon to do so by the Architect, with the prior written consent of the Bank, the premium of such further sum being allowed to the contractor as an authorized extra. Such policy shall cover the property of the Bank only and Architects and surveyor's fees for assessing the claim and in connection with his services generally in reinstatement and shall not cover any property of the contractor of any subcontractor or employee. The contractor shall deposit the policy and receipts for the premiums paid with the Architects, within twenty one days of the date of commencement of work, unless otherwise instructed, as provided above failing which the Bank or the Architect on his behalf may insure and may deduct the premium paid from any money that may be due or that may become due to the contractor. The contractor shall as soon as the claim under the policy is settled, or the work reinstated by the insurers should they elect to do so, proceed with all due diligence with the completion of the works in the same manner as though the fire or other such risk had not occurred and in all respects under the same conditions of contract.

The contractor in case of rebuilding or reinstatement after fire or other such usual risk shall be entitled to such extension of time for completion as recommended by the Architect.

Please refer Special Conditions of Contract, clauses.

30. **MINIMUM AMOUNT OF THIRD-PARTY INSURANCE:**

Such insurance shall be affected with an insurer and in terms approved by the TGB which approval shall not be reasonably withheld and for at least the amount stated below. The contractor shall, whenever required, produce to the Architect/Consultant the policy or policies of insurance cover and receipts for payment of the current premium.

The minimum insurance cover for physical property, injury, and death is Rs.5.00 lakhs per occurrence with the number of occurrences limited to four. After each occurrence contractor will pay additional premium necessary to make insurance valid for four occurrences always.

31. **COMMENCEMENT AND COMPLETION:**

The contractor shall be allowed admittance to the site on the “Date of Commencement” stated in the Appendix, and he shall thereupon and forthwith begin the works and shall regularly proceed with and complete the same (except such painting or other decorative work as the Architect may desire to delay) on or before the ‘Day of Completion’ started in the Appendix subject nevertheless to the provisions for extension of time hereinafter contained.

Refer clause 9 & 37 of Special Conditions of Contract.

32. **DELAY AND EXTENSION OF TIME:**

If in the opinion of the Architect the works be delayed:

- a. by force majeure, or
- b. by reason of any exceptionally inclement weather, or
- c. by reason of proceedings taken on threatened by or dispute with adjoining or neighboring owners or public authorities arising otherwise, than through the contractor’s own default, or
- d. by the works or delays of the contractors or tradesmen engaged or nominated by the Bank or Architect and not referred to in the Schedule of Quantities and/or specifications, or
- e. by reason of civil, commotion, local combination of workmen or strike or lock-out affecting any of the buildings/traders, or
- f. by reason of the Architect’s instructions as per clause 2, or
- g. In consequence of the contractor not having in due time, necessary instructions from the Architect, for which he shall have specifically applied in writing ahead of time, giving reasonable time to prepare such instructions.

The Architect shall make a fair and reasonable assessment for extension of time, for completion of the contract works which may be approved by the Bank. Contractor must apply for Extension

of Time within 7 days of occurrence, failing which claim is barred. No monetary compensation shall be payable for Extension of Time unless expressly approved by Bank.

In case of such strike or lock-out, the contractor shall as soon as possible, give written notice thereof to the Architect as well as to the Bank, but the contractor shall nevertheless constantly use his endeavors to prevent delay and shall do all that may reasonably be required, to the satisfaction of the Architect to proceed with the work.

33. **DAMAGES FOR NON-COMPLETION:**

If the contractor fails to complete the works by the date stated in clause 31 (date of completion) or within any extended time certified under clause 32 (extension of time) and if the Architect shall certify in writing on or before the date of issue of the certificate for the last payment to which the contractor may become entitled hereunder that the works could have been reasonably completed by the said date or within the said extended time, then the contractor shall pay to the Bank or allow the Bank to recover from dues to the contractor on any account the sum stated in clause 14 of "Notice to contractors" (liquidated damages and not by way of penalty), subject to a maximum amount of 5% of the value of the contract as stated in Appendix of General Conditions of contract (clause 5) and as stated in clause 14 of "Notice to contractors" and such damages may be deducted from any money due or which may become due to the contractor.

The deduction of such sums shall not, however, absolve the contractor of his responsibility and obligations to complete the work in its entirety.

Please refer clauses 9 & 37 of special conditions of contract.

34. **FAILURE BY CONTRACTOR TO COMPLY WITH ARCHITECT'S INSTRUCTIONS:**

If the contractor after receipt of written notice from the Architect requiring compliance with such further drawings and/or Architects instruction, fails within seven days to comply with the same, the Architect and Bank may employ and pay other persons to execute any such work whatsoever as may be necessary to give effect thereto and all costs incurred in connection therewith shall be recoverable from the contractors by the Bank on a Certificate by the Architect as a debit or may be deducted by him from any money due or which may become due to the contractors.

35. **ARCHITECT'S DELAY IN PROGRESS:**

The Architect may delay the progress of the works in case of rains or otherwise, without vitiating the contract and grant such extension of time with the approval of the Bank for the completion of the contract as he may think proper and sufficient in consequence of such delay, and the contractor shall not make any claim for compensation or damage in relation thereto.

36. **SUSPENSION OF WORKS:**

If the contractor, except on account of any legal restraint upon the Bank preventing the continuance of the works, or on account of any of the causes mentioned in the clause "Extension of time" or in the case of certificate being withheld or not paid when due, shall suspend works or in the opinion of the Architects, shall neglect or fail to proceed with due diligence in the performance of his part of the contract or if he shall more than once make default in the respects

mentioned in clause 24 (removal of improper work and materials), the Bank through the Architect shall have the power to give notice in writing to the contractor required that the works be provided within a reasonable manner, and with reasonable dispatch, such notice shall not be unreasonably given and must signify that it purports to be a notice under the provisions of this clause and must specify the acts or defaults on the part of the contractor upon which it is based. After such notice shall have been given, the contractor shall not be at liberty to remove from the site of works, or from any ground contiguous thereto, the site of works, or from any ground contiguous thereto, any plant or materials belonging to him which shall have been placed thereon for the purpose of work, and the Bank shall have lien upon such plants and materials to subsist from date of such notice being given until the notice shall have been complied with, provided always that such lien shall not under any circumstances subsist after the expiration of 30 (thirty) day from the date of such notice given, unless the Bank shall have entered upon and taken possession of the works and site, as hereinafter provided.

If the contractor shall fail for seven days after such notice has been given, to proceed with the works as therein prescribed, the Bank may enter upon and take possession of the works and site, and of all such plants, machinery and materials thereon intended to be used for the works, and the Bank shall retain and hold a lien upon all such plants, machinery and materials until the work shall have been completed, under powers hereinafter conferred upon him;

If the Bank shall exercise the above power, he may engage any other person to complete the works and exclude the contractor, his agents and servants from entry upon or access to the same, except that the contractor or any person appointed in writing may have access at all times during the progress of the works to inspect, survey and measure the works. Such written appointments or a copy thereof shall be delivered to the Architects before the person appointed comes on to the works and the Bank shall take such steps as in the opinion of the Architect may be reasonably necessary for completion the works, without undue delay or expenses using for that purpose the plant, machinery and materials above mentioned in so far as they as they are suitable and adopted to such use.

Upon the completion of the works, the Architects shall certify the amount of the expenses properly incurred consequent on and incidental to the default of the contractor as aforesaid and in completion the works by other persons.

Should the amount so certified as the expenses properly incurred be less than amount which should have been due to the contractor upon the completion of the works by him, the difference shall be paid to the contractor by the Bank, should the amount of the former exceed the later, the difference shall be paid by the contractor to the Bank. The Bank shall not be liable to make any further payments or compensations to the contractor for or on accounts of the proper use of the plant for the completion of the works under the provisions herein before mentioned other than such payments as is included in the contract.

After the works shall have been so completed by persons other than the contractor, under the provisions herein before contained, the Architect shall give notice to the contractor to remove his plan and all surplus materials as may not have been used in the completion of the works from the site.

If such plant and materials are not removed within a period of 14 days after the notice shall have been given, the Bank may remove and sell the same, holding the proceeds less the cost of the

removal and sale, to the credit of the contractor. The Bank shall not be responsible for any loss sustained by the Contractor from the sale of the plant in the event of the Contractor not removing it after notice.

37. **PRIME COST AND PROVISIONAL SUMS:**

- a. Where “Prime Cost” (P.C.) prices or provisional sums of money are considered for any goods or works in the specifications or Schedule of quantities or deviations hereof, the same are exclusive of any trade discounts, or allowances, discount for cash, or profit which the contractor may require and or carriage and fixing.
- b. All goods or work, for which prime cost prices or provisional sums of money are considered may be selected or ordered from any manufacturer’s or firms, at the discretion of the Architect or the Bank. The Bank reserves to himself the right of paying directly for any such goods or work and the Architect may deduct the said prices or sums from the amount of the contract. Should any goods or works for which prime cost prices or provisional sums are considered or portions of same be not required, such prices or sums, together with the profits allowed for such additional amount as the Contractor may have allowed for carriage and fixing will be deducted in full from the amount of the Contract. Whether the goods be ordered by the Contractor or otherwise, the contractor shall at his own cost fix the same, if called upon to do so, and the contractor shall also receive and sign for such goods and be responsible for their safe custody as and from the date of their delivery upon the works.
- c. In cases in which provisional quantities of items/materials are contained in the contract, the contractor shall provide such materials and or execute such items to such amounts or to greater or lesser amounts as the Architect shall direct in his schedule of quantities.
- d. No prime cost sum or sums (or any portion thereof) shall be included in any certificate for payment to the contractor until the receipted accounts relating to them have been produced by the contractor to the Architect. Such accounts shall show all discounts and any sum or sums in respect of such discounts shall be treated as a trade discount. Provided always, that should the contractor in lieu of producing such receipted accounts, request the Architect in writing to issue a certificate to the Bank for such sum or sums, due either on account or in settlement to a sub-contractor direct, the Architect shall, upon satisfying himself that the sub-contractor is entitled to the same, so issue the certificate and such sum or sums be deducted from the amount of the contractor, at the settlement of accounts and any profit or sum to which the contractor is properly entitled, in respect of such sub-contract, and which is in conformity with the terms of contract as though the amount of such certificates to the sub-contractor has been included in a certificate drawn in favor of the contractor.
- e. If the contractor neither produces the receipt nor gives authority to the Architect to issue a certificate in favor of such sub-contractor direct, the Architect may upon giving the contractor SEVEN DAYS NOTICE in writing of his intentions to do so, issue to the sub-contractor such certificate direct to the Bank and obtain a receipt from the sub-contractor, which receipt shall be deemed as a discharge for the amount of such certificates, as though given by the contractor. In such event, the contractor shall not be allowed any profit he may have added in the Schedule of Quantities upon such sub-contract.

- f. The exercise of the option before referred to by the Contractor and the issue of certificates, as before described to sub-contractor direct of certificates by the Architect, shall not however, relieve the contractor from any of the liabilities in respect of insufficient, faulty of in completed work of the sub-contractor for which he may be liable under the terms of the contract.

38. **CERTIFICATES AND PAYMENTS:**

The contractor shall be paid by the Bank after due checking and after making necessary correction from time to time, by installments under Interim Certificates to be issued by the Architect on account of the works executed by the contractor based on the joint measurements taken by the PMC, the Architects representative and the contractors representative when in the opinion of the Architect, work to the approximate value named in the Clause 10 of Appendix to General Conditions of contract as “Value of work for Interim Certificates”, (or less at the reasonable discretion of the Architect & Bank) has been executed in accordance with the Contract, subject however, to a retention of the percentage of such value named in the Appendix hereto mentioned as “Retention Percentage for Interim Certificates”, until the total amount retained shall reach the sum named in the appendix as Total Retention Money, after which time the installments shall be up to the full value of the work subsequently so executed plus such amount as he may consider proper on account of materials delivered upon the site by the contractor for use in the work and available on the date of billing.

And when the works have been virtually completed and the Architect shall have certified in writing that they have been so completed, the contractor shall be paid by the Bank after satisfying himself in accordance with the certificate to be issued by the Architect, the sum of money named in the Appendix as ‘Instalment after Virtual Completion’ being a part of the said Total Retention Money.

The Contractor shall be entitled to the payment of the final balance (balance security deposit/retention money) in accordance with the final certificate to be issued in writing by the Architect at the expiration of the period referred to as ‘The Defects Liquidation Liability period’ in Appendix to General Conditions of contract, from the date of virtual completion or as soon after the expiration of such period as the work shall have been finally completed and all defects made good according to the true intent and meaning hereof, whichever shall happen, provided always that the issue by the Architect of any Certificate during the progress of the works or after the completion shall not relieve the contractor from his liabilities in cases of fraud, dishonesty or fraudulent concealment relating to the works or materials or any matter dealt within the certificate, and in case of all such defects and insufficiencies in the works or materials, which reasonable examination would have disclosed. No certificate of the Architect shall by itself be conclusive evidence that any works or materials to which it relates are in accordance with the contract.

The Architect shall have power to withhold any Certificate, if the works or any parts thereof are not being carried out to his and Bank’s satisfaction. The Architect may by any certificate make any correction in any previous Certificate, which shall have been issued by him. Payment upon the Architect’s Certificates shall be made within the period named in the Appendix as ‘Period of Honoring of Certificates, after such certificates have been delivered to Bank.

Please refer clause 38 & 47 of Special conditions of agreement.

39. **NOTICES:**

Notices for the Bank, the Architect, or the Contractor may be served personally or by being left at or sent by registered post to the last known place of abode or business of the party to whom the same is to be given or in the case of the contractor by being left on the works. In case of a company or corporation, notices may be served at or sent by registered post to the Registered Offices of the Company or Corporation. Any notice sent by registered post shall be deemed to be served at the time, when in the ordinary course of post it would be delivered.

40. **TERMINATION OF CONTRACT BY THE BANK:**

If the contractor being an individual or a firm, commit any act of insolvency, or shall be adjudged as Insolvent or being an incorporated Company shall have an order for compulsory winding up made against it or pass an effective resolution for winding up voluntarily or subject to the Supervision of the Court and of the Official Assignee of the Liquidator in such acts of insolvency or winding up, shall be unable within seven days after notice to him requiring him to do so, to show to the reasonable satisfaction of the Architect or the Bank that he is able to carry out and fulfill the contract, and to give security thereof, if so required by the Architect or the Bank.

Or if the contractor (whether an individual, firm or incorporated Co.) shall suffer execution to be issued.

Or shall suffer any payment under this contract to be attached by or on behalf of any of the creditors of the contractor.

Or shall assign or sublet this contract without the consent in writing of the Architects/ Bank first obtained.

Or shall charge or encumber this Contract or any payments due or which may be due to the Contract there under.

Or if the Architect shall certify in writing to the Bank that the contractor,

- a. has abandoned the contract or
- b. has failed to commence the works, or has without any lawful excuse under these conditions suspended the progress of the works for 14 days, after receiving from the Architect written notice to proceed, or
- c. has failed to proceed with the works with such due diligence and failed to make such due progress as would enable the works to be completed within the time agreed upon, or
- d. has failed to remove materials from the site or to pull down and replace work for 7 days after receiving from the Architect written notice that the said materials or work were condemned and rejected by the Architect under these conditions, or
- e. has neglected persistently to observe and perform all or any of the acts, matters or things by this contract to the observed and performed by the Contractors for 7 days after written

notice shall have been given to the contractor requiring the contractor to observe or perform the same, or

- f. has to the detriment of good workmanship or in defiance of the Architect's instructions to the contrary, sublet any part of the contract.

Then and in any of the said cases the Bank with written consent of the Architect, may notwithstanding any previous waiver, after giving 7 days notice in writing to the contractor, determine the contract, but without hereby affecting the powers of the Architect to continue in force as full as if the contract has not been so determined and as if the works subsequently executed has been executed by or on behalf of the contractor.

And further, the Bank under recommendations of the Architect, by his Agents, or servants may enter upon and take possession of the works and all plants, tools, scaffoldings, sheds, machinery, and other equipment and materials also laying upon the premises or the adjoining lands or roads, and use the same as his own property or may employ the same by means of his own servants and workmen in carrying on and completion the works or by employing any other contractors or other persons to complete the works and the contractor shall not in any way interrupt or do not act, matter or thing to prevent or hinder such other contractor or other persons or person employed for completing and finishing or using the materials and plant for the works. When the works shall be completed or soon thereafter as convenient, the Architect shall give a notice in writing to the contractor to remove his surplus materials and plant, and should the contractor fail to do so, within a period of 14 days, after receipt thereof by him, the Bank shall sell the same by publication and shall give credit to the contractor for the amount realized. The Architect shall thereafter ascertain and certify in writing under his hand when (if anything) what shall be due to or payable by the Bank for the value of the said plant and materials so taken possession of by the Bank, and the expense or loss, which the Bank shall have incurred due to the contractor, and the amount which shall be so certified shall thereupon be paid by the Bank to the contractor or by the contractor to the Bank, as the case may be.

41. **TERMINATION OF CONTRACT BY CONTRACTOR:**

If payment of the amount payable by the Bank under certificate of the Architect as provided for hereinafter shall be in arrears and unpaid for 30 (thirty) days after notice in writing requiring payment of any undisputed amount, as aforesaid shall have been given by the Contractor to the Bank, or if the Bank obstructs the issue of any such certificates, or if the Bank commits any Act of insolvency, or if the Bank (being an incorporated company) shall have an order made against him or pass an effective.

Resolution for winding up, either compulsorily or subject to the supervision of the Court or voluntarily, or if the Official Liquidator or the Bank shall repudiate the contract, or if the Official Liquidator in any such winding up shall be unable within 15 days notice to him requiring him to do so, to the reasonable satisfaction of the contractor that he is not able to carry out and fulfill the contract and to give security for the same (including Earnest money), or if the works be stopped for any payments due, and to become due there under and if required under the order of the Architects or the Bank or by an injunction or other order of any court of law, then in any of the said cases, the contractor shall be at liberty to determine the contract by notice in writing to the

Bank/Architect, and he shall be entitled to recover from the Bank, payment for all works executed and for any losses he may sustain, upon any plant or materials supplied or purchased or prepared for the purpose of the contract.

In arriving at the amount of such payment, the net rates contained in the contract shall be followed, or where the same may not apply, valuation shall be made in accordance with clause 22 thereof.

42. **Matters to be finally determined by the Architects and the Bank:** (Called excepted matters) – (refer 43(a) below), which shall be final, conclusive and binding on the following matters:

- a) Instructions
- b) Transactions with local authorities
- c) Proof of quality of materials
- d) Assigning or under letting of the contract,
- e) Certificate as to the causes of delay on the part of the contractor and justifying extension of time or otherwise,
- f) Rectification of defects pointed out during the defects liability period.
- g) Notice to the contractor to the effect that he is not proceeding with due diligence.
- h) Certificate that the contractor has abandoned the contract.
- i) Notice for determination of the contract by the Bank.

43. **Settlement of Disputes (Arbitration):**

- a. When the contractor is dissatisfied with the decision of the Architect/Bank, the contractor is required to give a notice to the Bank within 30 days of the receipt of such decision, for the appointment of the Arbitrator for the settlement of the outstanding disputes.
- b. The General Manager of the Bank shall refer those disputes for adjudication to a sole arbitration.
- c. It is also a term of the contract that if the contractor does not make any demand for Arbitrator in respect of any claims within 90 days of receiving the intimation from the Bank that the final bill is ready for payment, the claims if any received after 90 days period shall be absolutely barred from reference to the Arbitrator.
- d. All disputes or differences of any kind whatsoever, which shall at any time arise between the parties hereto touching or concerning the works or the execution or maintenance thereof this contract, or the rights touching or of this contract, effect thereof, or to the rights or liabilities of the parties arising out of or in relation thereto, whether during progress or after determination, foreclosure or breach of the contract (other than those in respect of which the decision expressed to be final and binding in cases listed out in condition 40 above), Architects shall, after written notice to either party to the contract and to the appointing Authority, who shall be appointed for this purpose by the Bank refer those disputes for adjudication to a sole arbitrator, to be appointed as hereinafter provided.
- e. For the purpose of appointing the sole arbitrator referred to above, the Appointing authority will send, within thirty days of receipt by him of the written notice aforesaid, to the contractor a panel

of three names of persons, who shall be presently unconnected with the organization for which the work executed.

- f. The contractor shall on receipt by him of the names as aforesaid, select any one of the persons named to be appointed as a sole arbitrator and communicate his name to be appointed as a sole arbitrator to the Appointing Authority, within thirty days of receipt of the names by him. The Appointing Authority shall thereupon without any delay appoint the said person as the sole arbitrator. If the contractor fails to communicate such selection as provided above within the period specified, the Appointing Authority shall make the selection and appoint the selected person as the sole arbitrator.
- g. If the Appointing Authority fails to send to the contractor the panel of three names as aforesaid within the period specified, the contractor shall send to the appointing authority a panel of three names of persons, who shall be unconnected with either party. The Appointing Authority shall on receipt by him of the names as aforesaid select any one of the persons named and appoint him as the sole arbitrator. If the Appointing Authority fails to select the person and appoint him as the sole arbitrator within 30 days of receipt by him of the panel and inform the contractor accordingly, the contractor shall be entitled to appoint one of the persons from the panel as the sole arbitrator and communicate his name to the Appointing Authority.
- h. If the Arbitrator so appointed is unable or unwilling to act or resigns his appointment or vacates his office due to any reasons whatsoever, another sole arbitrator shall be appointed as aforesaid.
- i. The work under the contract, shall however, continue during the arbitration proceedings and no payment due or payable to the contractor shall be withheld on account of such proceedings.
- j. The arbitrator shall be deemed to have entered on the reference, on the date he issues notice to both the parties, fixing the date of first hearing.
- k. The arbitrator may from time to time, with the consent of the parties, enlarge the time for making and publishing the award.
- l. The Arbitrator shall give a separate award in respect of each dispute or difference referred to him. The Arbitrator shall decide each dispute in accordance with the terms of the contract and give a reasoned award. The venue of arbitration shall be Hyderabad.

The fees, if any, of the Arbitrator, if required to be paid before the award is made and published, shall be paid half and half by each of the parties. The costs of the reference and of the award including the fees, if any, of the Arbitrator, who may direct to any by whom and in what manner such costs or any part thereof shall be paid and may fix or settle the amount of costs to be so paid.

- m. The award of the Arbitrator shall be final and binding on both the parties.
- n. Subject to aforesaid, the provisions of the Arbitration and Conciliation Act, 1996, or any statutory modifications or re-enactments thereof, and the rules made thereunder, and for time being in force, shall apply to the arbitration proceedings under this clause.

6. INDEX TO SPECIAL CONDITIONS OF CONTRACT

1. Inspection of drawings
2. Contractor to visit site
3. Execution of work (Prices to include)
4. R.C.C.Work
5. Schedule of Quantities
- 6 a. Quantities liable to alterations
- b. Filling of tenders
7. Access for inspection
8. Dimensions
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10. Offices, Stores, Sheds etc., at the site
11. Water and Electricity
12. Procurement of materials
13. Secured advance for materials on site
14. Facilities to other contractors
15. Testing
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17. Site meetings
18. Custody and security of materials
19. Cement
20. Steel
21. **PVA-CLAUSE**
22. Treasure trove

23. Notices
24. Statutory regulations
25. Measurements to be recorded before work are covered up.
26. Working at night or on holidays.
27. Working on holidays
28. Action where there is no specification
29. Reporting of accident
30. Cleaning the site on completion/determination of work
31. Possession of buildings/work completed
32. Typographic, Clerical and other errors.
33. Information to be supplied by the Contractors.
34. Bench marks
35. Force Majeure
36. Architect's drawings and instructions
37. Completion of work and liquidated damages
38. Bill of payments
39. Workmanship
40. Schedule of quantities
41. Site Supervision
42. Engagement of Apprentices
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44. Income tax and GST
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53. Work performed at contractor's risk
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55. Inspection by the Chief Technical Examiner
56. Special conditions of contract
57. B.I.S. Codes
58. Occupancy Certificate

SPECIAL CONDITIONS OF CONTRACT

1. INSPECTION OF DRAWINGS:

Before filling in the tender, the contractor will have to check up all drawings and Schedule of quantities, and will have to get immediate clarifications from the Architect on any point, that he feels is vague or uncertain. No claim/damages or compensation will be entertained on this account in future or after entering into the contract.

2. CONTRACTOR TO VISIT SITE:

Each tenderer must, before submitting his tender, visit the site of works, so as to ascertain the physical site conditions prices and availability and quality of materials according to specifications before submitting the quotations. No excuse regarding non-availability of any materials or changes in the price will be entertained or extra allowed on that account in future or after entering into the contract.

The existing adjacent buildings belonging to Govt/private which are in close proximity of the proposed construction, hence the contractor shall cater for all arrangements to carry out the work without causing any disturbance to the occupants by providing screens with bamboo matting or other suitable material approved by Architects/Engineer. The contractor shall ensure that no dust or construction material falls near/around the existing buildings.

2.1 Personnel Safety Measures for Labour

- 2.1.1 This shall be ensured in accordance with the latest applicable CPWD Safety Code as contained in the “General Conditions of Contract for CPWD Works”, including all amendments and revisions issued from time to time and applicable on the date of execution of the contract.
- 2.1.2 The Contractor will take adequate precautions to prevent danger from electrical equipment i.e. no material will be so stacked or placed as to cause danger or inconvenience to any person or the public.
- 2.1.3 All necessary fencing and lights will be provided to protect the public.
- 2.1.4 All electric machines to be used in the construction will conform to the relevant Indian Standards (IS) codes, will be free from patent defect, will be kept in good working order, will be regularly inspected and properly maintained as per IS provision and to the satisfaction of the Engineer-in-charge.
- 2.1.5 The contractor will provide, erect and maintain informatory/safety signs, hoardings written in English, Hindi, and Local Language wherever required or as suggested by Architect.
- 2.1.6 The Contractor shall comply with all applicable statutory obligations and requirements in force from time to time in connection with the execution of the Works. Without limitation, the Contractor shall ensure full compliance with all relevant labour laws, rules, and regulations, Provide and maintain all mandatory social security benefits for its employees/

workers, arrange for adequate first aid facilities and ensure availability of safe drinking water and other welfare amenities as required at the construction site, obtain and maintain valid insurance coverage for all its employees/workers deployed at the site and fulfill all other obligations stipulated under applicable labour codes and any other laws in force. The Contractor shall be solely responsible and keep the Bank indemnified for compliance with the above requirements in respect of all personnel engaged by it for the Project.

2.2 Plantation/preservation/conservation measures

- 2.2.1 The contractor will take reasonable precaution to prevent his workmen and employees from removing and damaging any flora (plant/vegetation) from the project area.
- 2.2.2 All fossils, coins, articles of value of antiquity, structures and other remains or things of geological or archaeological interest discovered on any project location during excavation/construction shall be the property of the Government, and shall be dealt with as per provisions of the relevant legislation. The contractor will take reasonable precaution to prevent his workmen or any other persons from removing and damaging any such article or thing. He will, immediately upon discovery thereof and before removal inform the Bank/Architect of such discovery and carry out the official instructions of Bank/Architect for dealing with the same, till then all work shall be stopped.
- 2.2.3 The contractor shall make at his own cost all necessary arrangements for maintaining water level, in the area where works are under execution low enough so as not to cause any harm to the works or problems in carrying out with the execution and the rates for all items of work shall be considered as inclusive of pumping out or bailing out water, if required, for which no extra payment shall be made. This will include water coming from any source, such as rains, accumulated water, floods, leakages from sewer and water mains, sub-soil water table being high or due to any other cause whatsoever. The contractor shall make necessary provision of pumping, dredging, bailing out water coming from all above sources and excavation and other works shall be kept free of water by providing suitable system approved by Bank/Architect.
- 2.2.4 The contractor shall not store/dump construction materials or debris near the boundary wall or external roads. All demolition and construction waste shall be handled, segregated, transported, and disposed of in accordance with the Construction and Demolition Waste Management Rules, 2016 and the Environment (Construction and Demolition) Waste Management Rules, 2025 (or any subsequent replacement, amendment, or revision thereto), as applicable during the currency of the Contract. The Contractor shall comply with all the statutory requirements under such rules and obtain necessary approvals from authorities, including the Telangana State Pollution Control Board, if required.
- 2.2.5 The contractor shall get prior approval of construction management Plan CMP from PMC; The CMP will elaborate the construction strategies and all activities such as; Installation of Cranes Design and Methodology, Site for Worker hutments, Batching plant, Construction material storage, Debris storage.
- 2.2.6 The contractor shall take appropriate protection measures like covering the building periphery with Green Horticulture Fabric /plastic sheets /or other similar materials to ensure that no construction material dust fly outside the building area.

2.3 IGBG India - Design Guidelines to be followed during excavation stage

Construction Activity Pollution Prevention- Site Erosion and Sedimentation control Plan

- 2.3.1 Create and implement an erosion and sedimentation control plan for all construction activities associated with the project. The plan must conform to erosion and sedimentation control requirements of Local Standards and Codes (OR) National Building Code of India (NBC), Part 10, Section 1, Chapters 4 & 5, whichever is more stringent. The plan shall meet the following objectives:
- 2.3.2 Prevent sedimentation of storm sewer or receiving streams and/ or air pollution with dust and particulate matter.
- 2.3.3 Minimize site disturbance such as soil pollution due to spilling of the construction material and its mixing with rainwater.
- 2.3.4 Use staging and spill prevention and control plan to restrict the spilling of the contaminated material on site.
- 2.3.5 Topsoil, if any shall be stripped to a depth of 300 mm from areas proposed to be occupied by buildings, roads, paved areas and external services. Topsoil is rich in organic content and is essential to establish new vegetation. It shall be stockpiled to a height of 400 mm in designated areas and shall be reapplied to site during plantation of the proposed vegetation.
- 2.3.6 Topsoil shall be separated from sub-soil debris and stones larger than 50 mm diameter.
- 2.3.7 The stored topsoil may be used as finished grade for planting areas. Sediment basins, contour trenching, mulching, soil stabilization methods may also be used to protect the top soil from erosion during construction.
- 2.3.8 Specify and limit construction activity in pre-planned/designated areas.
- 2.3.9 Consider employing strategies such as temporary and permanent seeding, mulching, earth dikes, silt fencing, sediment traps and sediment basins.
- 2.3.10 Stabilize the slopes of the excavated area to prevent erosion.
- 2.3.11 Provide photographic documentation of the above measures. (Min 18 relevant photographs)

2.4 Construction Waste management guidelines during Construction:

- 2.4.1 The project is aiming to divert construction, demolition and land clearing debris from landfill disposal and redirect recyclable recovered resources back to the manufacturing process or to redirect reusable materials to appropriate sites. Currently, the project is aiming to divert more than 75% of the construction, demolition and land clearing debris (by weight or by volume) from landfill disposal. The following measures are to be taken during the excavation stage:

- 2.4.2 Designate an area on site to segregate the waste generated on site.
- 2.4.3 Typically the waste generated can be segregated as Concrete Debris, Steel waste, Brick waste, tile waste, wood waste, glass waste etc.
- 2.4.4 Show documented evidence in form of site photos and maintaining records of the waste generated in tons on weekly basis.
- 2.4.5 Keep the waste segregation area clean with properly marked divisions.
- 2.4.6 Ensure that all the segregated waste collected on site as directed above is cleared on periodic basis for recycling.
- 2.4.7 Debris shall be transported to other sites for back filling. Documented evidence in the form of letter issued by the receiving contractor / site is required.
- 2.4.8 Other recyclable waste shall go back to the scrap vendor or manufacturer of recycling.
- 2.4.9 Documented evidence in the form of letter issued by the receiving/recycling agency is required for all waste types. Documented evidence in form of photos has to be provided.

3. **EXECUTION OF WORK (PRICES TO INCLUDE):**

- i) The whole of the work as described in the Contract (including the Schedule of Quantities, the specifications and all drawings pertaining thereto) and as advised by the Architect & Bank from time to time is to be carried out and completed in all its parts to the entire satisfaction of the Architect & Bank. Any minor details of construction, which may not have been definitely referred to in this contract, but which are usual in sound building, road and all construction practice and essential to the work, are deemed to be included in this contract. Rates quoted in the Schedule shall be inclusive of all freights, taxes, such as octroi, Sales tax, Royalties, duties, excise, turnover tax, sales tax on works contract, etc., as well as transportation, so as to execute the contract as per the rules and regulations of Local Bodies, State Government and Government of India. Any increase in these taxes and rates, during pendency of contract, shall be borne by the contractor and no extra claim on this account will be entertained.

The rates quoted in the tender should also include all charges for:

- a)
 - 1. Carrying
 - 2. Hauling
 - 3. Labour
 - 4. Fixing
 - 5. Watering
 - 6. Cleaning
 - 7. Making good and
 - 8. Maintenance etc.
- b) The contractor should arrange timely at his cost for all required.

- i) Plant, machinery, scaffolding, formwork, ladders, ropes, nails, spikes, shuttering, temporary supports, platforms, tools, all materials etc., required for executing the work, and protecting them from weather and other normal/natural causes.
 - ii) Covering/protecting for the walling and other works, during inclement weather, strikes etc., as and when necessary and or as directed.
 - iii) All temporary canvas covers/covering, lights, tarpaulin, barricades, water shoots etc.
 - iv) All stairs and steps, thresholds and any other requisite protection for the works.
 - v) All required temporary weather-proof sheds at such places and in a manner approved by the Architect, for the storage and protection of materials, against the effects of sun and rain.
 - vi) All required temporary fences, lighting/sign-boards etc., guards, approaches and roads as may be necessary for execution of the contract works and for safeguarding the public.
 - vii) The whole of necessary plant and machinery like bull dozers, graders, road rollers, bitumen heating plants, blowers, pumps, concrete mixers, hoists, vibrators, scaffolding, formwork, tackle, cartage, labour etc., and removal of the same at the completion of works.
 - viii) Dewatering by bailing out or pumping out the water from foundation/trenches during the progress of work anywhere on site, to the satisfaction of the Architect & Bank: and clearing of the site.
- c) The Architect & Bank will be the sole judge in deciding as to the suitability or otherwise of the tools/formwork/machinery or plant that may be brought to the work site by the contractor for the proper execution of the work.
 - d) The rates quoted by the tenderer in the Schedule of Probable items of work will be deemed to be for the finished work.

4. **R.C.C.WORKS:**

The contractor shall carry out all the RCC works, including formwork, strictly in accordance with drawings, details, relevant BIS specifications, and instructions of the Architects/Bank/Consulting Engineer. If any changes have to be made in the RCC designs, the contractors shall carry out the same without any extra charge. The Architect & Bank's decision in such cases shall be final and shall not be open to arbitration.

5. **SCHEDULE OF QUANTITIES:**

The Schedule of quantities forms part of the contract, but the Bank reserves the right to modify the same or any part thereof as per variation clause stated herein below. The contractor shall not

be allowed any compensation or damages for the work which is so omitted or cancelled or added or substituted by the Architect & Bank.

Please refer clause 4 of General Conditions of Contract.

6.a. **QUANTITIES LIABLE TO VARY:**

This clause applies for unlimited variations (+ or -) for items of foundations and those executed below plinth level. For all other items, only in case where + variations of any item exceeds 100% of Quantities of respective items given in the schedule of quantities of the contract, such additional quantities of those items shall be treated as extra items and valued as per clause 45 of special conditions of contract, considering of that rates for these items cannot be derived from the contracted items of work.

The quantities indicated in the bill of quantities are only approximate, and hence may vary on either side (+ or -) for accomplishing the works enunciated under the scope of works, in accordance with designs, drawings and specifications and or instructions of the Architect & Bank. Variations may also occur, consequent upon addition or deletion or substitution of particular items, change of designs or specifications during the course of execution. The contractor, in either case, is bound to carry out the modified quantities upto +100% (plus one hundred percent) variation, without any enhancement in rates and at the same rates as per accepted original tendered rates.

Please refer clause 4, 5 & 6 of General conditions of contract.

b. **FILLING OF TENDERS:**

The rates and amounts for each tendered item should filled in separate columns provided for in the Schedule of quantities and all the amounts should be totaled up in order to show the aggregate value of the entire tender. All rates shall be filled in both words and figures. These figures and words shall be preceded by 'Rs' and 'Ps' as the case may be, and while filling in words, must end with "Only". Example:

- i) Rs.15.25 (Rupees fifteen and paise twenty five only)
- ii) Rs.20.00 (Rupees twenty only)

The rates quoted in figures should be clearly show the rates in full. While filling rates in words, each line should end in '-', and if continued further, last line for the rate of each item shall end in "Only". All corrections, by the contractor in the tender schedule shall be duly attested by the initials of the tenderer. Corrections which are not attested or over writings in rates may entail the rejection of the tender.

In case the rate written in figures/words/amount differs, the following procedure shall be followed:

- a) When there is a difference between the rates in figures and in words, the rates which correspond to the amounts worked out by the contractor will be taken as correct.

- b) When the amount of an item is not worked out by the contractor or it does not correspond with the rate written either in figures or in words, then the rate quoted by the contractors in words shall be taken as correct.
- c) When the rates quoted by the contractor in figures and in word tallies but the amount is not worked out correctly, the rate quoted by the contractor shall be taken as correct and not the amount.

7. **ACCESS OF INSPECTION:**

The contractor is to provide at all times, during the progress of the works and the maintenance period, means of access with ladders, gangways etc., and the necessary attendants to move and adopt the same as directed for the inspection or measurement of the work by the Architect and Bank or any other agency employed by the Bank.

Refer clause 7 of General Conditions of Contract.

8. **DIMENSIONS:**

In all cases figured dimensions are to be accepted in preference to scaled sizes. Large scale details shall take precedence over small scale details/drawings. In case of any discrepancy, the contractor shall ask for a clarification, before proceeding with the work. Accordingly, if any work is executed without prior clarification, it is liable to be rejected and shall not be paid for,

9. **PROGRAMME OF WORKS:**

The contractor on starting the work shall furnish to the Bank and Architect a PERT/CPM programme, for carrying out the work stage by stage in the stipulated time, for the approval of Architects and Bank, and follow strictly the approved time schedule by incorporating changes, if any, so authorised by the Architect and Bank, to ensure the completion of construction work ins stipulated time. A graph or chart on individual item/group of items/trades of work shall be maintained, showing the progress both in terms of quantities and value, week by week. The contractor shall submit to the Bank and Architect a weekly progress report stating the number of skilled and unskilled laborers employed on the work, working hours done, quantity of cement, steel and other major items of materials (quantity and value wise) used and corresponding place, type and quantity of work done during the period.

The contractor must inform the Architects, 10 days in advance of requirement of respective drawings and details by him, from time to time. The contractor shall strictly adhere to the approved programme and arrange for the materials and labour etc., accordingly.

Despite repeated instructions, if the contractor fails to show satisfactory progress of the work, the Bank/Architect may take suitable action as deemed fit, including levying of liquidated damages not exceeding ½% of contract price for delay of every week or part thereof, subject to a limit of total liquidated damages levied under this clause to 5% of contract price without prejudice to any terms and conditions of the contract.

Please refer clause 31, 32 & 33 of General Conditions of contract.

10. **OFFICES, STORES, SHEDS ETC., ON THE SITE:**

- a. The contractor shall erect and maintain entirely at his own expense properly lighted, ventilated waterproof and lockable aircooled offices for the Architect's/ Banks representatives and for his own staff respectively on such parts as the Architects shall indicate. Separate offices for Architects and Banks representatives shall be constructed having minimum area of 20 Sqm, as per the sketch plan and specifications, which will be given by the Architects before starting the work. Contractor shall also provide and maintain, at his own cost, adequate water supply, closets and sanitary accommodation for exclusive use of Architect & Bank's representatives at site. In case, these offices have been provided with AC/GI sheet roofing, the same shall have false ceiling as directed. These offices shall be provided by the contractor with adequate numbers of windows, tables, chairs, steel cupboards, fans, lights and attendants etc., as directed by the architects. Necessary permission from various authorities will be obtained by the contractor and necessary fees shall be paid by the contractor prior to constructing such offices, and as well for stores, huts for labourers or any other temporary structures required for the due execution of work. Any penalty levied by local authorities, for not following their bye-laws/regulations etc., in the matter, will be borne by the contractor. The contractor shall pay for the Electricity and Water charges consumed. All these offices shall be demolished and the materials shall be taken away from site and ground left in good and proper order on completion of work, as required and directed.
- b. The contractor shall provide for all necessary storage on the site, in a specified area for all materials, in such a manner that all such materials, tools etc., shall be duly protected from damages by weather or any other cause. Stores for storage of cement shall have all weather proof floors, walls and roof and have proper locking arrangements and must be secure. All these must be maintained till the work is completed and so certified by the Architect. Necessary and adequate watch and ward for all such accommodations and stores shall be provided for by the contractor at his cost and same included in the rates/amounts quoted by him. All such stores shall be cleared away and the ground left in good and proper order on completion of this contract unless otherwise expressly mentioned herein.
- c. All materials which are stored on the site such as cement, brick, metal sand etc., shall be stacked in such a manner as to facilitate rapid and easy checking of quantities of such materials and prevent deterioration in quality due to water etc.
- d. In addition to the offices provided to Architect's Bank's representative, contractor shall provide accommodation for Project Management Consultants as specified.

11. **WATER AND ELECTRICITY:**

Contractor shall make his own and adequate arrangements for water required for drinking and construction purposes and also for required electric supply at site for satisfactory execution and completion of the work, at his own cost. The contractor shall get the water used for construction purpose tested periodically as per relevant BIS codes at his cost, and shall get the same approved from Architect and clients before using such water for the work.

12. **PROCUREMENT OF MATERIALS:**

Contractor shall procure all the materials including cement and steel required for the work from the open market. Time is the essence of the contract. Acceptance of the completion date by the contractor shall mean that he has taken into consideration the availability of all materials of approved make and quality in sufficient quantities at respective markets/sources, to enable him to complete the entire work in the stipulated period.

Contractor will get samples of all materials approved by the Architect and Bank, before placing order/purchase/procurement. They shall conform to relevant B.I.S. codes and or tender specifications as applicable.

For all materials, the contractor shall quote for the best quality of the materials of best make/source or supply and they should be got approved by the architect and Bank, before procurement.

In case sufficient quantities of approved quality materials from approved sources are not available in time, contractor may have to procure the same from neighbouring areas even with longer leads, as required and directed, at no extra cost. In case approved good quality sand is not available consistently throughout the duration of the contract period, best quality of sand locally available may have to be screened and washed, as directed by the Architect and Bank depending upon the use of sand in different items of work, at no extra cost. The materials will be, however as per relevant I.S.S. as and wherever applicable.

Please refer clause 10 of General Conditions of contract.

13. **SECURED ADVANCE FOR MATERIALS ON SITE:**

The contractor will be paid secured advance against the materials required and brought and stacked safely and securely at site for consumption within 45 days. The advance paid shall be limited to 75% of the cost (limited to costs of materials based on quoted and approved rate for relevant items of work) of the materials stacked at site, and the contractor shall produce necessary cash vouchers/documents in support of the cost of each of such materials for each consignment. In case of sanitary, Water supply and electrical materials, the advance will be restricted to 65% of the quoted rates for the relevant items in the tender and not exceeding 75% of the cost of those materials in the market. Whenever payment is made on stack measurement basis, necessary deductions for voids will be made, which shall be applicable both for advance and/or for final payment, wherever applicable. These materials shall be stacked on fairly level ground and at safe and secure places, as directed. No secured advance will be paid for materials brought prematurely to the site.

The materials against which advance is paid, shall be the property of the Bank and shall not be removed from the site, without written permission of the Architect & Bank. However, the security of these materials and preventing deterioration of quality of same shall be the sole responsibility of the contractor. The materials shall also be in conformity with the contract specifications and of approved quality/make/brand etc.

The secured advances shall be recovered in the next immediate interim bill.

These advances shall be made on the basis of the quantity of each of the materials lying at site, at the time of preparation of respective interim bill. For all such advances claimed/proposed, the Contractor shall sign an indemnity bond for each of such interim bills, in favour of the Bank, against any loss either due to theft or fire etc. The format shall be finalised in consultation with Architect/Engineer.

13.1 **SANITARY ACCOMMODATION IN SITE:**

The contractor shall provide and maintain at his own cost and expense adequate closet and sanitary accommodation for the use of his workmen and others in accordance with the rules and regulations of the relevant local authorities.

14. **FACILITIES TO OTHER CONTRACTORS:**

The contractor shall give full facilities and co-operation to all other contractors working at site doing plumbing, Electrical, civil works etc., as directed by the Architect & Bank and shall arrange his programme of work, so as not to hinder the progress of other works. The decision of the Architect & Bank, on any point of disputes between the various contractors, shall be final and binding on all parties concerned.

15. **TESTING:**

The contractor shall, as and when directed by the Architect & Bank, arrange to test materials and/or portions of the work at site in any approved laboratory at his own cost, in order to provide their soundness and efficiency. The contractor shall transport all the materials from site to the approved laboratory at his own cost. The contractor shall carryout all the mandatory tests as per list attached at the frequencies stated therein. Even after such tests, any materials brought to site or incorporated in the works are found to be defective or unsound or not as per approved samples, the contractor shall remove the same and re-erect at his own cost and without any additional time/period for the same, with reference to the date fixed for completing the work. In case these tests are not carried out at the frequencies stated, then proportionate costs of materials not so tested, including cost of testing and quantities of items of work executed with such materials, if otherwise accepted for retention in the work, will be deducted from the dues to the contractor. The deductions will be worked out by the Architect/Bank and shall be final and binding on him.

Tolerance on various material and items of work shall be allowed laid down in the documents below and the order of precedence shall be:

- a) Relevant Indian Standards Specifications.
- b) CPWD norms.
- c) Manufacturer's Specifications.

In absence of above Architect's decision basing on the general practice being following shall be final.

16. **TESTING OF CONCRETE:** The contractor shall make his own arrangements for testing of the concrete blocks at site or in any approved laboratory from time to time, as required by the Architects/ Bank and all the costs of testing and conveyance shall be borne by the Contractor. At

least, six blocks of 150 x 150 x 150mm per 20 cum of RCC work or part thereof, for each day's work (subject to the condition that a minimum quantity of 0.5 cum of particular grade/type of concrete is laid on that day) must be taken in steel moulds as directed and tested. The Architect & Bank reserves the right to test the blocks at the cost of the contractor, in the event of the contractor failing to do so. It shall be contractor's sole responsibility to ensure that the blocks are cast, got tested from specifically approved laboratory/test house etc., in time and results reach the Architect, well before measurements for the corresponding work are to be recorded. For any failure in this regard, shall result in rejection of corresponding work (for which the blocks were not cast and or tested in time) and such work shall be dismantled fully alongwith linked up works and redone to required specifications/quality etc., EXCLUSIVELY at contractor's cost. Without any addition time beyond the stipulated/extended time for completion, as the case may be. Application of clauses 15 above in such cases shall EXCLUSIVELY rest within the discretion of the Architect.

17. **SITE MEETINGS:**

A senior representative of the contractor shall attend weekly meetings at works site; and in additions, meetings as and when arranged by Architect & Bank to discuss the progress of the work and sort out problems, if any, and ensure that the work is completed in the stipulated time.

18. **CUSTODY AND SECURITY OF MATERIALS:**

The contractor shall be responsible for the custody and security of all materials and equipment at site and he will provide full time watchman/watchmen to look after his materials, stores, equipments etc., including cement and steel at site and ensure that at no time unauthorized persons gains any access at works site.

19. **CEMENT:**

Cement shall be procured by the Contractor from the manufacturers only; however in case of urgency smaller quantity of cement say less than one lorry can be purchased from authorized dealers after getting the make and quality approved by the Bank and Architect. The brands shall be **ULTRATECH/MAHA/NAGARJUNA/PENNA/ COROMANDAL/BHARATI** or any other manufacturer as approved by Architect and the Bank. The contractor should purchase the cement in adequate quantity, quite in advance, in order to have sufficient stocks (not less than the requirement of next fortnight) at site all the time. He will construct cement storage shed of adequate capacity with water tight walls, floor, roof and secure locking arrangements and locking as required and directed. Empty bags will be contractor's property. Contractor's Site Engineer shall maintain cement account at site, showing cement received with details of invoices, etc., quantity used daily (with brief details of items/location of works on which used), and progressive consumption and balance at site. This register will be checked periodically by Architect & Bank representative. Actual cement consumption will be periodically checked with the theoretical cement consumption.

20. **STEEL:**

Steel shall be procured by the contractor from **SAIL/VSP/JSW/TATA**. The contractor shall produce necessary cash vouchers in support of the purchases and also test certificates, for conforming the quality. All wastages, rolling margins, site to site transportation shall be borne by the contractor. Contractor shall maintain at site, steel account showing – steel received at site (consignment wise and section wise) and steel used (section wise) for work corresponding to

each of the bills, etc., which shall be subject to checking by client/Architect 75% of the value of the steel physically available at site in good condition and quantities limited to actual requirements of next 30 days (reckoned from date of corresponding bill) plus 1% for wastage and variation will be paid. This exercise is to be section-wise. Theoretical quantity of consumption of steel shall be actual quantities measured plus 10% towards wastages and variations (rolling margins) and on this basis, balance quantities at site may be provisionally arrived at. All scrap steel at site and unused steel at site to the extent not required on the work shall be contractor's property and contractor will be allowed to take it away after measurements/weight, and after getting necessary permission in writing from the Architect & Bank. In case of any discrepancy between the actual quantity of steel lying at site and the balance quantity as per record, the decision of the Architect/Bank shall be final and binding. The secured advance paid in any bill will be fully recovered in the next bill.

21. GENERAL PRICE VARIATION ADJUSTMENT (PVA) CLAUSES FOR ALL MATERIALS (INCLUDING CEMENT & STEEL) & LABOUR:

During the stipulated period of completion i.e. 18 Months, the rate quoted shall be firm and shall not be subjected to any exchange variation, labour condition, fluctuation in railway freight and any other condition. NO PRICE VARIATION ADJUSTMENT (PVA) is allowed during stipulated period of completion i.e. 18 Months. In case the period of completion is extended beyond 18 months for the reasons not attributable to the contractor, then PVA will be applicable for the value work executed after stipulated completion period of 18 months and is calculated as under

(i) MATERIALS:
$$\frac{V_m}{100} = 70 \left[0.88 v - (C+S+X) \right] \times \frac{(WI-WIO)}{WIO}$$

Where:

V_m = Variation in material cost i.e. increase or decrease in the amount in rupees to be paid or recovered.

V = Value of work done excluding advances on materials, if any during the period under reckoning.

C = Cost of grey cement used in the work. (Cost of materials supplied/ arranged by the Bank at fixed prices during the period under consideration).

S = Cost of Steel used in the work. (Cost of materials supplied/ arranged by the Bank at fixed prices during the period under consideration).

X = Cost of any other material supplied at fixed basic rate.

WI = Average all India Wholesale Price Index for all commodities for the period under reckoning as published in the RBI Bulletin. In case the tender is opened on or before 10th day of a month, on Index, of previous month shall be considered.

WIO = All India Wholesale Price Index for all Commodities during the month of opening of the tender, as published in the RBI Bulletin.

ii) LABOUR:
$$VL = \frac{30}{100} \times [0.88V - (C+S) \times \frac{(I - IO)}{IO}]$$

Where:

VL = Variation in labour cost i.e. increase or decrease in the amount in rupees to be paid or recovered.

V,C & S = As stated under (i) above

I = Average All India Consumer Price Index Number for Industrial Workers declared by Labour Bureau, Government of India, as published in RBI, Bulletin during the months of opening of the tender. In case the tenders are opened on or before 10th day of a month the Index for last month shall be considered.

IO = All India Consumer Price Index Number for Industrial Workers declared by Labour Bureau, Government of India, as Published in RBI, Bulletin during the months of opening of the tender. In case the tenders are opened on or before 10th day of a month the Index for last month shall be considered.

1. Adjustments based on the above formulae will be made for each bill as and when the indices are published. The contractors shall submit the bill for price adjustment with detail calculations.
2. The downward adjustment on account of labour element will be made only if the minimum wages also register corresponding fall compared to the minimum wages prevailing in the month of opening of the tenders.
3. In case the work is not completed within the contract period including authorized extension and the provision of liquidated damages has to be enforced, this adjustment clause will not be applicable for work done during that period. It is also clarified that price adjustment clause will not be applicable to any extra variation items, the rates of which are based on prevailing market rates.
4. In view of the price adjustment in cost being covered as above, no other adjustments viz., increase or decrease due to statutory measures/levies, etc., will be allowed for any reason whatsoever.
5. In case the bill is submitted to the Assistant Engineer prior to 15th of a particular month, index for that month will not be reckoned for calculating the average indices for arriving at the adjustment. If however, the bill is submitted on or after 15th, the Index for that particular month shall be taken into consideration.
6. Immediately on award of contract, the contractor shall register with the appropriate authority obtain Sales Tax Registration No. and produce the details thereof to the Bank within 30 days on the award of the work and in no case later than the submission of his first running bill.
7. The successful tenderer may also note that the Bank reserves the right to deduct Sales Tax on works contract applicable and to be levied under relevant Act, from the bills and amount due to them from Bank and remit the same directly to the Government in case they are not submitting the proof/evidence of having paid the Sales Tax on work executed under this contract.

22. **TREASURE TROVE:**

Should any treasure, fossils, minerals, or works or art of antiquation interest be found during excavation or while carrying out the works, the same shall be the property of the Bank. The Contractor shall give immediate notice to the Architect & Bank about finding of any such treasure and hand over the same on demand to the Bank.

23. **NOTICES:**

The contractor shall give all notices and pay all necessary and relevant fees and shall comply with all Acts and Regulations, for the successful completion of the contract work.

Please refer clause 8 of General Conditions of Contract.

24. **STATUTORY REGULATIONS:**

The whole of the work including sanitation and electrical is to be complied with, as per the requirements and bylaws of the relevant statutory authorities, including but not limited to The Occupational Safety, Health and Working Conditions Code, 2020 and other labour codes and laws for the time being in force.

25. **MEASUREMENT TO BE RECORDED BEFORE WORK IS COVERED UP:**

The contractor shall take joint measurements with the Bank's representative (Project Management Consultant or any Engineer identified by the Bank) and Architect's representative before covering up or otherwise placing beyond the reach of measurement any item of work. Should the contractor neglect to do so, the same shall be uncovered at the contractor's expense or in default thereof, no payment or allowance shall be made for such work or the materials with which the same was executed.

Refer clause 21 of General Conditions of Contract.

26. **WORKING AT NIGHT OR ON HOLIDAYS:**

The contractor can carry out major work at night, only with prior permission of the Site Engineer of Bank/Architect and with proper supervision. However, all concrete work will be carried out only during the day light.

WORKS AT NIGHT:

If the contractor is required to do preliminary works at night, in order to complete the work within the Time Schedule, the contractor shall provide and maintain at his own cost necessary and sufficient barricades/lights etc., to enable the work to proceed satisfactorily without danger. Approaches to the site also shall be sufficiently lighted by the contractor.

28. **ACTION WHERE THERE IS NO SPECIFICATION:**

In case of any item/class of work, for which there is no specification mentioned (either in part or full), the same will be carried out in accordance with the relevant CPWD specifications (only for

the specifications missing in the contract) and if not available even there (either in part or full) in, relevant standards of BIS shall be followed (only for the portions of specifications missing in the contract specifications and CPWD specifications), Indian standard specifications, subject to the approval of the Architect & Bank.

29. **REPORTING OF ACCIDENT TO:**

The contractor shall be responsible for the safety of all persons employed by him on the works and shall report serious accidents to any of them, whenever and wherever occurring on the works, to Bank who shall make every arrangement to render all possible assistance. This shall be without prejudice to the responsibility of the Contractor, under the Insurance clause of the General Conditions. Contractor shall take all the precautions as detailed in the safety code attached separately and as required under any law and also indemnify the Bank for any claim and damages arising from such incident.

30. **CLEARING THE SITE ON COMPLETION/DETERMINATION OF WORKS:**

The contractor shall clear the site of works as per the instructions of the Architect. The site of works shall be cleared of all men, materials, sheds, huts etc., belonging to the contractor. The site shall be delivered in a clean and neat condition, as required by Architect, within a period one week after the job is completed. In case of failure by the contractor, the Bank, under advice to the Architect, has the right to get the site cleared to his satisfaction at the risk and cost of the contractor.

31. **POSSESSION OF BUILDINGS/WORK COMPLETED:**

The contractor shall hand over to the Bank possession of the completed works in stages, as and when required, and as directed by the Architect & Bank.

The Bank will take over the possession of completed works in stages as directed by the Architect, and defects liability period will commence only from the date of final handing over of all the work accordingly.

Please refer Appendix to General Conditions of contract.

32. **TYPOGRAPHIC, CLERICAL AND OTHER ERRORS:**

The Architects/Bank's clarification regarding partially omitted particulars or typographical, clerical and other errors shall be final and binding on the contractors.

33. **INFORMATION TO BE SUPPLIED BY THE CONTRACTOR:**

The contractor shall furnish to the architect & Bank the following from time to time:

- a. Detailed industrial statistics regarding the labour employed by him, etc., every month (within 5th of succeeding month),

- b. The Power of Attorney, name and signature of his authorized representative, who will be in charge for the execution of work.
- c. The list of technically qualified persons (to be approved by the Architect) employed by him for the execution of the work within 15 days from date of start of work,
- d. The total quantity and quality of materials used for the works, every month within 5th of succeeding month.
- e. The list of plant and machinery employed for this work, every month. Copy of log books shall also be submitted every month (within 5th of succeeding month).

Failure to submit any of these details in time, shall be treated as a breach of the contract and likely to result in,

- i) Levying a fine of Rs.5000 for each default for each month, and or
- ii) Withholding payments, otherwise due.
- iii) For the periods for which name of technically qualified persons are not given or for which such persons are not employed, recoveries shall be made at Rs.7,500/- per month for each month of default.

In all these matters the decision of the Bank shall be final and binding.

See clause 41 also.

34. **BENCH MARKS:**

The contractor shall construct and maintain proper benches at different places at site as required and directed by the Architect, so that levels can be checked accurately at all times during the progress of work. In case benches are disturbed for any reason whatsoever, necessary rectification shall be carried out by the contractor at his cost as directed by the Architect & Bank.

35. **FORCE MAJEURE :**

Neither party shall be held responsible by the other for breach of any condition of this Agreement, attributable to any "Act of God", Act of State, Strike, lock-out or control or any other reason, beyond the control of the parties and any breach of clauses arising from such Force Majeure conditions as aforesaid shall not be regarded as breach of the provisions of this Agreement. The Party affected by a Force Majeure Event shall promptly notify the other Party in writing of the occurrence, nature, and expected duration of such event, provide reasonable details of the impact of the Force Majeure Event on its performance and use all reasonable efforts to mitigate the effects of the Force Majeure Event and to resume performance of its obligations as soon as reasonably practicable failing which no relief shall be granted.

In the event Force Majeure is established, the Contractor shall be entitled only to a reasonable extension of time corresponding to the actual delay certified by the Architect/Bank, and no additional costs, compensation, escalation, idle charges, or damages shall be payable. If such

Force Majeure continues for more than ninety (90) consecutive days or one hundred twenty (120) cumulative days, the Bank may terminate the Contract without liability except for payment of measured work satisfactorily executed up to the date of termination, subject to adjustment of advances and recoveries, and the burden of proving Force Majeure and its impact shall lie solely on the Contractor.

Force majeure shall not include shortage of materials, labour issues, financial inability, subcontractor default etc

36. **ARCHITECT'S DRAWINGS AND INSTRUCTIONS:**

A set of major drawings, along with the contract documents shall be provided to the contractor. If any clarification or further drawings are required by the Contractor during or before the start of construction work, the contractor shall inform the Architects and the Bank sufficiently in advance in writing to provide the same. Working details will be given to the Contractor from time to time, during the progress of work, as and when required. In case, any other drawing/detail is required by the contractor, he will give a minimum of fifteen days notice to the Architect.

Refer clause 2 & 3 of General conditions of contract.

37. **COMPLETION OF WORK AND LIQUIDATED DAMAGES:**

The work shall be completed **in 18 months**, and reckoned as under:

- (a) The day two weeks from the date of issue of work order.
- or
- (b) The day on which the contractor receives the possession of the site – whichever is later.
- or
- (c) The contractor is asked in writing to take over the possession of the site.

Time is the essence of the Contract. The Contractor shall strictly adhere to the programme/chart agreed to. In case the contractor fails to complete the work as mentioned above, the liquidated damages may be imposed at the rate of 0.5% per each week (or part thereof) of delay, subject to a maximum of 5% of contract amount.

Refer clause 31, 32 & 33 of General Conditions of contract.

38. **BILLS OF PAYMENTS:**

The minimum value of work for interim payments will be Rs.100.00 lakhs, as stated in Appendix. The contractor shall submit interim bills, once a month on the basis of joint measurements recorded at site by the contractor's Bank's and the Architects representatives. The bill will be certified by the Architect within 15 working days from the date of submission of the bill by the contractor, and the Bank will make payment as stated in the Appendix to General Conditions of Contract. All such interim payments shall not be considered as an admission of the due performance of the contract or any part thereof in any respect and shall not preclude the requiring of bad unsound and imperfect or unskilled work to be removed and taken away and

reconstructed or re-erected at contractor's cost, all as per Bank and Architect's instruction and directions.

39. **WORKMANSHIP:**

Quality of materials and workmanship shall conform strictly to specifications given/stipulated in the tender/contract, and contractor will ensure that the best quality of work will be done to the satisfaction of the Architect and Bank, with strict control on the materials, workmanship and supervision.

Refer clause 10 of General Conditions of Contract.

40. **SCHEDULE OF QUANTITIES:**

Quantities mentioned in the Schedule of Quantities, included in the contract, are approximate and are subjected to variations as per actual site conditions & requirements and as directed by the Architect & Bank. The work shall be executed and completed accordingly.

Refer clause 4, 5 and 6 of General Conditions of Contract.

41. **SITE SUPERVISION:**

The contractor shall appoint at his own cost competent and adequate number of qualified Engineers at site, for (a) joint measurements and preparations of bills. (b) For testing materials at site and outside laboratory. (c) for concreting and reinforcement work. (d) For other general supervision. Their appointment shall be approved by the Architect & Bank. The site engineers shall not be removed from the site without the written consent of the Architect & Bank.

See clause 33 above also.

42. **ENGAGEMENT OF APPRENTICES:**

The Contractor shall during the currency of the contract, when called upon by the clients, engage and also ensure engagement by sub-contractors and others employed by the contractor in connection with the works such number of apprentices in the categories mentioned in the act and for such period as may be required by the Bank. The contractor shall train them as required under the Apprentice Act 1961 and the Rules made thereunder and shall be responsible for all obligations of the Bank under the said Act, including the liability to make payment of apprentices, as required under the said Act. Contractor shall indemnify Bank against any statutory liability (if any) under the said act.

43. **RATES:**

Contractor shall quote (+)/ (-) % on given estimated cost.

44. **INCOME TAX AND GST :**

Income tax and GST, TDS shall be deducted at source by the client from the contractor's interim and final bill payments as required by law. The GST will be paid extra.

45. **EXTRA/SUBSTITUTED ITEM RATES:**

Such items shall be executed as per directions/instructions of the Architects of the Bank.

The work on extra/substituted items shall be started only after the receipt of written order from the Bank/Architect. Rates for additional/extra or substituted (altered) items of work, which are not covered in the contract, cannot be derived from the contract item rates either in full or partly, shall be calculated on the basis of actual costs plus 15% for overhead and profit etc., only to the extent not derivable from the contract item rates.

See clause 22 of General Conditions of Contract.

46. **SERVICES DRAWINGS/SHOP DRAWINGS/CATALOGUE:**

After getting approval from the Architect & Bank, the contractor shall submit to the concerned local authority's necessary services drawings showing layouts etc., for getting approval of the schemes. On completion, the contractor shall arrange to get Drainage Completion Certificate and other Certificate necessary for obtaining Building Completion certificate. The contractor shall furnish completion drawings of all services in triplicate, showing the work as actual executed, along with levels. Contractor shall submit for approval 4 copies of shop drawings/catalogue/ equipment characteristics/ manufacturer's specifications, drawings etc., as and when required and directed by the Architect & Bank. Costs of all these are deemed to have been included in the respective item rates quoted by the contractor and nothing extra shall be paid on account of any of these requirement/acts.

47. **PAYMENT:**

No payment whatsoever shall be made by the Bank, if the Contractor abandons the work, due to any site difficulties etc.,

See clause 37 & 38 of General conditions of contract.

48. **PERMISSION:**

The contractor shall also obtain necessary permission for using explosive (if required and specifically permitted by the Architect and Bank in writing), as per rules and regulations of relevant authorities, and all other approvals from the relevant authorities shall be obtained by the contractor at no extra cost.

49. **MAINTAINING REGISTERS AT SITE:** The contractor shall maintain registers for consumption of various specials, testing of materials etc., in the proforma which shall be given by the Architect & Bank from time to time.

List of registers / records to be maintained at site by the contractor for the following materials / items:

1. Cement
2. Steel

3. Anti – termite chemical
4. Test Reports
5. Brick work
6. Hindrance
7. Labour wages
8. Site Order Book

50. **AGREEMENT:**

The successful contractor shall be required to enter into an agreement in accordance with the Draft Agreement and Schedule of Conditions etc., within 15 days from the date the contractor is advised by the Architect & Bank that his tender has been accepted. The contractor shall pay for all stamps and legal expenses incidental thereto. However, the written acceptance of the tender by the Bank, will constitute as a binding contract between the Bank and contractor, whose tender has been accepted, whether such formal agreement is or is not subsequently executed.

51. **INSURANCE:**

The contractor shall provide insurance in respect of damage to persons and property and firm insurance as per clause 28 and 29 of General conditions of contract. In addition he will also insure against riots and civil commotion. The insurance shall also cover third party and all the persons working at site and visitors including contractor's, worker's, Architect's and clients people, other contractor's workers etc. The contractor shall indemnify the Bank against any claim or compensation or mishaps of whatsoever nature at site during the progress of work.

The contractor shall prove to the Architect/Client from time to time that he has taken out all the insurance policies as required and directed and has paid the necessary premium for keeping the policies valid as per clause 28 and 29 of the General Conditions of Contract.

In case of failure by the Contractor or sub-contractor to effect and keep in force the insurance policies, then the client, without being bound to, may pay such premiums as may be necessary and deduct the same from any money due or which may become due to the contractor or recover the same as a debt due from the contractor.

52. **INDEBTEDNESS AND LIENS:**

The contractor agrees to furnish the Bank from time to time, during the progress of the work as requested, verified statement showing the contractor's total outstanding indebtedness in connection with the work covered by the contract. Before final payment is made, the Bank may require the contractor to furnish the Bank with satisfactory proof that there are no outstanding debts or liens in connection with the contract. If during the progress of the work, the contractor shall allow any indebtedness to accrue to sub-contractor or other and shall fail to pay or discharge same within five (5) days after demand, then the Bank may withhold any money due to the contractor until such indebtedness is paid, or apply the same towards the discharge thereof.

53. **WORK PERFORMED AT CONTRACTOR'S RISK:**

The contractor shall take all precautions necessary and shall be responsible for the safety of the work and shall maintain all lights, guards, signs, barricades, temporary passages or other

protection necessary for the purpose. All work shall be done at the contractor's risk and if any loss or damage shall result from fire or from any other cause, the contractor shall promptly repair or replace such loss or damage free from all expenses to the Bank. The Contractor shall be responsible for any loss or damage to materials, tools or other articles used or held for use in connection with the work. The work shall be carried on to Bank or of others and without interference with the operation of existing machinery or equipment, if any.

54. **PHOTOGRAPHS:**

The contractor at his own cost shall take photographs of site and individual buildings during the progress of the work as directed by the Architect/Client and submit two copies of each photograph with minimum size 20 cm x 15 cm to the client/Architect.

55. **INSPECTION BY THE CHIEF TECHNICAL EXAMINERS (VIGILANCE):**

The proposed work covered under this tender, during the progress and/ or after completion, can also be inspected by the Chief Technical Examiner/ Technical Examiner or Officers of the Central Vigilance Commission, Government of India, on behalf of Architect & Bank to ascertain that the execution of the work has been done with materials and workmanship all as stipulated in the contract and as directed.

Contractor shall afford all reasonable facilities to the above vigilance staff and also provide them with ladders, tapes, plum bob, level etc., as required and directed and also necessary laborers skilled/unskilled to enable them to complete their inspection/study/technical scrutiny and no extra shall be admissible to the contractor on this account.

56. **SPECIAL CONDITIONS OF CONTRACT:**

In the event of any discrepancy with clauses mentioned anywhere else in the tender with the clauses mentioned within special conditions of contract, the clauses mentioned within the special conditions of contract shall supersede there mentioned elsewhere.

57. **BIS CODES:**

It is compulsory for the contractor to keep all the B.I.S. codes mentioned in this tender document at his cost at the site to ensure the proper supervision/quality of work and materials.

58. **OCCUPANCY CERTIFICATE:**

The successful tenderer must apply to GHMC for obtaining Occupancy Certificate by submitting the Drawings required and other document related to Occupancy of the Building after the Full Completion of the Building under the Guidance of the Project Architect at his Own Cost. Final bill will be cleared After the Submission of the OCCUPANCY CERTIFICATE to the Bank.

7. PRE-CONTRACT INTEGRITY PACT

(TO BE STAMPED AS AN AGREEMENT)

General

This pre-Bid pre-contract Agreement (hereinafter called the Integrity Pact) is made on day of the month of 2026, between, on the one hand,

The TELANGANA GRAMEENA BANK, Scheduled bank owned by government and constituted under Regional Rural Bank Act, 1976, having its Head office at Nallakunta, Hyderabad (Hereinafter called the "TGB", which expression shall mean and include, unless the context otherwise requires, its successors) of the First Part and M/s represented by Shri MD & Chief Executive Officer (hereinafter called the " CONTRACTOR which expression shall mean and include, unless the context otherwise requires, its / his successors and permitted assigns of the Second Part.

WHEREAS the TGB proposes to appoint a CONTRACTOR for PROPOSED CONSTRUCTION OF HEAD OFFICE BUILDING (TWO CELLARS + STILT FLOOR + FIVE UPPER FLOORS) FOR TELANGANA GRAMEENA BANK ON BANK'S OWN PLOT SITUATED IN SY NO. 417 AND 420, PLOT NO 79, UPPAL BHAGAYATH LAYOUT, UPPAL, HYDERABAD, TELANGANA. (CIVIL AND LANDSCAPE WORKS) and the CONTRACTOR is willing to offer/has offered the services and WHEREAS the CONTRACTOR is a private company/public company/Government undertaking/partnership, constituted in accordance with the relevant law in the matter and the TGB is a Scheduled bank owned by government and constituted under Regional Rural Bank Act, 1976, having its Head office at Nallakunta, Hyderabad, NOW, THEREFORE,

To avoid all forms of corruption by following a system that is fair, transparent and free from any influence/prejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to:

- Enabling the TGB to obtain the desired service / Equipment/ product at a competitive price in conformity with the defined specifications by avoiding the high cost and the distortionary impact of corruption on public procurement; and
- Enabling CONTRACTORS to abstain from bribing or indulging in any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also abstain from bribing and other corrupt practices and the TGB will commit to prevent corruption, in any form, by its officials by following transparent procedures.

The parties hereto hereby agree to enter into this Integrity Pact and agree as follows:

1. Commitments of the TGB

1.1. The TGB undertakes that no official of the TGB, connected directly or indirectly with the contract, will demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favor or any material or immaterial benefit or any other advantage from the

CONTRACTOR, either for themselves or for any person, organization or third party related to the contract in exchange for an advantage in the bidding process, Bid evaluation, contracting or implementation process related to the contract.

1.2. The TGB will, during the pre-contract stage, treat all CONTRACTORs alike, and will provide to all CONTRACTORs the same information and will not provide any such information to any particular CONTRACTOR which could afford an advantage to that particular CONTRACTOR in comparison to other CONTRACTORs.

1.3. All the officials of the TGB will report to the appropriate authority any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach.

1.4. In case any such preceding misconduct on the part of such official(s) is reported by the CONTRACTOR to the TGB with full and verifiable facts and the same is prima facie found to be correct by the TGB, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be initiated by the TGB and such a person shall be debarred from further dealings related to the contract process. In such a case while an enquiry is being conducted by the TGB the proceedings under the contract would not be stalled.

2. Commitments of CONTRACTOR.

2.1. The CONTRACTOR commits itself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of its Bid or during any pre contract or post-contract stage in order to secure the contract or in furtherance to secure it and in particular commit itself to the following:

2.2. The CONTRACTOR will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favor, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the TGB, connected directly or indirectly with the bidding process, or to any person, organization or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the contract.

2.3. The CONTRACTOR further undertakes that it has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favor, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the TGB or otherwise in procuring the Contract or forbearing to do or having done any act in relation to the obtaining or execution of the contract or any other contract with TELANGANA GRAMEENA BANK for showing or forbearing to show favor or disfavor to any person in relation to the contract or any other contract with TELANGANA GRAMEENA BANK.

2.4. Wherever applicable, the CONTRACTOR shall disclose the name and address of agents and representatives permitted by the Bid documents and Indian CONTRACTORs shall disclose their foreign principals or associates, if any.

2.5. The CONTRACTOR confirms and declares that they have not made any payments to any agents/brokers or any other intermediary, in connection with the Bid/contract.

2.6. The CONTRACTOR further confirms and declares to the TGB that the CONTRACTOR is the original SIs in respect of Equipment / product / service covered in the Bid documents and the

CONTRACTOR has not engaged any individual or firm or company whether Indian or foreign to intercede, facilitate or in any way to recommend to the TGB or any of its functionaries, whether officially or unofficially to the award of the contract to the CONTRACTOR, nor has any amount been paid, promised or intended to be paid to any such individual, firm or company in respect of any such intercession, facilitation or recommendation.

2.7. The CONTRACTOR, at the earliest available opportunity, i.e. either while presenting the Bid or during pre-contract negotiations and in any case before opening the financial Bid and before signing the contract, shall disclose any payments he has made, is committed to or intends to make to officials of the TGB or their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.

2.8. The CONTRACTOR will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, Bid evaluation, contracting and implementation of the contract.

2.9. The CONTRACTOR will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.

2.10. The CONTRACTOR shall not use improperly, for purposes of competition or personal gain, or pass on to others, any information provided by the TGB as part of the business relationship, regarding plans, technical proposals and business details, including information contained in any electronic data device / carrier. The CONTRACTOR also undertakes to exercise due and adequate care lest any such information is divulged.

2.11. The CONTRACTOR commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.

2.12. The CONTRACTOR shall not instigate or cause to instigate any third person to commit any of the actions mentioned above.

2.13. If the CONTRACTOR or any employee of the CONTRACTOR or any person acting on behalf of the CONTRACTOR, either directly or indirectly, is a relative of any of the officers of the TGB, or alternatively, if any relative of an officer of the TGB has financial Interest/stake in the CONTRACTOR's firm, the same shall be disclosed by the CONTRACTOR at the time of filing of tender.

The term 'relative' for this purpose would be as defined in Section 2(77) of the Companies Act, 2013.

2.14. The CONTRACTOR shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the TGB.

3. Previous Transgression

3.1. The CONTRACTOR declares that no previous transgression occurred in the last three years immediately before signing of this Integrity Pact, with any other company in any country in respect of any corrupt practices envisaged hereunder or with any Public Sector Enterprise / Public Sector Banks in India or any Government Department in India or RBI that could justify CONTRACTOR's exclusion from the tender process.

3.2. The CONTRACTOR agrees that if it makes incorrect statement on this subject, CONTRACTOR can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

4. **Sanctions for Violations:**

4.1. Any breach of the aforesaid provisions by the CONTRACTOR or any one employed by it or acting on its behalf (whether with or without the knowledge of the CONTRACTOR) shall entitle the TGB to take all or any one of the following actions, wherever required:

i. To immediately call off the pre contract negotiations without assigning any reason and without giving any compensation to the CONTRACTOR. However, the proceedings with the other CONTRACTOR would continue, unless the TGB desires to drop the entire process.

ii. To immediately cancel the contract, if already signed, without giving any compensation to the CONTRACTOR.

iii. To recover all sums already paid by the TGB, and in case of an Indian CONTRACTOR with interest thereon at 2% higher than the prevailing Base Rate of TELANGANA GRAMEENA BANK, while in case of a CONTRACTOR from a country other than India with interest thereon at 2% higher than the LIBOR. If any outstanding payment is due to the CONTRACTOR from the TGB in connection with any other contract for any other stores, such outstanding could also be utilized to recover the aforesaid sum and interest.

iv. To encash the advance bank guarantee and performance bond/warranty bond, if furnished by the CONTRACTOR, in order to recover the payments, already made by the TGB, along with interest.

v. To cancel all or any other Contracts with the CONTRACTOR. The CONTRACTOR shall be liable to pay compensation for any loss or damage to the TGB resulting from such cancellation/rescission and the TGB shall be entitled to deduct the amount so payable from the money(s) due to the CONTRACTOR.

vi. To debar the CONTRACTOR from participating in future bidding processes of the TGB or any of its Subsidiaries for a minimum period of five years, which may be further extended at the discretion of the TGB. To recover all sums paid, in violation of this Pact, by CONTRACTOR to any middleman or agent or broker with a view to securing the contract. Forfeiture of Performance Bond in case of a decision by the TGB to forfeit the same without assigning any reason for imposing sanction for violation of this Pact.

vii. Intimate to the CVC, IBA, RBI, as the TGB deemed fit the details of such events for appropriate action by such authorities.

4.2. The TGB will be entitled to take all or any of the actions mentioned at para 6 of this Pact also on the Commission by the CONTRACTOR or any one employed by it or acting on its behalf (whether with or without the knowledge of the CONTRACTOR), of an offence as defined in Chapter XII of the Bharatiya Nyaya Sanhita or Prevention of Corruption Act, 1988 or any other statute enacted for prevention of corruption.

4.3 The decision of the TGB to the effect that a breach of the provisions of this Pact has been committed by the CONTRACTOR shall be final and conclusive on the CONTRACTOR. However, the CONTRACTOR can approach the Independent Monitor(s) appointed for the purposes of this Pact.

5. Fall Clause

The CONTRACTOR undertakes that it has not supplied/is not supplying similar service / product / equipment / systems or subsystems at a price lower than that offered in the present Bid in respect of any other Ministry/Department of the Government of India or PSU or any other Bank and if it is found at any stage that similar Equipment/product/systems or sub systems was supplied by the CONTRACTOR to any other Ministry/Department of the Government of India or a PSU or a Bank at a lower price, then that very price, with due allowance for elapsed time, will be applicable to the present case and the difference in the cost would be refunded by the CONTRACTOR to the TGB, if the contract has already been concluded.

6. Independent External Monitors

6.1. The TGB has appointed Independent Monitor (hereinafter referred to as Monitors) for this Pact in consultation with the Central Vigilance Commission.

Shri Uppuluri Krishna Murty
IRTS (Retd.)
Mobile no: 7045592460 / 7045592461
Email: ukmirts86@gmail.com .

6.2. The task of the Monitors shall be to review independently and objectively, whether and to what extent the parties comply with the obligations under this Pact.

6.3. The Monitors shall not be subjected to instructions by the representatives of the parties and perform their functions neutrally and independently.

6.4. Both the parties accept that the Monitors have the right to access all the documents relating to the project/procurement, including minutes of meetings. Parties signing this Pact shall not approach the Courts while representing the matters to Independent External Monitors and he/she will await their decision in the matter.

6.5. As soon as the Monitor notices, or has reason to believe, a violation of this Pact, he will so inform the Authority designated by the TGB.

6.6. The CONTRACTOR(s) accepts that the Monitor has the right to access without restriction to all Project documentation of the TGB including that provided by the CONTRACTOR. The CONTRACTOR will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors.

The Monitor shall be under contractual obligation to treat the information and documents of the CONTRACTOR/Sub-contractor(s) with confidentiality.

6.7. The TGB will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the parties. The parties will offer to the Monitor the option to participate in such meetings.

6.8. The Monitor will submit a written report to the designated Authority of TGB/Secretary in the Department/ within 8 to 10 weeks from the date of reference or intimation to him by the TGB / CONTRACTOR and, should the occasion arise, submit proposals for correcting problematic situations.

7. Facilitation of Investigation

In case of any allegation of violation of any provisions of this Pact or payment of commission, the TGB or its agencies shall be entitled to examine all the documents including the Books of Accounts of the CONTRACTORS and the CONTRACTORS shall provide necessary information and documents in English and shall extend all possible help for the purpose of such examination.

8. Law and Place of Jurisdiction

This contract is subject to Indian Law. The place of performance and jurisdiction is at Hyderabad.

9. Other Legal Actions

The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceedings.

10. Validity

10.1. The validity of this Integrity Pact shall be from date of its signing and extend up to 5 years or the complete execution of the agreement to the satisfaction of both the TGB and the CONTRACTOR, including warranty period, whichever is later. In case Architect is unsuccessful, this Integrity Pact shall expire after six months from the date of the signing of the contract, with the successful CONTRACTOR by the TGB.

10.2. Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact shall remain valid. In this case, the parties will strive to come to an agreement to their original intentions.

11. The parties hereby sign this Integrity Pact at _____ on _____

For TGB

FOR Contractor

Name of the Officer

Chief Executive Officer

Designation

Office/Department/Branch

8. SPECIFICATIONS FOR CIVIL WORK

MATERIALS -GENERAL:

- A. EXCAVATION/SOIL TREATMENT
- B. PLAIN, REINFORCED CEMENT/PRECAST CONCRETE
- C. BRICK MASONRY
- D. RUBBLE MASONRY
- E. CEMENT PLASTERING/CEMENT POINTING
- F. FLOORING
- G. WOOD WORK
- H. ALUMINUM DOORS AND WINDOWS
- I. WATER PROOFING
- J. PAINTING/POLISHING WORK

SPECIFICATIONS FOR CIVIL WORK

MATERIALS – GENERAL

- a. All the materials required in the construction shall conform to the relevant latest Indian Standards specifications unless otherwise indicated. For patented products, the specifications and instructions of the manufacturers will be followed. In case where there are no specifications, then Architects/Banks instructions will be followed. In Case of any discrepancy/dispute regarding specifications, Architect and Bank's decision will be final and binding.
- b. Materials shall be transported, landed and stored at the site or elsewhere in such a manner as to prevent any damage, deterioration or contamination.
- c. The samples of all materials shall be got approved by the Architect and Bank prior to ordering and shall be kept at site office of the Architect & Bank. The materials brought to site shall conform in all respects to the approved samples. Any work executed, without approval for the materials, is liable to be rejected. Accordingly, it will be paid either at tender rates or reduced rates or not to be paid at all, at the discretion of Architect & Bank, whose decision will be final and binding.
- d. The Architect & Bank shall have an option to have any materials tested at the contractor's cost to find out whether they are in accordance with the specifications. All Bills, vouchers, test certificates shall be produced for inspection on demand by the Architect & Bank to ascertain the quality/ suitability of materials.
- e. The materials shall be stacked at site as directed by the Architect & Bank.
- f. Any materials rejected by the Architect & Bank, shall be removed by the contractor from the site within 24 hours at his own cost.
- g. The contractor shall include the elements of wastage of materials in his rates for various items.
- h. The Architect & Bank shall have the power to cause the contractors to purchase and use such material from any particular source at his opinion be necessary for proper execution of work.

A. **EXCAVATION:**

A – 1. **EXCAVATION AND EARTH WORK:**

A.1.1. **Examination of the Site:**

The contractor shall visit and ascertain the nature of the ground to be excavated and the works to be done and shall accept all responsibility for the cost of the work involved.

A.1.2. **Setting out:**

The contractor shall set out the center line of the building or other involved works after clearing the site and get the same approved from Architect & Bank. It shall be the responsibility of the Contractor to install substantial reference marks, bench marks etc., and maintain them as long as required by the Architect & Bank. The Contractor shall assume full responsibility for proper setting out, alignment, elevation and dimension of each and all parts of the work.

A.1.3. **Ground level and Site level:**

Before starting the excavation, the requisite block levels of the entire plot shall be taken by the contractor, in consultation with the Architect & Bank, and a proper record of these levels kept, which shall be jointly signed by the contractor and the Architect & Bank. A block level plan showing all ground levels of the plot shall be prepared and shall jointly be signed by the contractor and the Architect & Bank. The levels shall be taken at intervals of 3M, or even less, as required and directed.

A.1.4(a) **Excavation and Preparation of foundation for concreting:**

Excavation shall include removal of all materials of whatever nature at all depths and whether wet or dry, necessary for the construction/foundation and sub-structure (including mass excavation for underground reservoirs, where applicable) exactly in accordance with lines, levels, grades and curves shown in the drawings or as directed by the Architect & Bank. The bottoms of excavation shall be levelled both longitudinally and transversely or sloped as directed by the Architect & Bank.

Should the contractor excavate to a greater depth or width than shown on the drawings, he shall at his own expense fill the extra depth or width in cement concrete in proportion as directed by Architect & Bank but in no case with concrete of mix leaner than 1:4:8 cement concrete, at no extra cost.

The contractor shall report to the Architect & Bank when the excavations are ready to receive concrete. No concrete shall be placed in foundations until the contractor has obtained Architect and Bank's approval. In case, the excavation s done through different stratas of soil and if the same are payable as per provisions in the Schedule of Quantities , the contractor shall get the

dimensions/levels/ heights of each of the strata recorded/decided by the Architect & Bank for payment. If no specific provision is made for different strata in the schedule of quantities, it will be presumed that excavation shall be in all types of soil and the contractor's rate shall cover for the same viz., for all types of soil (only excluding hard rock, when so specifically provided for).

After the excavation is passed by the Architect & Bank and before laying the concrete, the contractor shall get the depth and dimensions of excavations and levels (and nature of strata as applicable as per Schedule of Quantities like hard rock, soft rock etc.,) and measurements recorded from the Architect & Bank.

Measurement of Excavation in Rock:

Excavated soft/disintegrated rock and hard rock should not be mixed up and shall be stacked separately for purpose of payment. (Even otherwise they shall be stacked separately, and not mixed up with soils). Minimum of the quantities arrived at from

- i) Levels/pit measurements for sheet rock.
- ii) Volume based on stack measurements reduced by 40% to account for voids in stacks for Builders/overcops.

shall be considered for purpose of payment.

- A.1.4(b) The contractor shall be responsible for safe custody of these stacks, till the same are taken over by the Bank or completion of work, whichever is earlier. The rates quoted for excavation shall include costs of all these and nothing extra shall be paid towards the same.

A.1.5 **Shoring:**

The sides of the excavations should be timbered and shored in such a way as is necessary to secure them from falling in, and the shoring shall be maintained in position as long as necessary. The contractor shall be responsible for the proper design of the shoring to hold the sides of the excavation in position and ensure safety against injury to persons. The shoring shall be removed as directed after the items for which it is required are completed. In case the contractor wants to step/slope the sides of foundation suitably, in lieu of shoring, he should get prior approval for it from the Architect & Bank and nothing extra shall be paid for same and as well for the additional back fill necessitated by it, viz., items of excavations and backfilling be limited to excavations as per plans only and no quantities involved in making slopes and consequent back filling will be paid for.

A.1.6. **Earthwork for leveling of the area:**

Before earthwork is started, the area coming under cutting and filling shall be cleared of shrubs, rank vegetation, site grass, brushwood and trees and saplings of all girths, and rubbish removed outside the periphery and as directed by the Architect & Bank. The roots of trees shall be removed to a minimum depth of 600mm below ground level or 300mm below

formation level whichever is lower and the hollows filled up with approved earth, levelled and rammed to the satisfaction of the Architect & Bank.

Under no circumstances undermining or undercutting be allowed. The final surface shall be neatly dressed and compacted to the required levels. Any extra cutting done, shall be filled back with approved earth, duly consolidated at contractor's cost. During the execution of the work, the natural drainage of the area shall be maintained by the contractor.

The approved earth from cutting shall be directly used for filling as directed. The filling shall be done in layers of not more than 150mm, each layer watered and consolidated with roller, not less than 10 M.T. roller. The earth used for filling shall be free from all roots, rubbish, grass, and all lumps and clods shall be broken before filling. The top surface of finally finished area shall be neatly dressed and compacted.

A.1.7 **Protection:**

If instructed by the Architect & Bank all foundation pits, and similar excavations shall be provided with strong fence and marked with red lights at night to avoid accidents. Adequate protective measures shall be taken to see that the excavation does not affect or damage adjoining structures. All measures required for the safety of the excavations, the people working in and near the foundation trenches, property and the people in the vicinity shall be taken by the contractor at his own cost, he being entirely responsible for any injury and damage to property caused by his negligence or accident due to his constructional operations.

A.1.8 **Stacking of excavated materials:**

All materials excavated will remain the property of the Bank and rate for excavation includes sorting out of useful materials and stacking them on site as directed. Materials suitable and useful for back filling, plinth filling or leveling of the plot or other use shall be stacked in convenient places but not in such a way as to obstruct free movement of men, animals and vehicles or encroach on the area required for constructional purposes.

A.1.9 **Backfilling:**

All shoring and formwork shall be removed after their necessity ceases and trash/slush of any sorts shall be cleaned out from the excavation. All space between foundation masonry or concrete and the sides of excavation shall be refilled to the original surface with approved excavated materials in layers, each not exceeding 150mm in thickness, watered and rammed. The filling shall be done after concrete or masonry is fully set and done in such a way as not to cause undue thrust on any part of the structure. Where excavated materials are to be used for refilling, it shall be brought from the place, where it is temporarily stacked, and used in refilling.

No excavation of foundations shall be filled in or covered up, until all measurements of excavations, masonry, concrete and other works below ground level are jointly recorded. Black cotton soil shall not be used for back filling or in plinth filling. In case back filling is done without recording measurements of foundation work, the contractor will have to remove back filling at his cost for taking measurements. Otherwise, the foundation work will not be measured and will be paid for.

A.1.10 **Dewatering:**

Rate for excavation shall including bailing or pumping out water, which may accumulate in the excavation during the progress of work either from seepage, springs, rain or any other cause whatsoever, and diverting surface flow, if any, by bunds or any other appropriate means. Pumping out water shall be done in such an approved manner as to preclude the possibility of any damage to the foundation trenches, concrete or masonry or any adjacent structure. When water is out water shall be from auxiliary pits of adequate size, dug slightly outside the building excavations, the depth of auxiliary pit shall be more than the working foundation trench levels. The auxiliary pit shall be refilling with approved excavation materials after the dewatering is over.

The excavation shall be kept free from water:

- a. During inspection and measurement.
- b. When concrete and/or masonry are in progress and till they come above the natural water level and
- c. Till the Architect & Bank consider that the concrete/mortar is sufficiently set.

A.1.11 Rates quoted for excavation shall include all these (A.1.1. to A.1.10) operations to the extent required for completing the work please see A.3 also, unless otherwise specifically provided for.

A.1.12 **Surplus excavated materials:**

The item of removal of surplus excavated materials shall only be undertaken by the contractor when specific instruction in this regard has been obtained from the Bank/Architect. The contractor must also secure the approval of the Architect & Bank regarding the quantity of surplus materials to be removed prior to commencement of this item of work. The contractor shall dispose of surplus excavated materials anywhere within the site as required and as directed. He will spread the same in layers of 150mm each and as directed. Contractor will take the decision of Architect & Bank for disposal of surplus excavated material and no extra will be paid for double handling of the same, if any. Wherever surplus or unsuitable material is to be disposed off outside the site, it shall be dumped and spread at the places to be specifically approved and as directed by the Architect & Bank, with all leads and lifts (unless otherwise provided for), and shall be paid as a separate item, as stated in the schedule of quantities.

A – 2 **ROCK EXCAVATION:**

A.2.1 **Ordinary Soft rock comprises of:**

- a. Limestones, sandstones, laterite or disintegrated rock which can be split or be quarried with crow bars or wedges.
- b. Unreinforced cement concrete, stone masonry in cement mortar.

A.2.2. **Hard rock comprises of:**

- a. Any rock or cement concrete for the excavation of which the use of mechanical plant or blasting is required, or which cannot be removed with iron crow bars.
- b. Reinforced cement concrete below ground level.
- c. Where blasting is prohibited for any reasons, the excavation has to be carried out by chiselling, wedging or any agreed method.
- d. Rock which requires chiselling/blasting/compressor.

A.2.3 Hard rock encountered in excavation work shall be removed by chiselling or wedging as directed by the Architects/Banks and no blasting is permitted.

A.2.4 Rock excavation shall comply with the specifications for excavation, except that it shall be of soft or hard rock.

A.2.5 Rock excavation will be measured and paid for quantities computed from (i) pit measurement/levels or (ii) by stack measurements reduced by 40% to account for voids, whichever is less.

A-3 **RATES TO INCLUDE FOR EXCAVATION ITEMS:**

Apart from other factors mentioned elsewhere in this contract, rates for the item of excavation shall also include for the following:

A.3.1. Clearing the site of all bushes, grass, roots of trees etc., and carting away from the site.

A.3.2. Setting out works, profiles etc., as required.

A.3.3. Providing shoring and shuttering to avoid slipping/sliding of soil and to protect adjacent structures, and subsequently removing the same.

A.3.4. Bailing and pumping out water as required and directed.

A.3.5. Excavation at all depths (unless otherwise specified in the schedule of quantities) and removal of all materials of whatever nature, wet or dry, with all leads (unless otherwise provided for) and necessary for the construction, foundation, underground reservoir etc., preparing bed for laying concrete, for roads etc., and completing the work.

A.3.6. Sorting out useful excavated material and conveying beyond the structure and stacking them neatly on the site for back filling or reuse etc., as directed.

A.3.7. Necessary protection including labour, barricades, materials and equipments etc., to ensure safety and protection against all risks and accidents.

Please see A.1.11.

A – 4 **MODE OF MEASUREMENT:**

- A.4.1 Excavation for foundation of columns, beams, walls, and the like shall be measured and paid net as per drawing, dimensions of concrete (bed concrete where so specified) at the lowest level. In regard to length and breadth and depth shall be computed from the concerned excavation levels and ground level taken before excavation. Any additional excavation required for working space, formwork, planking, dewatering and strutting etc., shall not be measured and paid for separately but rates quoted for excavation shall include for all these factors. No increase in bulk after excavation shall be paid for. Excavation beyond dimensions of mass concrete for foundation as per drawing or below required depth shall not be paid for. Any excavation beyond required level shall be filled back with cement concrete of mix not leaner than 1:4:8, at his cost.
- A.4.2 Measurement for general excavation/filling in roads/areas shall be made on sectional measurement by taken levels jointly before starting the work and after completion of the work and shall be worked out on average area method. This will give the total quantity of excavation. Levels shall be taken at 3m intervals or closer as required and directed by the Bank & Architect.
- A.4.3. In the case of filling by morrum brought from outside, the quantities will be worked out from levels, as stated above, and shall be calculated/checked with lorry measurements, after deducting 20% for shrinkage. In case of inadequate information regarding lorry measurement and/or number of lorry trips, Banks/Architect's decision will be final and binding.
- A.4.4 In case of all fillings, in exposes and open areas, 10% deduction will be made from the total quantities in the running bills, out of which 5% will be deducted permanently and balance 5% will be paid after expiry of the defects liability period of one year or one monsoon, whichever is more and after making good levels, surface etc., as required and directed.
- A.4.5 In case of soft and hard rock, payments shall be limited to minimum of the quantities arrived at from levels or stack measurements (after deducting 40% for voids). The material shall be stacked on fairly level ground and places, as directed. All depressions over the required final levels will be made good by P.C.C. of mix not leaner than 1:4:8 as directed, at no extra cost.
- A.4.6 The quantity of excavated materials disposed off outside the premises will be worked out on the basis of total quantity of excavation less follows:
- A.4.6.1. Quantity of excavated (other than rock) materials used for filling (on the basis of levels).
- A.4.6.2. Quantity of rock excavation (Stack measurements less 40% or level basis).
- A.4.6.3. Quantity of excavated materials disposed of within the site (on the basis of levels).
- The quantity worked out on these basis will be checked with lorry measurements, with deduction of 20% for looseness/shrinkage. In case of any discrepancy, Architect & Bank's decision will be final and binding.

- A.4.7. Total quantity of excavation and filling will be finalized on the basis of levels only. The total quantity of excavation will be checked by adding quantities of the following items:
- A.4.7.1. Material used for filling wherever required (on level basis).
- A.4.7.2. Rock excavation minimum of quantity arrived from stack measurements with 40% voids) or based on levels.
- A.4.7.3. Surplus/unsuitable material disposed within site on level basis (deducting 10% voids if consolidated, otherwise deducting 20%). In case of lock 40% voids will be deducted.
- A.4.7.4. - do – disposed outside site (on lorry measurements and by deducting 20% for looseness/shrinkage if transported by lorries, otherwise on basis of levels and by deducting 10% voids if the fill is consolidated – otherwise 20% voids shall be considered.

In case of any discrepancy, the decision of Bank & Architect shall be final and binding for the above sub-divisions A.4.7.1, A.4.7.2, A.4.7.3 & A.4.7.4 as stated above.

- A.4.8. Whenever the contractor is instructed to reuse the excavated rock for works such as masonry, soiling, filling etc., the measurement for such items shall be the same/equivalent as that of rock measured under excavation items earlier. The contractor will not be paid for double handling of such excavated materials.

A – 5 **SOIL TREATMENT:**

Soil treatment for pre-construction termite control shall conform to the following:

A.5.1.	Chemicals	Concentration
	Chlorophyriphos Emulsifiable Concentrate 20%	1% strength applied in oil solution or water emulsion.

A daily record shall be maintained by the contractor indicating quantities of chemical brought to site, used on work with location/stage of treatment (the quantum/ area of work done) and the upto date quantity of chemical consumed for the work and upto date balance at close of work on that day. This record book shall be property of the Bank.

A.5.2. **Method of application and treatment - All as per IS 6313 (Part – II) – 1981.**

A.5.2.1 **Conditions of formations:**

Barrier shall be complete and continuous under the whole of the structure to be protected. All foundations shall be fully surrounded by and in close contact with barrier of treated soil. Each part of the area treated shall receive the prescribed dosage of chemical.

A.5.2.2. **Time of Application:**

Soil treatment should start when foundation trenches and pits are ready to take mass concrete in foundations. Laying of mass concrete should start when the chemical emulsion has been

absorbed by the soil and the surface is quite dry. Treatment should not be carried out, when it is raining or when the soil is wet with rain or subsoil water. The foregoing requirement applies also in the case of treatment to the filled earth surface within the plinth area before laying the sub-grade for the floor.

A.5.2.3. Disturbance:

Once formed, treated soil barriers shall not be disturbed. If, by chance treated soil barriers are disturbed, immediate steps shall be taken to restore the continuity and completeness of the barrier system.

A.5.2.4. The chemical emulsions shall be applied uniformly at the prescribed rate in all the stages of the treatment. A suitable hand operated compressed air sprayer or watering can should be used to facilitate uniform dispersal of the chemical emulsion. On large jobs, a power sprayer may be used to save labour and time.

In the event of waterlogging of foundation, the water shall be pumped out and the chemical emulsion applied when the soil is absorbent.

A.5.2.5. Treatment for Masonry foundations and Basements as per clause 6.2 of IS 6313 (Part II) – 1981.

A.5.2.6. Treatment for RCC Foundations and Basements as per clause 6.3 of IS 6313 (Part II) – 1981.

A.5.2.7. Treatment of top surface of plinth filling as per clause 6.4 of IS 6313 (Part II) – 1981.

A.5.2.8. Treatment of junction of the wall and the floor as per clause 6.5 of IS 6313 (Part II) – 1981.

A.5.2.9. Treatment of soil along external perimeter of building as per clause 6.6 of IS 6313 (Part II) - 1981.

A.5.2.10. Treatment of soil under Apron along External perimeter of the building as per clause 6.7 of IS 6313 (Part II) – 1981.

A.5.2.11. Treatment for walls retaining soil above floor level as per clause 6.8 of IS 6313 (part II) – 1981.

A.5.2.12. Treatment of soil surrounding pipes, waster and conduits as per clause 6.9 of IS 6313 (Part II) – 1981.

A.5.2.13. Treatment for expansion joints as per clause 6.10 of IS 6313 (Part II) – 1981.

A.5.3. Guarantee : 10 years (as per form enclosed on requisite stamp paper)

In the unlikely event of any re-treatment becoming necessary subsequently during the guarantee period, necessary inspection and re-treatment, as required, shall be carried out, free of cost, by the contractor.

A.5.4. **The rate to include:**

The contractor should include in his rates given in schedule of quantities in Sq.meter area basis, all the stages of treatment, Viz., bottom of foundations, sides of trenches, underside of the floors, underside/damp proof courses, outer faces of external walls upto plinth protection, and around all pipe lines at ground level etc., and finally the back fill all around and in the building as per detailed specifications mentioned above. Where the rate of applications of the insecticide has not been specified clearly, the rates of application of chemical should be so governed that during the guarantee period, no trouble may arise. Payment will be made on the plinth area measurement of ground floor only, and the rate for the same should include all the stages of work as mentioned above and no extra on any account will be entertained.

B. **PLAIN AND REINFORCED PRECAST CONCRETE WORK:**

B.1. **APPLICATION OF SPECIFICATIONS:**

B.1.1 Not withstanding what is stated in the specification herein, detailed architectural and structural drawings and notes appended there on shall be deemed to form part of the specifications and to supersede these, in case of any discrepancy.

B.2. **GENERAL:**

B.2.1 The structural and architectural drawings shall be studied thoroughly and any discrepancy in the dimensions on the drawings or any other point not clear to the contractor shall be brought to the notice of Architect & Bank well in advance, and got decided from them before further proceeding with the work.

B.2.2. No concrete works shall be carried out in the absence of authorised and qualified supervisor of the client/Architect.

B.3. **MATERIALS:**

B.3.1. **General:**

B.3.1.1. All the materials constituting the concrete shall conform to the relevant latest Indian Standard Specifications, unless otherwise indicated.

B.3.1.2. Materials shall be transported, handled and stored on the site or elsewhere in such a manner as to prevent damage, deterioration or contamination.

B.3.1.3. All the materials such as sand, coarse aggregates, cement and water shall be got tested in any approved laboratory, as directed by the Bank & Architect, before starting the concrete work. During construction also all these materials will have to be tested, as often as deemed necessary by the Bank & Architect.

B.3.2. Cement:

Cement shall be ordinary Portland cement 43 grade and of approved brand confirming to IS 1812 – 1989 unless otherwise specified. The contractor shall procure cement of makes – **ULTRATECH/L&T/BIRLA/NAGARJUNA**. The contractor may use ordinary Portland Cement of 53 grade of the makes specified above by obtaining written permission from the Architects/Bank. It shall be stored by the contractor in a dry, watertight and properly ventilated structure as per specified conditions. The cement shall be stacked on a dry raised platform, 1'-0" above the floor level and shall be stacked in the sequence of receipt of consignments. Not more than 10 bags should be kept in one stack. Any cement which has deteriorated, caked or which has been damaged due to any reason whatsoever shall not be used. Cement, concerning which there is any doubt, shall be got tested by the contractor at his cost and used, only if found satisfactory. Condemned/damaged cement shall be removed immediately from the site by the contractor at his cost.

Daily account of receipt and use of cement bags shall be maintained by the contractor in the proforma approved by the Architects/Bank and got checked by the Bank's Engineer at site. Cement should be used in the order in which it is received at site. Cement stored for more than three months shall be got tested, before using it in the work.

B.3.3. Sand:

Sand shall be well graded, coarse in texture, clean, hard and free from salt, earth, clay or any other harmful material. Before starting the work, the contractor shall get samples of sand, locally available from different sources, if required, and the same shall be got tested as per latest relevant B.I.S. codes for concrete work and to get the final approval of Bank & Architect. During the course of the construction or for any reasons it is observed that the sand, procured by the Contractor from previously approved source, is not upto the approved standard or it is not available in sufficient quantity required for the entire project, then the contractor will have to make such alternative arrangements to procure the sand of approved quality from any other source, even with longer lead at no extra cost. Sand shall be screened and washed, if required, as directed by the Bank & Architect/at no extra cost. Field tests shall be carried out regularly and as directed, to ensure the suitability/quality of the same. Silt content should not exceed 8% by volume or 5% by weight, and should be free from other deleterious materials. When sand is mixed by volume, necessary allowance shall be made for bulking, as required and directed to give correct mixture.

B.3.4. Coarse Aggregate:

Coarse aggregates shall consist of hard, dense, durable uncoated crushed Granite rock. It shall be free from soft, friable, thin or long laminated pieces. All aggregates should generally confirm to IS 383 – 1970. For reinforced cement concrete, the maximum size shall be not more than 20mm and minimum shall not be less than 5mm and shall be uniformly graded to the approval of Bank & Architect. If locally available coarse aggregate is not suitable or is not sufficient in quantity, the contractor shall have to procure it from any other source, even with longer leads at no extra cost. As and when directed by Bank & Architect, aggregates shall be washed by approved methods at contractor's cost. Necessary tests shall be carried

out, as and when required to ascertain about the suitability and grading of the aggregated, by the contractor at his cost.

B.3.5. Water:

Water shall be clean, fresh and free from organic or inorganic matters in solution or suspension in such amounts, that may impair the strength or durability of the concrete. Water fit for drinking will generally be found suitable for use in concrete and plastering work. However water shall be tested periodically for its use in construction work.

B.3.6. Reinforcement:

B.3.6.1. Mild steel bars:

Mild steel reinforcement bars shall conform to I.S.432 – 1982 “Part I” Fe 410 – S, other qualities of steel shall not be acceptable.

B.3.6.2. High strength deformed bars:

Where deformed high strength reinforcement bars are specified, the contractor shall use tor steel, accompanied by a test certificate from the manufacturer, conforming to IS – 1786 – 1986 and shall be Fe 550D grade. Contractor shall bet steel reinforcement tested at his cost as and when required and directed by Bank & Architect.

Steel shall be from the main manufacturers i.e., **SAIL/ VSP/ JSW/ TATA** or any other manufacturer as approved by Architect & Bank.

B.3.6.3. Cleaning of reinforcement:

Before steel reinforcement is placed in position, the surface of the reinforcement shall be cleaned of loose rust or scaling, dust, grease and any other objectionable substances as required and directed.

B.3.6.4. Bar bending schedule of reinforcement:

On receipt of structural drawings, contractor shall prepare bar bending schedules of reinforcement and shall get it approved by the Bank & Architect, in advance before starting the work.

B.3.6.5. Cutting and Reinforcement:

Before steel reinforcement bars are cut, the contractor shall study the lengths of bars required as per drawings and shall carry out cutting, only to suit the sizes required as per drawings so that the wastage is minimum.

B.3.6.6. Placing and Security:

Reinforcement bars shall be accurately placed and secured in position and firmly supported or wedged by precast cement mortar concrete blocks of suitable mix, thickness and size, at sufficiently close intervals, so that the bars will not sag between the supports or get displaced during the placing of concrete or any other operation of the work. It is most important to maintain reinforcement in its correct position without displacement and to maintain the correct specified cover. The contractor shall be responsible for all costs for rectification required in case the bars are displaced out of their correct position.

B.3.6.7. Binding wire:

The reinforcement shall be securely bound wherever bars cross/lap or whenever required with 2 strands of suitable length of 18 gauge soft annealed steel wire.

B.3.6.8. Welding:

Welding of bars, in place of splicing, shall not be carried out, unless specifically authorised in writing by architect & Bank, and the welding shall be as per relevant I.S. code of practice. However, no extra payment shall be allowed for the same.

B.3.6.9. Bends etc:

Bends, cranks, curves, etc., in steel reinforcement shall be carefully formed and shall strictly conform to the drawings/requirements, care being taken to keep bends out of winding. Otherwise, all rods shall be truly straight. If any bend/crank shows signs of cracking, such rods/bars shall be removed immediately from the site. For bending of bars to any curvature, minimum radius of 9 times diameter of the bar shall be used, unless otherwise specified in the drawings. However, in respect of standard hooks, the radius of bends shall be two times the diameter of bar. Heating of reinforcement of bars to facilitate bending will not be permitted. The bars shall always be bend cold. In case of mild steel reinforcement bars of larger sizes, where cold bending is not possible, they may be bent by heating, but only with written permission of the Architect & Bank. Bars when bent shall not be heated beyond cherry red colour, and after bending shall be allowed to cool slowly, without quenching. The bars damaged or weakened in any way in bending shall not be used on the work. High strength deformed bars shall in no case be heated to facilitate bending or cranking.

B.3.6.10 Inspection of Reinforcement:

No concreting shall be commenced until the Architect & Bank have inspected the reinforcement in position and their approval obtained. A notice of atleast 72 hours shall be given to the Architect & Bank by the Contractor for inspection of reinforcement. If in the opinion of the Architect & Bank any material is not in accordance with the specification or the reinforcement is incorrectly spaced/bend or otherwise defective, the contractor shall immediately remove such materials from the site and replace with new ones and rectify any other defects in accordance with the instruction of the Architect and Bank and to their entire satisfaction.

B.3.6.11 Net Measurement:

Reinforcements shall be placed as shown on the structural drawings and payment will be made based on and limited to the net measurements, as per drawings. The contractor shall allow in his quoted rates for all wastages and rolling margins, which will not be paid for. The measured length of all the bars shall be converted into weight, as per standard weights given in latest I.S.Schedule. In case the weights of any bar/bars are less than the required weight (beyond rolling margins specified by B.I.S.) the same shall not be used on work. If used, the same shall be replaced with proper ones, at no extra cost.

B.3.6.12 Cover for Reinforcement:

Unless otherwise specified in drawings, cover shall be measured from outer surface of the main reinforcement and shall be as follows:

- a. For beams and lintels – 25mm or dia of the bar, whichever is higher.
- b. For slabs, chajjas, canopies, pardas – 15mm or dia of the bar, whichever is higher.
- c. Columns – 40mm, or dia of bar, whichever is higher.
- d. Footings – 50mm.
- e. Cover blocks shall be of (1:1½:3) P.C.C. and of thickness, not less than the cover specified. Cover blocks of 1:2 cement mortar may be allowed, if specifically permitted by the Architect. PVC cover blocks of required cover is also allowed.

B.3.6.13. Rates quoted for reinforcement, in addition to any factors mentioned elsewhere, shall also include for:

- a. Stock piling of reinforcement as described.
- b. Decoiling, straightening (coiled bars, bent bars).
- c. Removal of rust and every other undesirable substances, using wire brushes etc., as required/directed.
- d. Cutting to required lengths, labour for bending and cranking, forming hooked ends (if required), handling, hoisting, placing in position, tying binding with binding wire and every thing necessary to fix reinforcement in work as per drawings/requirements.
- e. Cost of binding wire required as described.
- f. Fabricating and fitting reinforcement, in any structural member, irrespective of its location, shape, dimension and level.
- g. Cost of precast concrete/mortar cover blocks of proper size or nylon spacers to maintain cover and holding reinforcement in position.

h. Work at all levels.

B – 4 **FORM WORK:**

B.4.1. **Materials and design:**

Contractor shall get the materials, sizes/arrangements and method of supports, details of joinery, and design of formwork for beams, slabs, columns etc., approved by Architect, before starting the formwork.

B.4.2. **Design of Form work:**

- i) Form work shall be adequately designed to support the full weight of workers, reinforcement, freshly placed concrete, effects of tamping/vibrating, etc., without yielding/settlement or deflection, and to ensure good and truly aligned concrete finish in accordance with the construction drawings.
- ii) The formwork shall be so designed that the sides of the beams can be first struck, leaving the soffit of beams and supporting props in positions. Props shall be designed to allow accurate adjustment and to permit of their being struck without jarring the concrete.
- iii) The design of form work shall be got approved from the Architect & Bank before starting this item of work.

B.4.2.1 The form work shall be of approved plywood (Marine or boiling waterproof) and not less than 12mm thick and with proper supports as may be approved by Architect & Bank. As an alternative sufficiently rigid steel shuttering with appropriate supports may be used, as may be approved by Architect & Bank at not extra cost. In every case, joints in the shuttering are to be such as to prevent loss of liquid from concrete. In case of steel shuttering, the joints must be perfectly close and sealed with craft paper or any other types of approved sealing materials. If any particular material or materials are specified in the Schedule of Quantities for form work, only such particular/ specified material or materials shall be used in the work. The form work shall be constructed so as to remain sufficiently rigid during placing and vibrating/tamping of the concrete. All shuttering and framing must be adequately stayed and properly supporting the concrete during period of hardening. The forms shall have sufficient strength and rigidity to hold concrete and withstand the forces/pressure of people and machinery working ramming and vibration, and more so when the concrete is tamped/vibrated. The surface of all forms in contact with concrete shall be clean, rigid, watertight, and smooth. Suitable devices shall be used to hold corners, adjacent ends and edges of panels of other forms together in accurate alignment.

B.4.2.2. The form work shall conform to the shape, lines and dimensions to suit the RCC members, as shown in the drawings and be so constructed. A camber of 6mm in all directions, for every 5 meter span, in shuttering for all slabs and beams shall be given to allow for unavoidable sagging, due to self weight (including concrete, workers, machinery etc)/compaction of other causes.

B.4.2.3. Temporary openings or windows shall be provided at the base of column forms, and at other points, where necessary to facilitate cleaning and observation, immediately before concrete is deposited. These shall be properly closed, before placing concrete in position.

B.4.2.4. **Vertical centering/staging:**

The vertical shuttering shall be carried down to such solid surface as is sufficiently strong to afford adequate support and shall remain in position until the newly constructed work is able to support itself. Props shall be steel tubes with extension pieces and securely braced against lateral displacement. The spacing of steel tubes shall be designed to carry loads imposed on it without undue deflection of the members, supported by the props. The spacing and sizes of props shall be approved by the Architect & Bank and any alterations suggested by them shall be carried out at contractor's expense. Pipe bracing shall be provided, as required/directed, without extra cost. The contractor shall allow in his rates for providing props and struts upto any height as shown in the working drawings issued to the contractor from time to time. Wooden props and bracing can only be allowed under special sanction of the Architect & Bank.

B.4.2. **Design of form work:**

- i) Form work shall be adequately designed to support the full weight of workers, reinforcement, freshly placed concrete, effects of tamping/vibrating, etc., without yielding/settlement or deflection, and to ensure good and truly aligned concrete finish in accordance with the construction drawings.
- ii) The form work shall be so designed that the sides of the beams can be first struck, leaving the soffit of beams and the support props in position. Props shall be designed to allow accurate adjustment and to permit of their being struck without jarring the concrete.
- iii) The design of form work shall be got approved from the Architect & Bank before starting this item of work.

B.4.3. **Water tightness:**

It is the contractor's responsibility to ensure that the forms are checked for water tightness during progress of shuttering work and also just before concreting operation starts and to make good deficiencies, if any. If instructed by the Architect & Bank, building paper will have to be used, without any extra charge for the same, viz., to have adequate water tightness.

B.4.4. **Cleaning and treatment of forms:**

All rubbish, particularly chippings, shavings and saw dust, etc., shall be removed from the interior of the forms, before the reinforcement is placed in position and as well before the concrete is placed. The form work to be in contact with the concrete shall be cleaned and thoroughly wetted or treated with an approved composition before placing concrete. Care shall be taken that such approved composition is kept out of contact with reinforcements. Interior of all moulds and boxes must be thoroughly washed (water) with hose pipe or otherwise so as to be perfectly clean and free from all extraneous matter before depositing of

concrete. Prior approval of the form work should be obtained from Architect/Bank, before placing reinforcement on the form work.

B.4.5. Stripping:

Form shall be left in place until their removal is authorised by the Architect & Bank and shall then be removed with due care, so as to avoid injury to concrete and or workmen. In no circumstances the forms shall be struck, until the concrete develops a strength of at least twice the stress, to which the concrete may be subjected to at the time of striking. The strength referred to shall be that of concrete, using the same cement and aggregates with the same proportions, and cured under conditions of temperature and moisture similar to these existing on the work. Where possible, the form work should be left longer, as it would assist in more effective curing.

B.4.6. Stripping time:

In normal circumstances (general where temperatures are above 20 degrees C and where ordinary Portland cement is used) forms shall be struck after expiry of the following periods, unless otherwise specifically directed at site by the Architect & Bank.

LOCATION	STRIKING TIME IN CLEAR DAYS (OPC) (AFTER THE DAY OF CASTING)
a. Vertical sides of walls slabs, beams and columns	4
b. Bottoms of slabs upto 4.5m span.	7
c. Bottom of slabs above 4.5m span/ bottoms of beams & arch rib bottoms upto 6m span.	14
d. Bottom of beams over 6m span and arch rib bottoms above 6m span.	21

B.4.7. Form work in lifts for continuous surfaces:

Where forms for continuous surface are placed in successive units, (as for example in columns or walls) the forms shall fit tightly over the completed surface so as to prevent any leakage of water/mortar from the concrete and to maintain accurate alignment of the surface.

B.4.8. Procedure while removing the form work:

All formwork shall be removed without shock or vibration, as otherwise it would damage the reinforced concrete. Before the soffit and struts are removed, the concrete surface shall be first exposed partly, where necessary, in order to ascertain that the concrete has sufficiently hardened. Proper precautions shall be taken to allow for the decrease in the rate of hardening that occur with cement, in cold weather. Wetting the surface before stripping is preferable, to avoid spalling of corners.

B.4.9. In case of structures with two or more floors, the weight of concrete, centering and shuttering of any upper floor being cast shall be suitably supported on one floor below the top most floor already cast. The rate quoted for reinforced concrete items is deemed to have included for these arrangements/supports.

B.4.10. **Tolerance:**

- a. All RCC work shall be executed to true lines and levels and plumb and to the final approval of Architect & Bank's representative.
- b. If work is not carried out within the reasonable tolerance the cost of all rectification measures of dismantling and reconstructing or as decided by the architect and Bank shall be borne by the Contractor. In case of work dismantled, the same will not be measured and paid for.

B.5.1. **Concrete mix proportioning:**

Concrete mix proportioning for all grades of concrete shall be as per IS 456 – 2000 clauses 8 & 9 and as per SP 23 – 1982 Section 6. The constituent materials to be used for concrete making namely cement, aggregates & water shall be as per clause 4 of IS 456 – 2000. The mix proportions shall be so selected as to ensure that the workability of the fresh concrete is appropriate/suitable for the conditions of handling and placing, so that after compaction it surrounds all reinforcements and completely fills the form work. When concrete is hardened, it shall have the required strength, durability and surface finish. The determination of the proportions of Cement, Aggregates and water to attain the required strengths shall be made as follows:

- a. By adopting nominal concrete mix, which is called 'nominal mix concrete'.

Batching:

In proportioning concrete the quantity of both cement and aggregate should be determined by mass. The mass of cement can be determined on the basis of mass of cement per bag. Water shall be measured by volume in calibrated containers/tanks or weighed.

In case of design mix of concrete, uniformity of the materials used for the concrete making has been established over a period of time, the proportioning may be done subsequently by volume batching, provided prior approval of Architect & Bank is obtained for same and ensured that periodic checks are made on mass/volume

relationships of materials. Where weigh batching is adopted, allowance shall be made for bulking in accordance with IS 2386 (part III) 1963.

The concrete shall be mixed in a Mechanical Mixer as per IS 4791 – 1968. Workability of the concrete should be controlled by direct measurement of water content. Workability should be checked at frequent intervals as per IS 1199 – 1959. The contractor is entirely responsible for the proportioning of concrete mixes of required strengths and must submit the procedure for such proportioning of concrete mixes for the prior approval of Bank & Architect, whose decision shall be final in the matter.

- b. Alternatively, contractor may use suitable ready mix concrete at no extra cost and after obtaining written permission from Architects/Bank.

B.5.2. Transporting and placing concrete:

- B.5.2.1. Immediately prior to placing the concrete, the shuttering shall be well watered and any water and rubbish lying removed.
- B.5.2.2. The concrete shall be transported from mixer to the position of placing as rapidly as possible and in a manner that would prevent separation or bleeding or impair the quality of concrete. Equipment for transportation, pumping or pneumatically conveying concrete shall be of such size and design as to ensure a practically continuous flow of concrete at the delivery end, and without any separation of the materials. The chute shall be of metal or metal-lined wood with slopes neither less than 1 vertical to 3 horizontal nor more than 1:2. The discharge end of the chute shall be provided with baffle plates to prevent segregation.
- B.5.2.3. Concrete shall not be dropped from a height in a manner, which will cause segregation. It shall be placed directly in its permanent position to avoid segregation due to rehandling. Rate of placing concrete shall be such as to avoid formation of planes of weakness in concrete being placed. No partly set or retempered concrete shall be used on the job.
- B.5.2.4. Each layer of concrete being placed shall be consolidated by mechanical vibration supplemented by hand spreading, rodding and tamping as directed, to form dense concrete with all surfaces free from honeycombing and tolerably free from water and air holes or other blemishes. Vibrators shall in no case be used to work along the forms. Duration of vibration shall be so limited to reduce time necessary for satisfactory consolidation, without causing objectionable segregation. The vibrator shall not be inserted into a lower course, that has already been vibrated/compacted and begun to set.
- B.5.2.5. The contractor shall be responsible for the co-ordination with sub-contractors or other contractors for incorporating necessary inserts, electrical conduit pipes, fixing boxes, blocks, chase holes, etc., as required. The contractor shall obtain approval from the Architect/Client as regards the above, before casting of the concrete. No holes or chases shall be made in the concrete, without prior approval of the Architect & Bank.
- B.5.2.6. Concrete shall be placed continuously until completion of the work.
- B.5.2.7. Accumulation of set concrete on the reinforcement shall be avoided. Before fresh concrete is deposited upon or against any concrete which has already hardened, the surface of the

hardened concrete shall be well roughened, if necessary by chipping, and all littance removed. The surface shall then be swept clean with wire brushes, thoroughly wetted and covered with a thin layer of rich cement mortar and or chemical additives, as may be directed by Architects.

- B.5.2.8. In foundation trenches or in like positions, concrete shall be carefully laid and poured from less than over 1 meter height. If the height exceeds 1 meter, the concrete must be deposited through inclined spouts. The trenches shall be maintained free of water during concreting by proper diversion of water flow with dewatering as required and directed, at no cost and without washing over freshly deposited concrete.
- B.5.2.9. Concrete footing shall be placed upon undisturbed clean and hard surfaces of specified bearing capacity.
- B.5.2.10. Contractor's authorised Engineers/Supervisors/Foremen shall always be present for all concreting work carried out at site.

B.5.3. Protection of Concrete:

Newly placed concrete shall be protected by approved means from rain, sun and drying winds. Exposed vertical/inclined/curved faces of concrete shall be kept wet continuously for not less than a fortnight by covering with a layer of sack curing, invariably horizontal surfaces shall be kept covered with water pounded by means of bunds. Concrete placed below the ground shall be protected from falling earth during and after placing. Approved means shall be taken to protect immature concrete from damage due to debris, excessive loading, vibration, abrasion, ground-water, mixing with earth or other materials, flotation and other influences that may impair the strength and durability of the concrete.

B.5.4. Consistency:

Only minimum and sufficient water shall be added to the cement and aggregate during the mixing to produce a concrete having sufficient workability to enable it to be well consolidated and to be worked into the corners of the shuttering and around reinforcement, to give the specified surface finish, and to have the specified strength. When suitable and appropriate amount of water has been determined, the resultant consistency shall be maintained through the corresponding parts of the work and approved tests shall be conducted from time to time to ensure the maintenance of this consistency.

The exact determination of the slump for various members and water cement ratio shall be as directed by the Architect & Bank.

Slumps tests shall be made in accordance with the details given in IS 456 – 1978.

B.5.5. Finishing:

- B.5.5.1. As soon as possible after the form work has been struck holes left by clamping bolts, air and water holes and other rough patches shall be filled in with cement and sand mortar 1:1 mix (sand passing 1/8" sieve) by working into the surface with a wooden float. Excess water shall be avoided. This should be done within 72 hours after removal of form work.

B.5.5.2. Unless instructed to the contrary the face of exposed concrete placed against shuttering shall be rubbed down immediately upon removal of the shuttering to remove fine or other irregularities. All surfaces which are required to be plastered shall be hacked properly.

B.5.5.3. All exposed faces of concrete members for which shuttering is not provided, shall be smoothed with a wooden float, when the concrete is green and setting has not started, to give a finish equal to that of rubbed down face where shuttering is provided. The top face of a slab, which is not intended to be covered with other materials, shall be levelled and floated while unset to a smooth finish to the levels of falls/slopes shown on the drawings or as instructed. The floating shall be done so as not to bring an excess of mortar to the surface of the concrete. Dentations in the surface of the concrete shall be formed, if specified/ordered, by approved implements to the depths and patterns described. The top face of a slab intended to be surfaces with mortar, granolithic or any other materials shall be finished rough (to receive final finish) and to the approval of the Architect & Bank.

B.5.5.4 Honey Combing:

- i) Where honey combed surfaces are noticed in the concrete, the contractor shall not patch up the same, until examined by the Architect & Bank and decision given regarding accepting the work with rectifications or rejections of the same. If the contractor patches up such defects without the knowledge of the Architect & Bank, the Architect & Bank will be at liberty to order demolition of the concerned concrete members to the extent they consider necessary. In such cases, the contractor shall reconstruct the demolished work. The cost of demolition and demolished work and disposal of debris shall not be measured and paid for.
- ii) If in the opinion of the Architect & Bank the honey combing is harmful to the structure and where so directed by the Architect & Bank, the full structural members affected by honey combing, as decided by Architect & Bank, shall be dismantled and reconstructed to Architect & Bank's approval. The cost of demolished concrete and as well cost of demolishing and disposing the debris will not be measured and paid for.
- iii) Where in the opinion of the Architect & Bank the structural members containing honey combing can be allowed to be retained with rectification, the rectification shall be carried out as directed by the Architect & Bank by gunniting (with cement mortar 1:3 proportion) or epoxy bonding and plastering the areas concerned at the contractor's expense.
- iv) If such honey combed areas are not severe in the opinion of the Architect & Bank and where so directed shall be patched up with dry-pack cement mortar consisting of 1 part of cement and 3 parts of sand after removing defective concrete down to sound concrete to the satisfaction of Architect & Bank all at the expense of the contractor. Such works should be completed within 72 hours from deshuttering.
- v) Concrete faces to be finally concealed shall be left as from the shuttering, except that honey combed surface shall treated as above (i), (ii), (iii) & (iv). Faces of concrete that are to have finished other than specified shall be prepared in an approved manner and as instructed.

vi) The patched up areas shall be kept moist for 7 days and prevented from drying out too soon. Wherever required or instructed by the Architect & Bank, patching work shall be done using part white cement upto 30% of the total quantity of cement specified.

B.5.6. Construction joints:

Concreting shall be carried out continuously upto construction joints, if any, the position and details of which shall be predetermined by the Architects/Banks. Construction joints shall be provided as directed by the Architect. They shall be rebated and or of an approved shape for slabs, beams etc., and shall be provided in the positions described on the drawings or as directed by the Architects/Bank. Inclined “Feather” joints shall not be permitted. Shear keys not less than 2” deep and equal to 50% of the cross sectional area shall be provided to all construction joints. Reinforcing bars shall extend by not less than 60 time dia of respective bars for M:150, 50 times dia, for M:200, beyond construction joints, unless otherwise indicated.

The joints shall be kept only at places, where the shear force is minimum and these shall be at right angles to the direction of main reinforcement. In case of columns, the joints shall be horizontal and about 3” below the bottom of the deepest beam framing into the columns.

B.5.7. Structural joints:

Expansion joints, construction joints, hinges or other permanent structural joints shall be provided in the position and of the form described in the drawings or as directed by the Architects/Banks and shall be got approved before casting.

In no case shall the reinforcement corner protecting angles or other fixed metal items, embedded in or bonded into concrete, run continuously through the expansion joints. The placing of concrete on either side of the expansion joint shall be separated by suitable filler materials during continuous construction or alternately adequate space left during construction and filler materials placed in position later after an interval of atleast seven days.

B.5.8. Cutting into concrete:

No concrete shall be neither cut into, nor shall it be interfered with in any way, without the prior approval in writing by the Architect & Bank.

B.5.9. No portion of the structure shall be subjected to any loading in excess of design loads, except with prior written permission of Architect.

B.6.0. Strength of Concrete:

B.6.1. The concrete mix shall be so made to produce the desired grade concrete having the required workability and characteristic strength not less than values given below:

Grade Definition	Specified Minimum Characteristic compressive strength at 28 days

M – 15	150 Kg/Sq.cm
M – 20	200 Kg/Sq.cm
M – 25	250 Kg/Sq.cm
M – 30	300 Kg/Sq.cm

Strength of concrete required for various situations have been clearly stipulated in the relevant item of the schedule of quantities and/or in the drawings. As required by the Architect, the water content and the water/cement ratio shall be determined from the results of tests of the materials proposed for use, in advance of construction. It is important to maintain constant water cement ratio at its correct value.

If the concrete produced at site does not satisfy the above strength requirements, the Architect & Bank will reserve the right to require the contractor to improve the method of batching, the quality of the ingredients and the mix with increased cement contents, if necessary. The contractor shall not be entitled to claim any extra cost for the extra cement used or for the modifications, for fulfilling the strength requirements as specified. The able guide for the quality and for durability of concrete. It must also have an adequate cement content and as well a low water – cement ration, as given below, which is applicable for moderate weather conditions, as specified in I.S. 456 – 2000.

MINIMUM CEMENT CONTENT	MAXIMUM WATER – CEMENT RATIO
Moderate conditions 290 Kg/Cum	0.55

The minimum cement contents is based on 20mm aggregates. For 40mm aggregate it should be reduced by about 10% and for 12.5mm aggregate it should be increased by about 10%.

B.6.2. Strength tests during the work:

Samples should be taken from each 20 cum of concrete made during the progress of the work, or when a day's concrete work does not amount to 20 cum, then from each day's quota, and as required by Architects/Banks. Six samples of cubes of size 150 x 150 x 150mm shall be taken jointly each time in steel moulds, 3 of which shall be tested for 7 days strength and the remaining 3 shall be tested for 28 days strength on 7th and 28th day respectively, after the day of casting. Proper curing arrangements, as directed by Banks/Architects, shall be made at site by the contractor. Each cube shall be marked and numbered, and dated by the contractor.

The contractor shall maintain a register at site as directed by the Architect & Bank, showing all particulars (date of casting, mix of concrete, location of concreting, water cement ratios, approximate concrete quantity represented by samples, no of cubes cast, date and results of testing, and remarks) and all the entries should be signed jointly by the contractor with Architect & Bank. 7 days strength shall not be less than 2/3rds of the 28 days strength. The results of the tests in any of the recognised laboratories and/or contractor's laboratory at site shall be taken as final and binding on the contractor. The average strength shall be higher than the prescribed strength. The average strength of the specimens taken at a time, may be assumed as the compressive strength of concrete, provided the difference between the maximum and minimum strength of the three specimens does not exceed 15% of the average strength. Concrete test cubes shall be taken out and got tested as per time schedule for knowing 7 days and 28 days crushing strength, at no extra cost, either at site or at an approved laboratory. Whenever for any set of cubes, if the 7 days crushing strength is found satisfactory, 28 days tests are not necessary. In cases, where 7 days strength is not satisfactory, tests for 28 days strength must be gone done WITHOUT ANY EXCEPTION.

In case the compressive strength obtained from the test samples of concrete at 28 days is less than the minimum specified characteristic compressive strength, the work is liable to be rejected at the sole discretion of Architect & Bank.

Bank's & Architect's decision regarding dismantling of such works or suitable rectifications or any alternative assessment by load test for allowing the corresponding work to be retained, shall be final and binding on the contractor. These shall be carried out at contractor's cost only. The condition of any test does not guarantee acceptance of concrete covered by the test final decision regarding finally accepting/rejecting such works even after conducting those tests shall be made by the Architect & Bank only.

In case of concrete showing test results lower than the specified strength and in the opinion of the Architect & Bank such works could be allowed to remain, after due and satisfactory rectifications, if any, ordered and or load tests or even otherwise, then the rates quoted by the contractor, corresponding to those items, shall be reduced suitably for paying for that part of work. The Bank/Architect shall have full power in their absolute discretion to fix the actual rate payable after deduction, and it shall be binding on the contractor. If the strength is so low that in the opinion of Architect & Bank, the work has to be dismantled, then the contractor shall do so as directed at his own cost irrespective of the amount of loss, inconvenience and difficulties involved. Rejected/dismantled work shall not be paid for.

If in the opinion of the Architect & Bank/Engineer any load test or hammer test or any other test is necessary, the same shall be carried out by the contractor as directed and he shall bear the cost of the same. Based on the results of the tests, the Architect shall reduce rates/accept after rectification or modification/reject and order dismantling of concrete, and the decision shall be final and binding on the contractor.

The contractor shall pay all costs incurred in supplying the material for and in making, maturing, delivering and testing the cubes.

B.7. **RECORD OF CONCRETING:**

B.7.1 The contractor shall keep a daily record showing the date when each portion of concrete is poured in slab, beam, column footing etc., curing period, removal of formwork and test cubes results at 7 days and 28 days period and observations on the same.

B.8. The rates for concrete shall also include, apart from any other factors specified elsewhere in the tender, as follows:

B.8.1. All materials required for design/ nominal mix concrete, getting the designs for the design mix from an approved agency, labour, use of tools and plants, scaffolding, mixing, conveying, placing, ramming, vibrating, formwork, finishing, curing, hacking etc., complete as required and directed.

B.8.2. Rates for concrete items shall cover

- a. Any shape and size, and for doing at any height and depth (all lifts) as per drawings, providing cover blocks or nylon spacers etc.
- b. Fixing all inserts such as pipes, plugs, forming holes/pockets etc.
- c. Providing dowel bars, etc., through shuttering and forming drip moulds to chajjas, sills etc., or at any other places as directed.

B.9.0 **MODE OF MEASUREMENT:**

B.9.1. Length of columns will be measured upto top of the slab.

B.9.2. Length of main beams will be measured between columns and depth below the top of the slab. For secondary beams length will be between main beams.

B.9.3. Slabs to be measured in Cum between beam to beam.

B.9.4. Chajjas will be measured in CUM. Width to be measured beyond lintel width.

B.9.5. For staircase, RCC steps, waist slab, beams will be measured in Cum.

B.10. **PRECAST CONCRETE:**

B.10.1. All provisions in the specifications for concrete shall apply to precast concrete except for the specific variations given herein below:

B.10.2. **Aggregate:**

For maximum size of aggregate shall not be larger than one third of the minimum dimension of the member.

B.10.3. **Concrete Cover:**

For all surfaces not exposed to weather, all reinforcement shall be protected by concrete equal to the nominal diameter of bars but not less than 15mm.

B.10.3. Concrete Cover:

For all surfaces not exposed to weather, all reinforcement shall be protected by concrete equal to the nominal diameter of bars but not less than 15mm.

B.10.4. Care:

The concrete in one precast piece shall be placed in one operation. No piece shall be removed from the mould or erected until sufficiently natured to ensure that no damage may occur to the piece.

B.10.5. Details:

All details of jointing, inserts, anchors and bearing widths etc., shall be as shown in the drawings.

B.10.6. Identification and Marking:

All precast concrete members shall be properly marked to indicate the top of the member and its location.

B.10.7 Transportation, Storage and Erection:

While handling, including loading/unloading, the members shall be supported/hung at such suitable points, so that the member may safely withstand all the loads/stresses etc., that may occur/develop. For this, suitable hooks/markings etc., shall be provided, while casting itself, as may be necessary and or as directed.

B.10.7.1. Units shall be stored, transported and placed so that they will not be over stressed/pressed or damaged.

B.10.7.2. Precast concrete units shall be adequately braced and supported during erection to ensure proper alignment and safety and such bracing and supports shall be maintained until there are adequate permanent connections.

C. MASONRY:

C.1. BRICK MASONRY:

C.1.1. Bricks:

a. The bricks shall be of best locally available quality, and having the specified crushing strength, and shall be of quality approved by the Bank & Architect before placing orders for the same.

- b. They shall be sound, hard and well burnt. They must give a ringing sound when struck with a metal piece and shall have frog.
- c. They shall be free from cracks, flaws and nodules and also free from lime or stone pieces.
- d. All bricks when dry, shall have an average compressive strength not less than 35 Kg/Sqcm, unless otherwise specified.
- e. The bricks wherever specified as wire cut and or machine made, shall have compressive strength not less than 75 Kg/sq.cm, unless other wise specified. The crushing strength bricks of bricks which vary by more than 15% of average strength of that group of sample, must be omitted and average strength of balance bricks only shall be considered as representative of that lot of bricks.
- f. The contractor shall produce different brands of locally available bricks for approval by the Bank & Architect. If during the execution of the work, it is observed that the bricks of approved brand/quality are not sufficient in quantity or Manufacturer's have not maintained the same approved quality, then the contractor shall make alternate arrangements to procure bricks from any other source even with longer leads without any extra cost, after getting same approved in advance by the Architect & Bank, as done earlier.
- g. If the contractor executes the work, without approved quality of bricks, the same shall be liable for rejection or paid at reduced rates, at the sole discretion of the Bank & Architect, which shall be final and binding.

C.1.2. **Mortar:**

The sand should be only of approved quality and 'Coarse' unless otherwise specified. It will be screened and/or washed, if required and directed, without extra cost. Unless otherwise stated, cement mortar for brick work shall be of 1:6 (1 cement : 6 sand) proportion for walls of one brick thick and above. While for half brick walls or brick on edge work cement mortar shall be of 1:4 (1 cement :4 sand) proportion.

C.2. **WORKMANSHIP:**

C.2.1. **Proportion and mixing of cement mortar:**

Cement and sand shall be mixed in the specified proportion by volume by emptying cement bags on measured quantity of sand and thoroughly turning over the mixture in a dry state, till uniform colour is obtained. The mixture is made into the form of a frustrum of a cone with a hollow at top centre, and then water added to it. The whole material is then thoroughly turned and mixed till mortar is homogeneous; and shall be mixed only for such quantities, which can be readily used. Not more than 30 minutes should pass between adding of water to the dry mixture and the actual placings of mortar in position.

C.2.2. **Construction:**

- C.2.2.1. All brick work shall be set out and built to lines, levels, batters, curves and to any shape or position to dimensions, thickness and heights shown upon the drawings, and a good bond shall be preserved throughout the work both laterally and transversely. English bond shall be used throughout.
- C.2.2.2. All bricks shall be thoroughly wetted before use in the manner that water penetrates to the full depth of brick stock, and every brick is fully soaked.
- C.2.2.3. Single or double scaffolding of adequate strength shall be provided for all types of loads likely to come on them during construction. In case of single scaffoldings all the scaffolding holes shall finally be filled with cement concrete 1:3:6 (1 cement :3 coarse sand : 6 graded stone aggregate, 20mm nominal size) at contractor's cost.
- C.2.2.4. All courses shall be laid truly horizontal and all vertical joints made truly vertical.
- C.2.2.5. Where water is met within foundations, work space shall be kept free of water by the contractor while the brick work is in progress and until the mortar, pointing, plastering have properly set.
- C.2.2.6. No half or quarter brick shall be used except as closures. The closures shall be horizontal and the walls shall be raised plumb. Not more than ten courses shall be raised in a day and no part of the work shall be raised more than one meter above another at any time.
- C.2.2.7. Joints shall be uniform in thickness. All joints shall be adjusted to its final position in the wall while the mortar is steel soft and plastic. All vertical joints shall be full of mortar and well compacted with trowel and just sufficient water (so that cement/mortar does not flow out of the joints). No looseness/hollows in the mortar (in the joints) shall be permitted. Any unit, which is disturbed after mortar has stiffened or the mortar in the joints is loose or has hollows, shall be removed and re laid with fresh mortar.
- C.2.2.8. All joint shall be raked out, while the mortar is still green, to a depth of 10mm (minimum) to ensure a good key for plastering.
- C.2.2.9. Half brick walls shall be reinforced at every 4th bedded course with 25 x 1.5mm hoop iron reinforcement well in mortar, properly lagged etc., and as directed by the Architect. Alternatively two 6mm dia bars be embedded in cement mortar in same locations.
- C.2.2.10. In brick arches or other circular work, the bricks shall be shaped to slope, joints radiating outward and correctly from the center, front to back of walls and joints shall be not more than 12mm thick.
- C.2.2.11. All brick work shall be adequately watered atleast for three times as day, for ten days continuously.
- C.2.2.12. During the rains and frosty weather, the work shall be carefully covered, without extra charge, so as to prevent any mortar being washed away etc. Should any brick work be damaged, the same shall be removed and rebuilt at the contractor's expense.

C.2.2.13. Chases and raked out joints shall be kept free from mortar or other debris. Spaces around door frames and other built-in items shall be solidly filled with cement mortar 1:3 (1 cement :3 coarse sand) or cement concrete 1:3:6 (1 cement :3 coarse sand : 6 hard stone aggregate of suitable size). Anchors, wall plugs, accessories, flashings and other items required to be built in with masonry shall be built in as masonry work progresses. Unfinished work shall be stepped back for jointing with new work. Tothing may be resorted to, only when specifically approved by the Architect. Before new work is started, all loose mortar shall be removed and the exposed joints shall be thoroughly cleaned before laying new work.

C.3. **RATES TO INCLUDE:**

Apart from other factors mentioned elsewhere in this contract, the rates for brick masonry shall also include following:

C.3.1. All materials, labour, tools/equipment used and other items intended for the satisfactory completion of brick masonry at all heights and depths.

C.3.2. Erecting and removing of all single or double scaffolding, (as may be directed/specified), ladders required for the execution of the work at any height and depth and shape as shown in drawings or as directed by the Architect & Bank, and as well cleaning everyday the surface of masonry executed on that day.

C.3.3. Cutting of brick work, raking out joints to received plaster, removing stains and mortar lumps, making required chases and openings and filling the chases with cement mortar not leaner than 1:4 (1 cement :4 coarse sand), all as specified/directed.

C.3.4. Reinforcement embedded in cement mortar, including cost of reinforcement, in half brick walls and brick on edge work.

C.3.5. Dewatering, wherever required.

C.4 **MODE OF MEASUREMENT:**

All brick work, except half brick work and brick on edge, shall be measured in cubic meters. Half brick and brick on edge will be measured in Sq.meters. Deductions shall be made for all openings, lintels, beams, chajjas/shelves bearings, and the like and columns etc., occupying full thickness of the walls. No deductions will be made for ends only of

i. Dissimilar materials like girders, beams, lintels, rafters etc., upto 500 Sq.cm. cross section, and for

ii. Openings upto 0.1 Sq.m. in face area.

D.O. **RUBBLE MASONRY:**

D.1. **MATERIALS:**

D.1.1. **Stones:**

- D.1.1.1. They shall be blue granite stones from an approved quarry.
- D.1.1.2. They shall be tough, hard, dense, durable, sound, uniform in colour and texture and free from flaws, cracks, unjuries, veins, crystals, minerals, salt, cavities, skins (weathered surfaces) and other defects.
- D.1.1.3. The stone shall not absorb water more than 5% of its dry weight, when immersed in water and tested as per I.S. 1224.
- D.1.1.4. The contractor shall furnish a sample of stones which he intends to use on the works and get the same approved by the Architects, well before start of masonry.
- D.1.1.5. All Royalties, Compensations, Taxes, Octroi, duties, etc., payable for securing stones shall be paid by the contractor and included in the rates quoted for respective items.

The mortar shall be as specified in the item or as shown on drawing. The sand shall be coarse and of approved quality and may be screened or washed, if required, without extra cost.

D.2.0. **WORKMANSHIP:**

D.2.1. **Masonry:**

- D.2.1.1. The stones shall be hammer dressed, unless otherwise specified in the item, before they are laid in position. For masonry to be plastered, bushes on surfaces shall not exceed 12mm in thickness and for other (exposed) faces not more than 25mm.
- D.2.1.2. The masonry shall consist of large stones flat bedded, properly selected for their places and carefully laid, with a suitable proportion of smaller stones and chips to fill up the interstices (but not on faces). No face joint shall exceed 20mm and shall also be not less than 10mm in width. The stones shall be wetted before laying in mortar. The work shall be hand set and solidly bedded in and surrounded with mortar fully and properly on every side except the face.
- D.2.1.3. Flat stones shall not be less in breadth than in height and its length shall not be less than 1½ times its height.
- D.2.1.4. Through stones or headers shall be laid in every course at a distance not exceeding 1.0 meter apart and shall be staggered. They shall be in one piece for walls upto 600mm width and shall be lap jointed (laps not less than 150mm) in case of greater thickness, if laps are desired by the contractor. In no case length of these stones shall be less than 400mm. Alternately headers may be of precast cement concrete blocks of cement concrete 1:3:6 (1 cement : 3 coarse sand: 6 hard stone aggregate 20mm nominal size) and in cross section, height shall be equal to the height of that course in the masonry. The face area of each header shall not be less than 0.05 sq.m. They shall be distinctly marked on their face.

- D.2.1.5. Quoins shall have the same height as that of the course. They shall be laid header and stretcher alternatively. Faces of quoins shall be fair dressed. No quoin stone shall be less than 0.03 cum in content. Jambs or doors, windows and openings be formed with quoins only. They shall have uniform chisel draft of 40mm at the corner edges.
- D.2.1.6. The masonry shall be laid to lines, levels, curves, and shapes as shown in the plans. The face of all masonry work shall be strictly in plumb. In the case of battered walls, the courses on the battered surface side shall be at right angles to the batter. All joints shall be raked out to a depth not less than 20mm, and unless otherwise stated shall be flush pointed for all exposed surfaces with cement mortar of proportion (1 cement :3 fine sand). The width of pointing shall be uniform and constant.
- D.2.1.7. The fixtures, plugs, frames etc., if any, shall be built in places as shown on plans, while laying the masonry, and not afterwards, by removing the stones already laid.
- D.2.1.8. Bad work shall be pulled down, as directed by the Architect, and shall be rebuilt at the contractor's cost.
- D.2.1.9. All masonry shall be washed down on completion and all stains and mortar removed from the faces as scaffolding is removed, on each day.
- D.2.1.10. Holes of the required size and shape shall be preferably left during construction alone for fixing pipes, service lines etc. After the pipes are fixed in position the hollows if any, shall be filled in with 1:3 (1 cement : 3 coarse sand) cement mortar or 1:3:6 cement concrete (1 cement: 3 coarse sand: 6 graded stone aggregate 20/12.5mm nominal size as required). The face shall be neatly finished with matching stones. Iron and steel fixtures shall be embedded in cement mortar 1:5 91 cement :5 coarse sand).
- D.2.1.11. In wet foundations, work space shall be kept free from water, while the masonry is in progress and until the mortar has sufficiently set.
- D.2.1.12. Adequate single/double scaffolding as required and or directed for constructing masonry shall be provided and scaffolding holes filled with cement concrete (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size) and finished to have surfaces matching with adjacent stones by the contractor at his expenses.

D.2.2. **Coursed Rubble – Stone Masonry – Second Sort:**

- D.2.2.1. Exposed face stones shall be khandki dressed to have the vertical and horizontal sides perfectly straight, parallel at right angles to the adjacent sides. Where the interior face is to be plastered, the backing stones and hearting shall be as specified for uncoursed rubble masonry, chisel drafts of 37mm dia shall be provided at the external corners, when stone face is not chisel dressed.
- D.2.2.2. Height of each course shall not be less than 150mm and all the stones in any course shall be of the same height. Unless otherwise stated, height of all courses shall be uniform. In no case the height of any course shall be more than any of the courses below it. The bed and joints shall be hammer or chisel dressed back from the face for 3” and 1½” width respectively. The faces of the stones shall be hammer dressed and bushings shall not be more

than 10mm. Thickness of the joints shall not exceed 10mm. Stones shall break joints atleast half of the height of the course.

D.2.2.3. Quoins shall be atleast 0.5m long (limited to thickness of wall when single piece placed across the jamb), laid square on their levels and beds shall be fair dressed to a depth of atleast 10mm.

D.2.2.4. Face joints shall not exceed 15mm.

D.2.3. **Uncoursed Rubble Masonry:**

Rubble stones shall be uncoursed blue granite stones from an approved quarry. They shall be tough, hard, dense, durable, sound, uniform in colour and texture and free from flaws, cracks, injuries, veins, crystals, minerals, salts, cavities, skins and other defects.

If ordered by the Architect & Bank, 75 x 75mm or of specified size weep holes shall be provided in the masonry without any extra cost, at spacings as directed by the Architect.

During the progress of the work, if necessary, diversion of the nalla shall be provided and maintained by the Contractor at his own cost.

In wet foundations, work space shall be kept free from water while the masonry is in progress and until the mortar has sufficiently set in. Dewatering shall be done bailing out water or pumping out water by the contractor at his own cost.

Adequate scaffolding required for constructing masonry walls shall be provided by the contractor at his expenses.

Flush cement pointing shall be done in cement mortar 1:3 (1 cement : 3 fine sand) unless otherwise specified. The width of pointing shall be constant and not varying.

Stones shall be hammer dressed. Nearly half the stones shall not be less than 0.01 cum each in content and 25% of stones shall tail back into the masonry by 40mm or more. The stones shall be so arranged to break horizontal joints atleast by 50mm and long vertical joints being carefully avoided.

Cement mortar shall be of (1:6) proportion, unless otherwise specified.

For masonry to be plastered, bushes shall not exceed 12mm, in thickness.

Flat stones shall not be less in breadth than in height and its length shall not be less than 1½ times its height.

The masonry shall consist of large stones flat bedded, properly selected for their places and carefully laid with a suitable proportion of smaller stones and chips to fill up interstices (hearting). The stones shall be wetted before laying in mortar. The whole work shall be hand set and solidly bedded and surrounded well with compacted mortar on all sides, except the face.

Through stones or headers shall be laid in every course at a distance not exceeding 1m. apart and shall be staggered. They shall be in one piece for walls, upto 600mm width and shall lap atleast 150mm for thicker walls. Face area shall not be less than 0.05 Sqm. They shall be distinctly marked less than 400mm. Alternately headers may be of precast cement concrete blocks of cement concrete 1:3:6 (1cement : 3 coarse sand : 6 hard stone aggregate 20mm nominal size) and in cross section, height shall be equal to the height of that course in the masonry.

Quoins shall have same height as courses and shall be laid alternatively header and stretcher. They shall be fair dressed and shall be less than 0.03 cum in content. Jambs of doors, windows and openings shall be formed with quoins. They shall have uniform chisel draft of 40mm at the corner edges.

The masonry shall be laid to lines, curves, levels and shapes as shown in drawings. The face of masonry shall be in plumb. In case of battered walls the courses on the battered side shall be at right angles to the batter.

All face joints shall be raked out for a depth not less than 20mm, and unless otherwise stated, shall be pointed sunk/raised/flush (as may be decided by the Architect) with cement mortar 1:3 (1 cement : 3 fine sand) in case of all exposed surfaces. The pointing shall be of uniform and constant width. The masonry shall be shaded from the sun and watered well for 10 days.

For the days work, all masonry shall be washed down, on completion of days work, of all stains; and mortar splashes removed from the face for the days work and before the scaffolding is removed.

The joints shall be uniform on the face and be not more than 20mm in width.

D.2.4. **Random Rubble – First Sort:**

D.2.4.1. Stones shall be roughly chisel dressed. They shall be so arranged as to break joints as much as possible, avoiding continuous lines of joints horizontal and vertical. Quoins shall be same as for coursed rubble second sort.

D.2.4.2. All stones shall be carefully fitted with uniform thickness of joints not exceeding 20mm. Face joints shall be chisel dressed for a depth not less than 25mm for fitting in position properly.

D.2.4.3. All other details shall be same as for coursed rubble stone masonry 2nd sort.

D.3.0 **MODE OF MEASUREMENT:**

Masonry work will be paid in Cu.m. All deductions shall be made specified for brick masonry work.

D.4.0. **STORM WATER DRAINAGE:**

Storm water drains shall be constructed as per drawings/directions, and on either one or both sides of the road, (unless the land beyond both the shoulders slopes away adequately), to serve as catch water drains and or for continuing upstream drain. The dimensions and slopes shall be as detailed in the drawings and as required and directed. Bed concrete shall be of P.C.C. 1:3:6 (1 cement : 3 coarse sand :6 hard graded stone aggregate 40mm size) of 150mm thickness. Drains shall be constructed either in rubble masonry or brick masonry as required and shall be plastered in CM 1:6 (1 cement : 6 fine sand) or as specified/directed. The sides of drains may also be of cast-in-situ or precast with cement concrete 1:2:4 (1 cement :2 sand : 4 hard graded stone aggregate 20mm nominal size), if so specified. When the drain is provided by the side of road, adjoining the shoulder necessary stone masonry parapets shall be provided over the drain wall on the road side.

D.5.0. **DRY RUBBLE PITCHING:**

The rubble stones for pitching shall be sound, hard and durable and fairly regular in shape. The average depth of the stones shall be not less than the specified thickness of pitching (and depth of any individual stone shall generally be less by more than 25mm) and each stone shall generally be not less than 0.01 cum or as ordered by the Architect & Bank. The smaller size stones shall be brought to site only for the purpose of packing and wedging.

The slopes of the bank shall be made up with morrum and trimmed to the required slope and properly compacted in layers (each not more than 200mm) after adequately watering profile shall be put up with pegs and strings at required intervals for the pitching, to ensure that it is done true to line, curves, levels, thickness and slopes.

Toe wall as shown and directed shall be provided at the toe to support the pitching and shall be measured along with the slope of pitching. The pitching shall be commenced at the toe and laid course by course up the slope. The stones shall be laid closely in position on the prepared bed, and firmly set. The pitching shall be laid to line, levels, curves and slope as indicated in the plans or as ordered by the Architect & Bank. Each stone shall cover the full depth of pitching and shall be perpendicular to the sloping bed. The stones shall be laid with breaking joints as far as possible. Additional morrum, bedding, if required, for proper slope shall be laid out simultaneously, watered and well rammed. The joints between stones shall be filled in with spalls of proper size and wedged in with hammers to ensure tight packing or filled with CM 1:5 (1 cement :5 coarse sand) for depths not less than 75mm or as specified and directed. The item includes repairing disturbed pitching, if any, as and when required and directed.

Flush pointing shall be done in cement mortar 1:3 (1 cement :3 fine sand), if so specified/directed.

E. **CEMENT PLASTERING/CEMENT POINTING:**

E.1.0. **MATERIALS:**

E.1.1. Cement, sand and water constituting the materials for the work shall conform to the specifications laid down for the concrete work. Fine sand shall be used as per IS Code.

E.1.2. Lime required for neeru finish shall be of approved variety fat lime.

E.1.3. Mortar shall be in proportions specified in the bills of quantities.

E.2.0. **WORKMANSHIP:**

E.2.1. **General:**

E.2.1.1. Adequate single scaffolding (if specifically permitted) shall be provided by the contractor at his expense and the scaffolding holes shall be filled in with cement concrete 1:3:6 (1 cement : 3 coarse sand: 6 hard graded stone aggregate 20mm size) compacted well and plastered over before lowering the scaffolding just below, if any, without any extra cost. In case double scaffolding is done, nothing extra shall be paid.

E.2.1.1. Dewatering the foundation if required, shall be done by the contractor at his own cost.

E.2.1.2. The surfaces to be plastered shall be first cleaned and watered well in advance and thoroughly wetted before plastering.

E.2.1.3. Smooth surfaces of concrete, old plaster etc., shall be suitably roughened or removed to provide necessary bond for the plaster. All dirt, spots, oil paint etc., which prevents proper bond with plaster, shall be removed.

E.2.1.4. Patches of plaster 150 x 150mm shall be put on about 3 meter apart as gauges, to ensure even plastering in one plane.

E.2.1.5. All plaster work will be done to lines levels and plumb and to the satisfaction of Architect & Bank.

E.2.1.6. For walls, columns and beams, thickness will be minimum 20mm for external faces and 15mm thick for internal faces, while for ceiling it shall be average 10mm, unless otherwise specified in bill of quantities.

E.2.1.7. The thickness specified shall be average and measured from the prouddest part of the surface.

E.2.1.8. Unless otherwise stated in Bill of Quantities, cement mortar shall be in 1:4 (1 cement :4 fine sand) proportion.

E.2.2. **Plaster with Neeru Finish:**

E.2.2.1. The surface thus rendered shall then be finished with good quality of lime neeru. Neeru may be prepared at site out of the best quality of fat lime slaked at site with fresh water and sifted as specified. The slaked and sifted lime shall be reduced to a fine paste by grinding in a mortar mill (150 turns). Only sufficient quantity which can be used within 10 days only, shall be prepared at a time. Chopped hessain or jute fibre in the required quantity may also be added to neeru, if directed by the Architect & Bank. Otherwise ready made neeru of approved quality can be used. If required, plastered surfaces should be finished smooth with junction of skirting and plaster, if any, shall be finished as directed at no extra cost. All door/window jambs shall be finished as directed.

- E.2.2.2. Plaster work shall proceed from top to bottom. An entire unobstructed surface shall be plastered in one operation. All exposed angles and junctions of walls and doors etc., shall be carefully flushed so as to furnish a neat and even surface. Before the base coat sets the neeru finish shall be applied and finished smooth. The entire plaster shall be surfaced truly vertical and horizontal. In case thickness item, no extra will be paid to the contractor.
- E.2.2.3. All mouldings as shown on drawings or as directed shall be worked true to the template and drawn neat, clean and level, at no extra cost.
- E.2.2.4. Bad work shall be pulled down as directed by the Architects/clients and shall be rebuilt by the contractor at his cost.
- E.2.2.5. All plaster work shall be cured atleast for 7 days and to the entire satisfaction of the Architect & Bank. The curing shall be so done that damage to plaster with the impact of splashing water is avoided.
- E.2.2.6. The contractor shall be responsible for making good any portion of plaster, which requires redoing, at his cost.

E.2.3. **Rough cast Cement plaster:**

- E.2.3.1. The surface shall be cleaned as specified under cement plaster with neeru finish.
- E.2.3.2. First coat comprising of cement and sand mortar 1:4 (1 cement :4 fine sand) with approved water proofing compound as per manufacturer's instruction, shall be applied uniformly with a trowel and flat board to exact plumb with thickness not less than 15mm and allow it to set for not less than half an hour.
- E.2.3.3. While this is still green, the surface shall be roughened with wire brush. The surface shall be cured for 4 days.
- E.2.3.4. All loose particles shall be dusted and a second coat of average 6mm thick cement mortar 1:3 (1 cement :3 fine sand) shall then be applied. Sand used shall be screened through a mesh not less than 1/16" and not more than 1/8" size and thoroughly washed, if required. The finished surfaces shall be lightly pressed with close pricked wooden board or a wet sponge to bring the sand particles into prominence.
- E.2.3.5. General workmanship, curing etc., shall be all as specified for cement plaster with neeru finish.

E.2.4. **Water proof cement plaster:**

This shall be all as specified herein before for cement plaster work except for the following:

- a) No neeru finish shall be applied over the rendered surface, but the rendered surface itself shall be finished smooth by steel trowelling.
- b) In the preparation of cement sand mortar, cement shall be mixed with an approved waterproofing compound such as pudlo, CICO No.1 water lock, impermo, composeal or

of any other standard manufacturer as per the manufacturer's instructions and as directed by the Architects.

E.2.5. **Rate to include:**

Apart from other factors mentioned elsewhere in the contract, rates for plastering shall also include following:

- E.2.5.1. All materials, labour, use of tanks/implements for satisfactory completion of the work.
- E.2.5.2. Erection, dismantling and removing single/double scaffolding.
- E.2.5.3. Preparing all the surfaces to secure plaster.
- E.2.5.4. Providing cement plaster of specified average thickness (measured from the proudest part of BB/stone work) and proportion at all heights and depths and to any shape as directed.
- E.2.5.5. Curing for 7 days.
- E.2.5.6. Chicken mesh of approved gauge shall be provided at all the junctions of concrete, masonry, timber and grouting of chases made for electrical/plumbing or other purpose as directed at no extra cost. Prover V-grooves must be made at all junctions of walls and slabs/beams/columns etc., at no extra cost.
- E.2.5.7. Any moulding, bends, arisers, gooves/drip mould, rounding/Vatas, chamfering, soffits of arches, and also making good damaged plaster after their (Contractor's) all the sub contractor or nominated sub contractors have done their work.

E.2.6. **Mode of Measurement:**

All plastering will be measured in square metre, unless otherwise described, as per relevant I.S. code.

Walls:

The measurement of walls plastering shall be taken between the walls or partitions for the length and from top of floor or skirting upto the ceiling bottom for the height. The dimensions before plastering shall be taken.

Ceiling:

Ceiling shall be measured between walls or partitions and the dimensions before plastering shall be taken. Ceilings with projected beams shall be measured over beam and the plastered side of the beam shall be measured and added to plastering on ceiling.

For jambs, soffits, sills, etc., for openings not exceeding 0.5 sq.m. each in area, ends of joists, beams, posts, girders, steps etc., not exceeding 0.5 sq.m each in area and openings not exceeding 3 sq.m each., deductions and additions shall be made in the following manner.

- E.2.6.1. No deduction shall be made for ends of joists, beams posts etc., and openings, not exceeding 0.5 sq.m. each, and no addition shall be made for reveals, jambs, soffits, sills, etc., of these openings no for finishing the plaster around ends of joists, beams, posts, etc.
- E.2.6.2. Deductions for openings exceeding 0.50 sqm but not exceeding 3 sqm each shall be made as follows and no addition shall be made for reveals, jambs, soffits, sills,etc., of these openings.
- E.2.6.3. Deductions for openings exceeding 0.50 sqm but not exceeding 3 sqm each shall be made as follows and no additions shall be made for reveals, jambs, soffits, sills, etc., of these openings.

When both faces of wall are plastered with the same plaster, deduction shall be made for one face only.

When two faces of wall are plastered with different plasters or if one face is plastered and the other pointed, deduction shall be made from the plaster or pointing, on the side of frames for doors, windows, etc., on which the width of reveals is less than that on the other side, but not deduction shall be made on other side.

- E.2.6.4. In case of openings of area above 3 sq.m each, deductions shall be made for the openings, but jambs, soffits and sills shall be measured.

E.3.0. **CEMENT POINTING:**

E.3.1. **Materials:**

- E.3.1.1. Cement, sand and water shall conform to the specifications laid down for the concrete work, fine sand to be used as per ISI code.

E.3.2. **Workmanship:**

- E.3.2.1. Dust and mortar powder shall be brushed out of all joints. The surface shall then be washed with water and kept wet before pointing is commenced.
- E.3.2.2. In case of dry rubble pitching, the cement mortar 1:4 (1 cement : 4 sand) proportion shall be well pressed into the joints with a pointed trowel and rubbed smooth. It shall not be spread over the corners, edges and face of the masonry. All superfluous mortar, if any, shall be removed, with a trowel. All joints shall be generally uniform in size.
- E.3.2.3. The pointing shall be kept wet for atleast ten days. It shall be suitably protected from sun, rain and other factors during the period of curing.

E.4. **Mode of Measurement:**

Pointing work shall be measured in Sq.meters. Deductions for openings exceeding 0.5 sq.m. will be made, same as for plaster.

F. **FLOORING:**

F.5. **GRANITE FLOORING SKIRTING AND FACING:**

F.5.1. **Materials:**

F.5.1.1. Granite stone slabs shall of the thickness and type mentioned in the item and of the colour and quality approved by the Architects. Slabs shall be hard, dense, uniform and homogeneous in texture. They shall have even crystallized grain and be free from defects and cracks. The surface shall be mirror polished to an even and perfectly plain surface and edge machine cut, true and square.

F.5.1.2. No slab shall be thinner than the specified thickness, at its thinnest part. The dimensions of the slab shall be as specified in the item. A few specimens of approved finished slabs shall be deposited by the Contractor in the Architect's office for reference.

F.5.1.3. All the Granite slabs brought to site shall be got approved by the Architect & Bank, before using them in the work. Sizes of Granite slabs for floorings, steps/raisers and dado etc., shall be got approved by Architect & Bank, before ordering for the same.

F.5.2. **Workmanship:**

F.5.2.1 They shall be laid to the pattern shown in the drawings or as directed by the Architects.

F.5.2.2. The surface on which the Granite slabs are to be laid shall be cleaned of all dust and saturated with water.

F.5.2.3. The Granite slabs shall be set in cement slurry over cement mortar bedding as specified and tamped with wooden mallet. The joints shall not exceed 1mm. In thickness and shall be grouted/flushed with white cement mixed with pigment of suitable colour, if required, to match the shade/colour of slabs, and cured for 10 days.

F.6. **GLAZED TILE IN FLOORS, DADOS & SKIRTING:**

F.6.1. **Materials:**

F.6.1.1. glazed tiles shall be of first quality and of approved make and 5.5 mm in thickness. They shall be sound, hard and well and evenly glazed with fine and sharp edges, and free from twists. The rear face shall be grooved and recessed or suitably moulded, in parts, to provide necessary cessed or suitably moulded, in parts, to provide necessary key for mortar. They shall generally conform to I.S.777:1988 (Second revision). The tiles shall be of sizes 150mm x 150mm or 100mm x 100mm or as specified/directed.

F.6.2. **Workmanship:**

F.6.2.1. The tiles to be used for floor and dado shall be of the same manufacture and of first quality, as per approved sample.

F.6.2.2. Tiles shall be immersed in water for atleast 6 hours prior to their end use.

- F.6.2.3. Cement sand mortar 1:4 (1 cement :4 coarse sand) bed (average 20mm thick for flooring and 12mm thick for skirting finished to proper levels and falls. After the surface has hardened sufficiently, it shall be roughened, cleaned and well set to receive a thin cement slurry of honey like consistency. Tiles with their under side also smeared with cement slurry of honey like consistency shall then be laid over the bedding and tamped into position properly to have the top surfaces in a true plane and level or to falls as directed.
- F.6.2.4. For skirting/dado, the surfaces shall be plastered with cement mortar 1:4 (1 cement : 4 coarse sand) to make the surface even and in plumb. The surface of the plaster shall be scarified with brush for getting a good bond between the back of the tiles shall be battered with cement paste and pressed on the plastered surface as per flooring and tapped in position.
- F.6.2.5. Joints shall be thin, uniform, even and straight. The joints shall be cleaned off gray cement and pointed with white cement paste with pigment, if required, to match the shade of the tiles. The work shall be cured for 7 days. After curing, the surface shall be washed clean with water and oxalic acid. The finished floor skirting/dadoo shall not sound hollow, when tapped with a wooden mallet.

F.6.3. **MODE OF MEASUREMENT:**

All flooring work will be measured in Sq.metre basis and shall be measured between unplastered wall surfaces. Skirting and dado will be measured in Sq.meters and the height above flooring will be measured, length between the finishes of adjoining walls, if any.

- F.7. The ceramic flooring shall be of first quality and of approved make and 7.5mm in thickness. They shall be sound, hard and tough as per manufacturers specification. The rear face shall be groove and recessed or) suitably manholed in part to provide necessary key for mortar. The tiles shall be of sizes 12” x 12”, 8” x 8” (or) as specified/directed.

G. **WOOD WORK:**

G.1. **MATERIALS:**

- G.1.1. Unless otherwise stated the timber used in this project will be second class teakwood and shall be got approved from the Bank & Architect before using it in work. The timber shall be well seasoned and free from shakes, fissures, cracks, large/loose knots or other major defects. It shall also be free from spongy, brittle, flaky wood, sapwood and all such defects, which will affect its strength, durability, appearance or usefulness for the purpose for which it is required. Any effort such as plugging, painting or using any adhesives, to hide any defects, shall render the timber liable to rejection by the Bank & Architect. No individual hard and sound knot shall be more than 40mm dia and the aggregate area of all the knots shall not exceed 1.5% of area of the piece for purposes of acceptance. It should confirm to relevant I.S.I003.
- G.1.2. Any timber rejected for any reason whatsoever, shall at once be removed from the site of work.
- G.1.3. Glue: Organic type shall comply with specification I.S. 852 –1957 and synthetic type shall comply with I.S.851 – 1957 in all respects.

- G.1.4. Nails, screws, ties, straps, bolts, etc., shall be of the material, make and pattern as approved by the Architect. Unless otherwise specified, they must be of mild steel and be of such sections and design, such that they serve the purpose adequately.
- G.1.5. The Contractor shall get all the wood approved by Architect & Bank, before taking permission of the Architect to apply paints, oils or otherwise treats wood work in anyway whatsoever.
- G.1.6. All embedded parts of wood work shall be well painted with two coats of hot boiled tar or creosoted, as approved by the Architects/Banks.
- G.2. **WORKMANSHIP:**
- G.2.1. All the wood work shall be neatly and truly finished as per tender item dimensions with not more than 3mm, planning margin. Unless otherwise specified, the exposed wood work shall be accurately planned to the required dimensions, within planning tolerance, smooth and to lines, planes, curves or shapes as required.
- G.2.2. All the necessary joinery work shall be carefully done as per normal standard practice and Architects instructions. All framed joinery for external work shall be put together with white lead and joints pinned with hardwood or Fevicol. For internal work, unaffected by moisture, the joints may be glued and pinned or joined with fevicol as directed.
- G.2.3. Framed/Fabricated wood work includes all sawing, cutting, planing, jointing, framing, supply and use of all straps, bolts, holdfasts, nauls, trensils, spikes, screws, etc., as may be necessary to complete the work and for fabricating/framing and or fixing. Fabricating/framing and trussing shall be done in the best possible manner and as shown on the drawings or as directed by the Architects/Banks.
- G.2.4. The contractor shall provide labour, scaffolding, ladders and tackle necessary for hoisting and fixing wood work in position and afford facilities for its inspection during construction. The contractor shall be responsible for the safety of the work, workmen and for any action or compensation that may arise in this connection.
- G.2.5. All iron work connected with wood work and going to be embedded in masonry shall, before erection, receive 2 coats of solignum/creosote. If it is to be painted, it shall be given one coat of red oxide primer and one coat of finishing paint on the ground, before being fixed in position and afterwards second coat of finishing paint.
- G.2.6. All wood shall be got inspected and passed by the Architect & Bank before being put into work. The architect defective quality, despite his having previously passed the same before it was worked upon. In no case the wood work shall be painted or otherwise, before it is inspected and approved by the Architect.
- G.2.7. After fixing the wood work in position, if any defects, including damaged edges of the frames, are notices by the Architect & Bank during the execution of work or in the defects liability period, the contractor shall have to rectify the same or remove and replace the defective work, as directed and to the satisfaction of Architect & Bank, at no extra cost.

G.2.8. Any cutting and waste of timber, that may be incidental in carrying out an item, shall not be paid for extra, but shall be included in the rate for the item.

G.3. **T.W.DOORS AND WINDOWS:**

G.3.1. Timber used for this work, shall be locally available second class teakwood, unless otherwise specified, and of approved quality and as per the sample approved by the Bank and Architect. As specified in the item, all the doors shall have teakwood door frames or pressed steel frames of approved make, quality and size, with three numbers holdfasts on each leg. Teakwood beading/cover moulding will be provided wherever necessary and at no extra cost. Hold fasts shall be embedded in concrete blocks, as shown in drawings or as directed.

G.3.2. For flush doors, shutters to be used shall be solid core of best approved make (BWP quality) with ISI mark, 30mm thick (unless otherwise specified) inclusive of either commercial ply, veneer or formica of approved shade and design/pattern on one or both sides as specified and shown in the drawings and shall be bonded with phenol Formaldehyde synthetic resin. If so specified, all flush shutters shall have teak wood lipping on all four sides, as directed, which shall be fixed at site. All solid core shutters shall generally conform to IS 2202 (Part I) & (Part 2) :1983.

G.3.3. For full panelled doors, the shutters shall be of best quality factory made with ISI marking and to be approved by the Bank and Architect and having panels of 19mm thick best approved make and quality marine ply, unless otherwise specified, and as shown in drawings or as directed.

G.3.4. The fixtures and fittings required for all the doors and windows shall be got approved from the Bank and Architect before placing the order. Any fixture found damaged or missing at the time of handing over shall be replaced by the contractor and surface of joinery made good as directed at no extra cost.

G.3.5. All the timber work including pressed steel frames shall be painted with 3 coats of synthetic enamel paint (including primer coat) of best approved make and shade as directed. In case of teak ply or decorative ply veneered shutters, they shall be French polished/wax polished, as per specifications and as directed.

G.4. **GLASS:**

G.4.1. All glass used in the doors, windows and ventilators etc., shall be of the best quality, free from specks, bubbles, smoke, veins, airholes, blisters and other defects. The kind of glass and its thickness shall be as mentioned in the item or as shown in detailed drawings or as ordered by the Architect. The glass shall generally conform to I.S.1765.

G.4.2. Sheet glass shall be best quality of approved make plain/ground/frosted, and either 4mm or 5.0mm thick, as specified. For Bath/W.C. windows 3.8 to 4mm thick frosted glass shall have to be used as directed.

G.4.3. Plate glass shall be polished patent plate glass of best quality. It shall have both surfaces flat and parallel and polished to give clean undistorted vision. All mirrors shall be of plate glass

and give clear undistorted reflection. The thickness of the glass shall be as mentioned in the item or shown in the detailed drawings or as directed by the Architect. Minimum thickness of plate glass shall be 4mm to 5.5mm.

G.4.4. Float glass, wherever specified shall be “Bronze tinted” manufactured by FLOAT GLASS INDIA LIMITED to thickness as specified.

G.4.5. **Obscured or ground glass:**

This glass transmits lights, but the vision is partially or almost completely obscured. Principal types are plain, rolled, double rolled, figured, ribbed, fluted, frosted (on one or both sides) and rough cast. The thickness shall be as specified in the item or as mentioned in the drawings or as directed by the Architect.

G.5. **MODE OF MEASUREMENT FOR DOORS AND WINDOWS:**

Payment will be made for the area of opening in the masonry as per relevant ISI. The height of the door shall be measured from finished floor level to the bottom of lintel on the top.

H.0. **ALUMINIUM DOORS, WINDOWS & VENTILATORS:**

H.1. Factory made unplasticised polyvinyl Chloride (UPVC) white colour sliding glazed window upto 2.40 m in height dimension comprising of UPVC multi-chambered frame with in-built roller track and sash extruded profiles duly reinforced with 1.60 ±0.2 mm thick galvanized mild steel section made from roll forming process of required length (shape & size according to UPVC profile), appropriate dimension of UPVC extruded glazing beads and UPVC extruded interlocks, EPDM gasket, wool pile, zinc alloy (white powder coated) touch locks with hook, zinc alloy body with single nylon rollers (weight bearing capacity to be 40 kg), G.I fasteners 100 x 8 mm size for fixing frame to finished wall and necessary stainless steel screws etc. Profile of frame & sash shall be mitred cut and fusion welded at all corners, including drilling of holes for fixing hardware's and drainage of water etc. After fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of required size and of approved quality, all complete as per approved drawing & direction of Engineer-in-Charge. Two and half track two panels sliding window made of frame 52 x 44 mm & sash 32 x 60 mm both having wall thickness of 1.9 ± 0.2 mm With single glazing with 6mm thick Glass of appropriate dimension. Approved Makes : NCL(VEKA), LG & FENESTA.

I.0. **WATER PROOFING TREATMENT:**

Water Proofing Treatment for Terraces

Waterproofing on TERRACE floor and on PARAPET walls upto 300mm. by chemical method as follows: Brushing, cleaning & hacking the surface area and mixing and applying two coats of ready to use two component acrylic polymer modified cementations, waterproof coating in 2 layers one after the other with 1mm tk with air cure of 4 hours for first coat and second coat followed with water curing for 48 hours as per manufacturers' specification. Including providing ten years guarantee against leakage on a requisite stamp paper complete. The Water proofing also to include 2 coats of waterproofing plaster done with 12 mm aggregates finishing in CM1:3 mixed with waterproofing compound of 20mm.

Ponding test to be done for 24 hours . Above the waterproofing Screed concrete to be laid in 1:2:4 with 75 to 100mm average thickness with 12mm to 20mm crushed stone and down graded stone aggregates wherever to required thickness maintaining slope for rain water and finished smooth as directed. The rate shall be inclusive of all the material ,labour, hardware, transportation necessary required for the complete execution of the item as directed by the architect. NOTE : Only Slab area shall be considered for Measurements, walls area will not considered. Approved Makes : FOSROC,LATICRATE,PIDILITE DR FIXIT, BOSTIK.

J.3.1.6. Rates to be inclusive of:

The rates shall include all labour, materials, equipment and tools for carrying out the following operations:

- i) Providing and mixing the primer and distemper separately.
- ii) Scaffolding.
- iii) Preparing the surface to receive the priming and finishing coats.
- iv) Applying the priming coats.
- v) Each coat to be completed in all parts of one building and got approved, before starting next coat in that building, and shall not be done room wise or floor wise.
- vi) Applying the distemper in 3 coats minimum, including primer coat. If a proper even surface is not obtained to the satisfaction of the Bank & Architects in 3 coats contractor shall carryout additional coats of distemper to approval, at contractor's own expense.

J.4. ACRYLIC WASHABLE DISTEMPER:

- J.4.1. Washable acrylic distemper shall be conforming to IS 2395 – 1 – 1966 and shall be of approved make and shade.
- J.4.2. As required, single or double scaffolding shall be used. Ladders, if used, shall be tied with old gunny bags at top to prevent damage or scratches to the walls/floors etc.
- J.4.3. The instructions of the manufacturer shall be followed regarding preparation of the manufacturer shall be followed regarding preparation of the surface and application of priming and finishing coats.
- J.4.4. Where the specifications of the manufacturer are not available, the following instructions shall be carried out:
- J.4.5. The surface shall be cleaned and all clears, holes and surface defects shall be repaired with gypsum and allowed to set hard. All irregularities shall be sand papered smooth and wiped clean. The surface so prepared shall be completely dry and free from dust before distemping is commenced. In case of newly plastered surfaces/walls, special care shall be taken to see that it is completely dry before treatment is attempted.

The old surfaces which had earlier been distempered, shall be cleaned of grease and dust etc. All cracks, holes and surface defects shall be repaired with plaster of Paris and allowed to set hard and then sand papered smooth and wiped clean. The flakings of previous coatings, if any, shall be taken off. But in case the surfaces are colour or white washed, the wash must be removed thoroughly first.

J.4.6. The priming coat shall be applied over complete dry surfaces as recommended by the manufacturers or patent distemper.

J.4.7. Distemper shall be applied in dry weather with a broad stiff brush in long parallel strokes. This shall be allowed to dry thoroughly before the next coat is applied. All the operations (strokes of brush) for one coat of white colour wash will give two coats in case of distemping.

Rates to be inclusive of: The rates shall include all labour, materials, equipment and tools for carrying out the following operations:

- i) Providing and mixing the primer and distemper separately.
- ii) Scaffolding.
- iii) Preparing the surface to receive the priming and finishing coats.
- iv) Applying the priming coats.
- v) Each coat to be completed in all parts of one building and got approved, before starting next coat in that building, and shall not be done room wise or floor wise.
- vi) Applying the distemper in 3 coats minimum, including priming coat. If a proper even surface is not obtained to the satisfaction of the Bank and Architects in 3 coats contractor shall carryout additional coats of distemper to approval, at contractor's own expense.

J.5. **TEXTURE PAINT:**

Applying of Texture paint on exterior walls with a base coat of primer and applying texture of desired shade and pattern either with roller/ spray / trowel finish with two coats of painting with Apex Ultima Protec paint of approved brand and manufacture at all levels complete for 100% wash ability elasticity and water proofing of texture for longer & dust proof life of texture paint as per manufacturer specifications and direction of Architect. as per the drawing. The rate shall be inclusive of all the necessary material,required hardware, labour, transportation & MS scaffolding necessary for the complete execution of the item. Approved makes : ASIAN, NEROLAC, BIRLA, BERGER.

Application Areas:

- External wall surface for durable insulation effect.
- For wall surfaces, can be used as protective coating in the desired colour.

- For protecting industrial as well as residential structures from weathering effect.

Coverage:

- 10 to 12 Sq-m/lit of PIDEBIND P – 100 on smooth surface once the area is covered properly with primer coat then, apply one coat of PIDICOTEW – 100 with a coverage rate of 5 sqm/lit.
- After 1 hour of drying of first coat, second coat of PIDICOTEW – 100 shall be applied with the coverage rate of 5 sqm/lit.

J.6. **MODE OF MEASUREMENT (FOR J1 TO J5):**

For all the above painting items, Mode of measurement shall be same as that of plastering and shall be in Sq.meters. No extra payment shall be made for painting rough cast surfaces or sandfaced surfaces.

J.7. **ENAMELLED PAINTING:**

J.7.1. **Materials:**

- J.7.1.1. The paint shall be of the specified colour and shade and of an approved make by the Architect & Bank. The paint shall comply in all respects with relevant Indian Standard Codes.
- J.7.1.2. The make and brand of the paint to be used on the work shall first be got approved by the Architects/Bank. The material shall be obtained directly from the approved manufacturers or authorised dealers and brought to the site in the manufacturers drums etc., with seals unbroken.
- J.7.1.3. Paint for undercoating and finishing coat shall be ready mixed. Mixing by contractor is not permissible except with prior written approved of the Architects/Bank, in which case the preparations of ingredients and their quality shall be strictly maintained as per manufacturer's instructions and relevant I.S. codes.
- J.7.1.4. All the materials shall be kept properly protected when not actually in use. Lids of containers shall be kept closed and surfaces of paint in open shall be covered with a thin layers of turpentine to prevent formation of a skin.

In case of doubt regarding the quality, the paint supplied by the contractor shall be got tested in an approved laboratory as described in I.S. 101 – 1964, if considered necessary by the Architect. The cost shall be borne by the client, if the results are satisfactory, and by the contractor if otherwise. The rejected paint shall be removed from the site of work forthwith.

J.7.2. **PREPARATION OF SURFACE:**

J.7.2.1. **Plastered Surfaces:**

New plaster shall not be primed or painted till it is completely dry and hard. The surface shall be carefully rubbed smooth and thoroughly cleaned. The surface shall be dry, smooth, clean and free from dirt.

J.7.2.2. **Steel work (NEW):**

Degreasing shall be done by either proprietary brands of approved solvent cleaner or by mineral turpentine or petroleum and other petroleum solvents, like trichloroethylene alkali solutions or detergents as directed by the architects.

The de-rusting shall be done by manual scraping (by wire brushes, fine steel wool scraper, sand paper etc.) and/or mechanically by sand blasting, shot blasting or flame cleaning or chemical methods as approved by the Architects.

J.7.2.3. **Steel work (Old):**

For repainting necessitated due to any specified reason the relevant instructions given in I.S. 1447:1966 shall be followed. If necessary and ordered by the Architect, the surface shall be cleaned completely as for new steel.

J.7.2.4. **Wood Work:**

The surface to be painted shall be thoroughly dry, clean and smooth. It shall be sand papered with coarse medium grade sand papers and the finished surface shall be free from scratches.

J.7.2.5. Before applying primer, knots, if any, shall be covered with preparation of red lead made by grinding red lead in water and mixing with glue sized and used hot. The surface prepared for painting shall be dry before paint is applied. The holes and indentation on the surface shall be stopped with putty. Stopping shall not be done before the priming coat is applied.

J.7.3. **Application:**

J.7.3.1. All brushes, tools, etc., used shall be cleaned of all foreign matter at the beginning of different operations being undertaken.

J.7.3.2. Paint may be applied by spraying or brushing. Unless otherwise specified, paint shall be applied with brushes. Brushes of appropriate size shall be either round or oval shaped and they shall be maintained carefully throughout the work so as to be pliable and free from bristles.

J.7.3.3. The contents of the drum and tins shall be well stirred with a small clean and smooth stick before using and occasionally during use to prevent sedimentation at the bottom of the container.

J.7.3.4. Painting shall be carried out as far as possible in dry and warm weather.

- J.7.3.5. Single or double scaffolding shall be used as necessary, by the contractor at his cost. Ladders, if used, shall be tied with old gunny bags at top to prevent damage or scratches to the walls, floors etc.
- J.7.3.6. The primer coat shall be applied as soon as the surface has been cleaned and before deterioration of surface by rust and contamination of the surfaces by dust, dirt or any other foreign material.
- J.7.3.7. Sufficient time shall be allowed for each coat of paint to dry before the next is applied.
- J.7.3.8. Painted surface, shall be protected from sun, rain, condensation, contamination or surface damage, till it is completely dry. 'Wet paint' shall be put, when necessary.
- J.7.3.9. Preparation of surfaces, priming coat, undercoat and finishing coats shall be applied as specified or recommended by the manufacturer. Where no specifications are available, the following specifications will be followed.

J.7.3.10. **Primer Coat: Plastered surface:**

Priming coat shall consist of equal parts of white and red lead mixed in boiled linseed oil to the required consistency applied uniformly over the surface. When this coat is dry, all cracks, holes and other such defects shall be filled with a mixture of one part of white lead and 3 parts of ordinary putty. After drying, the surface shall be rubbed with sand paper and dusted clean. An undercoat shall be applied thinly so that plaster may be thoroughly saturated. One or more undercoats with putty shall be applied as required and directed to obtain thoroughly saturated surface to the satisfaction of Architect & Bank.

Steel Work:

The primer coat be of red lead conforming to I.S.102 – 1962. Undercoating and puttying shall be done, if necessary. For old painted surfaces and new surfaces already primer with red lead/red oxide, the surface shall be cleaned thoroughly and primed with red lead/ red oxide, at some places, where necessary or over the whole surface as directed by the Architects.

Wood Work:

The primer coat shall consist of red lead, white lead, raw and boiled linseed oil and patent driers.

After priming coat, all small holes, cracks, open joints and other minor defects shall be stopped with putty made from whitening mixed to proper consistency with raw linseed oil and little white lead to help hardening of putty. The surface shall then be lightly rubbed down smooth with sand paper. One or more undercoats, with putty shall be applied as required and directed to obtain thoroughly saturated surface to the satisfaction of Architect & Bank.

J.7.3.11. **Finishing coats:**

Unless otherwise specified in the item, the finishing shall be done with atleast two coats of paint of approved make and shade confirming to the latest I.S. codes. The last coat of paint shall give a matt/flat, semi-glossy or glossy finish as specified for each item of painting or as directed by the Architect & Bank. Striple finish shall be given at no extra cost, if required, by the Architect & Bank. The finished surface shall be of the required shade and present an even appearance. It shall not show any brush marks. If required, final coat will be applied with rollers at no extra cost.

J.8. **ENAMEL PAINT:**

General specifications, preparation of surface and priming coat shall be same as specified for oil painting. Finishing shall be done in two coats or more as required with synthetic enamel paint of approved make and shade and shall generally conform to relevant I.S.codes.

J.9. **RATE FOR ALL PAINTING WORKS TO INCLUDE:**

Apart from other factors mentioned elsewhere in this contract, the rate for painting shall also include.

- J.9.1. Providing all the materials/labour and equipment that is required to execute the work as specified.
- J.9.2. Scaffolding (single/double) erection and removal.
- J.9.3. Preparing the surfaces before painting.
- J.9.4. Applying three coats of approved paint including priming coat. If proper & even surface or shade is not acquired, then extra cost/coats shall be applied as directed and to the final approval of the Architect & Bank, at no extra cost.
- J.9.5. Applying additional priming coat/coats to obtain thoroughly saturated surface and filling the putty as required and directed.
- J.9.6. No extra coat shall be paid for painting smooth/rough surfaces such as precast concrete pardis, rough cast plaster, sand faced plaster etc.
- J.9.7. Curing the cement paint as directed for minimum 7 days.
- J.9.8. Doors, windows, floors and other materials of furniture etc., shall be protects from being splashed upon. Splashing and droppings, if any, shall be removed and the surfaces cleaned as directed.
- J.9.9. If any cracks develop in the plaster, before or after final painting, the same will have to be filled in by suitable putty and the surface painted again as directed to give an even surface to the approval of Architect & Bank at no extra cost. If neeru surface is damaged due to any reason before painting, then the surface shall be redone by using plaster of paris as directed, at no extra cost.

J.10. **MODE OF MEASUREMENT FOR OIL, ENAMEL PAINT, POLISHING ETC:**

J.10.1. Measurement of painted/polished surfaces shall be in Sq.m and as per plaster work.

J.10.2. For measurement of polishing/painting to joinery and steel work etc., multiplying coefficients, as in standard table shall, be as follows:

S.NO.	DESCRIPTION OF WORK	HOW MEASURED	COEFFICIENT
I.	<u>Wood Work – doors and windows etc:</u>		
1.	Panelled doors/windows.	Measured flat including frame.	1.30 (for each side).
2.	Flush doors	- do -	1.20 (for each side).
3.	Partly panelled and partly glazed or glazed doors/windows (for glazed portions only – for panelled portions as per 1 above).	- do -	1.00 (for each side).
4.	Fully venetioned or louvered doors/windows.	- do -	1.80 (for each side).
S.NO.	DESCRIPTION OF WORK	HOW MEASURED	COEFFICIENT
II.	<u>Steel Work – Doors and Windows:</u>		
1.	Fully glazed doors & windows.	Measured flat including frame.	0.50 (for each side).
2.	Plain sheeted steel door, windows.	- do -	1.10 (for each side)
3.	Collapsible gate.	Measured flat.	1.50 (for painting all over)
4.	Rolling shutters of interlocked laths.	-do- jamb guides bottom rails, locking arrangement included (top cover shall be measured separately)	1.10 for each side.
III.	<u>General work:</u>		

1.	Expanded metal, M.S. grill work, grating in guard bars, ballustrades, railing and partitions. R.C.C. grill.	Measured flat. - do -	1(for painting all over). 1(for each side).
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The table given above is as per C.P.W.D. specification.

J.11. FRENCH SPIRIT POLISHING:

J.11.1. Materials:

French spirit polish shall be of an approved make conforming to I.S.348:1968 and shall be approved by the Architects. If it is to be prepared, the polish shall be made by dissolving 0.7 Kgs of best shellac in 4.5 litres of spirit or wine without heating. To obtain required shade, approved pigment shall be added and mixed in required proportions.

J.11.2. Workmanship:

J.11.2.1. Preparation of Surface:

The surface shall be cleaned. All unevenness shall be rubbed down smooth with sand paper and well dusted. Holes and indentations of the surface shall be filled with putty made of whiting and linseed oil. The surface shall be given a coat of filler made of 2.25 Kg of whiting and 1.5 litre of methylated spirit. When it dries, the surface shall again be rubbed down perfectly smooth with sand paper and wiped clean.

J.11.2.2. Application:

A piece of clean fine cotton cloth or cotton wool made into the shape of a pad shall be used to apply polish. The pad shall be moistened with polish and applied sparingly but uniformly and completely over the entire surface. It shall be allowed to dry and then only another coat is applied in the same way. To finish off, the pad shall be covered with a fresh piece of clean fine cotton cloth, slightly damped with methylated spirit and rubbed lightly and quickly with a circular motion. The finished surface shall have a uniform texture and high gloss. Irrespective of number of coats, this will be carried out to the entire satisfaction of Architect & Bank.

J.12. POLISHING:

J.12.1. Materials:

This shall be of approved quality and make and brought to site in sealed containers as marketed by the manufacturers.

J.12.2. Workmanship:

J.12.2.1 Preparation of Surface:

Woodwork to be treated, shall be finished smooth. It shall then be stopped and rubbed down perfectly smooth with different grades of sand paper. (The final rubbing shall be done with sand paper which has been slightly moistened with linseed oil and rubbed one over the other for a few seconds).

J.12.2.2. Application:

The mixture of the polishing shall be applied evenly, with a clean cloth pad in such a way that no blank patches are left, and rubbed continuously for half an hour. When the surface is quite dry, a second coat shall then be applied and rubbed for two hours or more if necessary, until the surface has assumed a uniform glass and is quite dry, showing no signs of stickiness when touched. Irrespective of number of coats, this will be carried out to the entire satisfaction of Architect & Bank.

J.13. MEASUREMENT:

Measurement for French/wax polishing and or polishing with ready made polish will be as per schedule stated herein before and the explanatory note on coefficient shall be as per C.P.W.D. specifications.

J.14. For all painting and polishing works (J.1. to J.12):

- (i) Detailed register shall be maintained, by the contractor, showing daily account of receipts, consumption and balance of different materials showing materials received and their consumption with location, and shall be checked by Bank & Architect as their discretion.
- (ii) Each coat of work shall be done in one building at a time and got approved before starting next coat in that building; and shall not be done room wise or floorwise.

Note: Any item not specified in this tender has to be executed as per latest standard CPWD specification or as per manufacturers specification.

9. INDEX FOR SPECIFICATIONS FOR WATER SUPPLY AND SANITARY WORKS

WATER SUPPLY:

1. CPVC pipes and Socket etc.

DRAINAGE:

1. SWR PVC soil and waste pipes etc.
2. Cement Concrete pipes
3. Manholes, Inspection chambers etc.
4. Soil, Waste, Rainwater, Vent, etc.
5. Eco Drain Pipes

“A” Cutting, Patching and Making good

“B” Equipment, Material & Workmanship, Tests

“C” Cleaning, Operation and Tests

6. Sanitary Fixtures and Fittings

7. Mode of Measurement

“C” Tools and materials and storage

“D” Safety codes

} General & Applicable for all types of work costs of these shall be included in the rates quoted.

SPECIFICATIONS FOR WATER SUPPLY & SANITARY WORKS

1. **WATER SUPPLY:**

CPVC Pipes

Supply and fixing as per IS 15778 – 2007

1.3. **FITTINGS:**

CPVC Pipes and fittings as per IS 15778 – 2007

General:

The brass or gun metal fittings shall be of heavy quality and of approved manufacture and pattern, with screwed or flanged ends, as specified. The fittings shall in all respects comply with Indian Standard specifications No. I.S. 778 – 1957 and I.S. 781 – 1959. The standard size of brass or gun metal fittings shall be designated by the nominal bore of the pipe outlet to which the fittings are attached. A sample of each kind of fittings shall be got approved from the Architect & Bank and all supplies made according to the approved samples.

- 1.4.1. All cast fittings shall be sound and free from pits, blow holes and projections. Both internal and external surfaces shall be clean, smooth and free from sand etc. Burning, plugging, stopping or patching of the casting shall not be permissible. The bodies, bonnets, spindles and other parts shall be truly machined so that when assembled the parts shall be axial, parallel and cylindrical, with surfaces smoothly finished. The area of the water way of the fittings shall not be less than the area of the nominal bore.

The fittings shall be fully examined and cleaned of all foreign matter before being fixed. The fittings shall be fitted in the line in a workman like manner. The joints between fittings and pipes shall be made leak-proof, when tested to a pressure of 6 Kg/sq.cm as described in para 1.1.6, and the defective fittings and joints shall be replaced or redone without any extra cost.

1.4.2. **Brass bib cock and stop cock:**

A bib cock (bib tap) is a draw off tap with a horizontal inlet and free outlet and a stop cock (stop tap) is a valve with a suitable means of connections for insertion in a pipe line for controlling or stopping the flow. They shall be of specified size and shall be of screw down type. The closing device should work by means of a disc carrying renewable non-metallic washer which shuts against water pressure on a seating at right angles to the axis of the threaded spindle which operates it. The handle shall be either crutch or butterfly type, securely fixed to the spindle. Valve shall be of the loose leather seated pattern. The cocks (taps) shall open in anti-clock wise direction.

The bib cock and stop cock shall be polished bright. The minimum finished weights of bob tap (cock) and stop tap (cock) as given in the I.S. specifications are reproduced below:

Size mm	Minimum finished weight	
	Bib Tap Kg.	Stop Tap Kg.
8	0.25	0.25
10	0.30	0.35
15	0.40	0.40
20	0.75	0.75

When the bib cocks or stop cocks are required to be chromium plated, the chromium plating shall be of grade B type conforming to I.S. 1068 – 1958. The chromium shall never be deposited on brass unless a heavy coating of nickel is interposed. In case these are required to be nickel plated, the plating shall be of the first quality with a good thick deposit of silvery whiteness capable of taking high polish, which will not easily tarnish or scale.

In finish and appearance, the plated articles, when inspected shall be free from plating defect such as blisters, pits, roughness and unplated areas and shall not be stained or discoloured. Before a cock is plated, the washer plate shall be removed from the fittings. The gland packing shall be protected from the plating solution.

Gun metal bib cock and stop cock:

These shall be of gun metal screw down pattern of the size as specified. So far as the general requirements of material are concerned, these shall be similar to those as described in para 1.4.2. The weight of these shall be the same as for brass bib cocks and stop cocks as described in para 1.4.2.

1.5.1. **Brass full way valve:**

Full way valve is a valve with suitable means of connection for insertion in a pipeline for controlling or stopping the flow. The valve shall be of brass, fitting with a cast iron wheel and shall be of gate valve type, opening full way of the size as specified.

The valve shall be of best quality as approved by the Architect & Bank.

1.5.2. **Gun metal full way valve with wheel:**

These shall be of the gun metal fitted with wheel and shall be of gate valve type opening full way and of the size as specified. These shall generally conform to I.S. 778 – 1978.

1.6. **Ball valve:**

The ball valve shall be of high pressure or low pressure class and shall be of sizes as specified and directed.

The nominal size of a ball valve shall be that corresponding to the size of the pipe to which it is fixed. The ball valve shall be of gun metal as specified with standard valve shall be of gun metal as specified with standard polyurethane float. The float shall be spherical in shape, the jointing of the float shall be made by efficiently finished, lapped and soldered seam or by brazing. Polyurethane floats shall be used as specified.

The ball valve shall generally conform to I.S. specification No.1703 : 1977. The weight of ball cock and the size of ball be as per table given below:

Both low pressure and high pressure ball valves are designed for use on mains having pressures upto 17.5 Kg/cm².

Ball valve size in mm			Total Wt. H.P.	Total Wt. L.P.
Dia	15	-	524 gms	481 gms
	20	-	986 gms	867 gms
	25	-	1549 gms	1411 gms
	32	-	2120 gms	1873 gms
	40	-	2646 gms	2303 gms
	50	-	4454 gms	3959 gms

1.0 **CAST IRON AND SPUN IRON PIPES AND FITTINGS:**

2.1 **MATERIALS:**

Pipes and Specials:

The cast iron pipes shall conform to I.S. 1537 – 1967, while spun iron pipes shall conform to I.S. 1537 – 1967, while spun iron pipes shall conform to I.S. 1536 – 1976. The pipes shall be either with spigot and socket ends or flanged ends. The cast iron pipes shall be vertically cast, either class A or class B, as specified. The spun iron pipes, shall be of cast iron casted centrifugally and shall be of class LA, class A and class B, as specified in the item.

Specials:

The specials shall conform to I.S. 1538 (Parts 1 to 23): 1976 and shall be of medium or heavy class, as specified, depending on their thickness.

All cast iron pipes shall be capable of easily worked with a drill or file. Pipes and specials should be sound with smooth inner and out surfaces, neatly dressed and carefully selected, free from laps, pinhole, and other imperfections, and shall ring clearly when struck with a light hammer. The ends of the pipes and specials shall be reasonably square to their axis.

All pipes and specials, before they are affected by rust, shall have been coated with an approved anti-corrosive treatment or by heating and dipping in Dr. Angus Smith's solution at the factory.

Stacking:

The pipes and specials shall be handled with sufficient care to avoid damage to them. These shall be lined up on one side of the alignment of the trench, socket facing uphill or in the direction of flow of water.

2.2 **TRENCHES FOR C.I. PIPES AND SPECIALS:**

The trenches for the pipes shall be excavated to lines and levels as directed. The bed of the trench shall have to be truly and evenly dressed throughout from one change of grade to next.

The gradient is to be set out by means of boning rods and the required depth be excavated at any point. The trench shall be excavated as directed by the Engineer/ Architect. The depth of the trench shall not be less than 1 meter, measured from the top of the pipe to the surface of the ground under roads crossing, and not less than 0.75m. elsewhere.

The width of the trench shall be the nominal diameter of the pipe plus 40 cm but it shall not be less than 80 cm. in case of all kinds of soils excluding rock and not less than 0.55 metres in case of rock.

The bed of the trench, if in soft or made up earth, shall be well watered and rammed before laying the pipes and the depressions, if any, shall be properly filled with earth and consolidated in 20 cm layers.

If the rock is met with, it shall be removed to 15 cm, below the level of the pipe and the trench shall be refilled with excavated materials (soil) and consolidated.

The excavated materials shall not be placed within 1 meter or half of the depth of the trench, whichever is greater, from the edge of the trench.

The materials excavated shall be separated and stacked so that in refilling they may be relaid and compacted in the same order to the satisfaction of the Architect & Bank. The trench shall be kept free of water. Shoring and timbering shall be provided wherever required. Excavation below water table shall be done after dewatering the trenches.

After the excavation of the trench is completed, hollows shall be cut at the required positions to receive the sockets of the pipes and these hollows shall be of sufficient depth to ensure that the barrels of the pipes shall rest throughout their entire length on the solid ground and that sufficient space is left for jointing to underside of the pipe joint. These socket holes shall be refilled with sand after jointing the pipe.

Where the pipe line or drain crosses an existing road, the road crossing shall be excavated half at a time, the second half being commenced after the pipes have been laid in the first half and the trench refilled. Necessary safety measures for traffic, as directed, shall be adopted. All types of pipes, water mains, cables etc., met within the course of excavation shall be

carefully protected and supported. Care shall be taken, not disturb the electrical and communication cables.

2.3 **Laying of pipes and specials:**

Before being laid, the pipes shall be examined to see that there are no cracks or defects, as described in para 1.7.1. above. Subject to the approval of the Architect & Bank, the damaged portion of the cracked pipe may be cut at a point not less than 15 cm beyond the visible extremity of the crack.

The pipe shall be thoroughly cleaned of all dust and dirt and special care shall be taken to clean the inside of the socket and outside of the spigots.

The pipes shall be lowered into the trench by means of suitable pulley blocks, shear legs, chains, ropes etc. In no case the pipes shall be rolled and dropped into the trench. After lowering, the pipes shall be so arranged that the spigot of one pipe shall be carefully laid central to the socket of the next pipe, and pushed to the full distance that it can go. The pipe line shall be laid to the levels required. Specials shall also be laid in their proper position as stated above.

Where so directed, the pipes and specials may be laid on masonry or concrete pillars. The pipe laid on the level ground, shall be laid with socket facing the direction of the flow of water. In all other cases, the sockets shall be laid facing up hill.

Any deviation either in plan or elevation less than $1\frac{1}{4}$ degree shall be effected by laying the straight pipes round a flat curve, of such radius that minimum thickness of lead at the face of the socket shall not be reduced below 6mm or the opening between spigot and socket increased beyond 12mm at any point. A deviation of about $2\frac{1}{4}$ degree can be affected at each joint in this way. At the end of each day's work, the last pipe laid shall have its open ends securely closed with a wooden plug to prevent entry of water, soil, rats and any other foreign matter into the pipe.

Cement concrete thrust blocks of suitable design as approved by the Architect & Bank shall be provided at 45 degrees and 90 degrees bends of the pipes and also at places where there is likelihood of thrust so as to withstand the dynamic and static forces developed due to water in the pipe line. The thrust blocks shall be made after the joints have been caulked with lead.

2.4 **Lead caulked joints:**

2.4.1. **Lead caulked joints with molten lead:**

This type of lead chalking is generally done in providing joints in water but not in case of wet conditions.

a. Materials : Pig lead and spun yard.

Pig lead shall be of uniform quality, clean and free from foreign materials. It shall be of uniform softness and capable of being easily caulked or driven. It shall conform to I.S. 782 – 1978 for caulking lead.

Spun yarn shall be of clean hemp and of good quality. It shall be soaked in hot coal tar or bitumen and cooled before use.

The approximate depth of pig lead for various diameters of C.I. pipes and specials shall be given below with a tolerance of plus or minus 5 percent.

Nominal size of pipe mm (1)	Lead per joint Kg (2)	Depth of lead joint mm (3)
80	1.8	45
100	2.2	45
125	2.6	45
150	3.4	50
200	5.0	50
250	6.1	50
300	7.2	55
350	8.4	55
400	9.5	55
450	14.0	55
500	15.0	60
600	19.0	60
700	22.0	60
750	25.0	60

Note:

1. The quantity of lead given in the table are on average basis and a variation of 10 percent is permissible.
2. Before pipes are jointed on large scale, three or four sample joints shall be made and the average consumption of lead per joint shall be got approved by the Engineer-in-charge.

Just sufficient quantity of spun yarn shall be put so as to give the specified depth of lead.

b. Jointing:

Preparing the joint: The interior of the socket and exterior of the spigots shall be thoroughly cleaned and dried. The spigot end shall be inserted into the socket right upto the back of the socket and carefully entered by two or three laps of treated spun yarn, twisted into ropes of uniform thickness, well caulked into the back of the socket. No piece of yarn shall be shorted than the circumference of the pipe. The jointed pipe line shall be at required levels and directions.

Leading: The leading of pipes shall be made by means of ropes covered with clay or by using special leading rings. The lead shall be melted so as to be thoroughly fluid and each joint shall be filled in one pouring.

The following precautions shall be taken for melting lead:

- a. The pot and the ladle in which lead shall be put shall be clean and dry.
- b. Sufficient quantity of lead shall be melted.
- c. Any scum which may appear on the surface of the lead during melting shall be skimmed off.
- d. Lead shall not be overheated, as it is not desirable to overheat it.

Caulking: After the lead has been run into the joint, the lead shall be thoroughly caulked. Caulking of joints shall be done after a convenient length of the pipes has been laid and leaded. The leading ring shall first be removed and any lead outside the socket shall be removed with a flat chisel and then the joint chalked round three times with caulking tools of increasing thickness and hammer 2 to 3 kg weight. The joints shall not be covered till the pipe line has been tested under pressure though the rest of the pipe line should be covered upto prevent expansion and contraction due to variation in temperature.

- 2.4.2. Lead caulked joints with lead wool yarn: This type of lead caulking is generally done when it is inconvenient or dangerous to use molted lead for joints, for example in cases such as inverted joints or in wet trenches or in exceptional cases. In such cases, the joints shall be made with lead wool or yarn. Caulking with lead, wool or yarn shall however be carried out, only after detaining the prior permission of Architect & Bank in writing.

Materials:

Lead wool or yarn and spun yarn:

Sub para (a) materials of para 1.7.4.1. shall apply except that the approximate weights and depths of lead wool or lead yarn required for each joint of various dia of C.I. pipes and specials shall be as given in the following table. Just sufficient quantity of spun yarn shall be put so as to give specified depth of lead wool.

Diameter of pipe in m.	Wt. of lead wool or lead yarn in Kgs.	Depth of lead wool or lead yarn in mm.
80	0.80	19
100	0.90	19
125	1.25	20

150	1.60	23
200	2.05	23
250	2.95	25
300	3.50	25
350	4.65	29
400	5.70	31
450	6.70	32
500	8.30	33
600	10.00	35
700	11.80	36
750	13.60	38
800	15.40	40
900	16.80	40

An allowance of five percent variation in the specified weight and depths shall be permissible.

Jointing:

The spun yarn shall be first inserted and caulked into the socket as described under jointing with pig lead. Lead wool or yarn shall then be introduced in the joint in strings not less than 6mm thick and the caulking shall be repeated with each turn of lead wool or yarn. The whole of the lead wool or yarn shall be compressed into a dense mass. The joint shall then be finally finished flus with face of the socket.

2.4.2. **Testing of joints:**

Para 1.1.6 shall apply.

2.5 **REFILLING OF EXCAVATED EARTH IN TRENCHES:**

The excavated earth shall be spread in layers of 200mm thickness and shall be compacted after proper watering. Initially, only thin filling shall be done, such that the joints remain completely open for working. Rest of the filling shall be done in the same manner, after the line is satisfactorily tested. The excavated material such as brick bats, asphalts cakes etc., shall be properly arranged in the top most layer of 23 cm only and shall be consolidated thoroughly. The excess materials shall be spread over the surrounding ground within a radius of 1.5 kilometers from the point of excavation at his own cost. If extra earth, for complete filling, will be necessary, the same shall be brought from other places by the contractor at his own cost, and the same shall be filled up into the trench as per the manner shown above.

2.5 **MEASUREMENTS:**

The lengths of pipes shall be measured complete as laid or fixed in running meter correct to a cm, excluding specials which shall be enumerated separately. The lengths of pipes shall however not include the portion of spigots within the sockets of specials and pipes at the joints.

Excavation, refilling, shoring and timbering in trenches, masonry or concrete pillars and thrust blocks, wherever required, shall not be measured separately by included in the item if so specified and provided for in bill of quantities, excavation in hard rock shall be measured and paid separately (on stack measurement basis after deducting 40% for voids).

Lead caulked joints shall be enumerated separately or may be clubbed with the item laying of pipes.

2.7. **RATE:**

The rate shall include the cost of all the materials and labour etc., involved in all the operations described above.

2.8. **MASONRY CHAMBERS:**

2.8.1. **General:**

All masonry chambers for stop cocks, shall be built as per supplied drawings.

2.8.2. **Excavation:**

The excavation for chambers shall be done true to dimension and levels as indicated on plans or as directed by the Architect & Bank.

2.8.3. **Bed Concrete:**

This shall be of cement concrete 1:3:6 (1 cement :3 fine sand : 6 graded stone aggregate 40mm nominal size) and 100mm thick. In case of chambers for stop cocks, thickness can be 75mm.

2.8.4. **Brick work:**

This shall be with 2nd class bricks (average crushing strength not less than 35 Kg/sqcm) with cement mortar 1:6 (2 cement :6 fine sand) and one brick thick.

2.8.5. **Plastering:**

Plastering not less than 12mm thick shall be done in cement mortar 1:4 (1 cement : 4 coarse sand). It shall be finished with a floating coat of neat cement for inner surfaces only.

2.8.6. **Surface Box:**

This shall be of cast iron, well made and free from casting and other defects. All sharp edges shall be removed and finished smooth. The shape and dimensions for surface boxes for stopcocks, water meters etc., shall be as given in drawings.

Drawing for this shall be supplied as a typical drawing and the item 1.8.1. to 1.8.5 to be checked to tally with drawings.

The C.I. Surface box shall be fixed on the top of masonry chamber in plain or reinforce cement concrete 1:2:4 (1 cement : 2 coarse sand: 4 grades stone aggregate 20mm, normal size).

The C.I. surface box shall be fixed on the top of masonry chamber in plain or reinforce cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm, normal size).

2.8.7. **Measurements:**

Masonry chambers shall be enumerated under the relevant items as per sizes.

2.8.8.

Rate:

The rate shall include the costs of all materials and labour involved in all the operations described above, including excavation in all soils, morrum, soft rock, boulders or decomposed rock, hard rock and disposal as directed. If so specified and provided for in bill of quantities the excavation in hard rock will be measured and paid for separately on stack basis after 40% deduction for voids.

B.

DRAINAGE:

SWR PVC SOIL AND WASTE PIPES:

B.1.1. All pipes shall conform to IS 13592-1992 and shall be of grade "B". These shall be sound, free from visible defects such as cracks or hair cracks etc.

The pipes shall be handled with sufficient care, to avoid damage to them.

B.1.2.

Laying of pipes:

The pipes shall be carefully laid to the alignments, levels and gradients shown on the plans and sections. The pipes between two manholes shall be laid truly in a straight line without vertical or horizontal undulations. The pipes shall be laid with socket up the gradient.

B.1.3.

Jointing:

Jointing shall be done with rubber ring and good quality lubricant for shafts and with solvent cement for drainage lines as per IS: 14735

B.1.4.

Testing of joints : Hydraulic tests:

The assembly of pipes and fittings shall be tested for water tightness pressure of 0.5mpa for a period of 15 minutes and there should be no leakage of any point.

B.1.5.

Refilling of trenches:

Relevant Para under water supply shall apply.

In case where pipes are not bedded on concrete, special care shall be taken in refilling trenches, to prevent the displacement and subsequent settlement at the surface, resulting in uneven surfaces and dangers to foundations etc. Initially, the back filling materials shall be packed by hand under and around the pipe and rammed with a shovel and light tamper. This method of filling will be continued upto the top of pipe. The refilling shall then rise evenly on both sides of the pipes and continued upto 60 cm above the top of pipes, so as not to disturb the pipes. No tamping should be done within 15 cm of the top of pipe. The remainder of backfill shall not be done until 7 days have elapsed for brick sewers and 14 days for concrete sewers, unless local conditions or materials are suitable for earlier placing of loads on the pipes. The tamping shall become progressively heavier, as the depth of the backfill increases.

B.1.6.

Measurements:

The lengths of pipes shall be measured in running meters nearest to a cm, as laid or fixed from inside of one manhole to the inside of the other manhole. The length shall be taken along the center line of the pipes, over all fittings such as bends, junctions etc., which shall not be measured separately.

Excavation, shoring, timbering, backfilling in trenches and cement concreting, wherever required, is clubbed with the item only if so specified and provided for in bill of quantities, excavation in hard rock will be paid for separately, based on stack measurement basis, after deducting 40% towards voids.

B.1.7. Rate:

The rate shall include the cost of all materials and labour involved in all the operations described above, including excavation in all soils, morrum, soft rock, boulders or decomposed rock, hard rock and disposal as directed. If so specified and provided for in bill of quantities the excavation in hard rock will be measured and paid for separately on stack basis after 40% deduction for voids.

B.1.8. S.W.Gully Trap:

- B.1.8.1. Gully traps shall conform to IS:651-1980. These shall be sound, free from visible defects, such as fire cracks or hair cracks. The glaze of the traps shall be free from crazing. They shall give a sharp clear note when struck with light hammer. There shall be no broken blisters.

The size of the gully trap shall be as specified and all dimensions will be as per drawing.

Each gully trap shall have one C.I. grating of square shape corresponding to the dimensions of inlet of gully trap. It will also have a water tight C.I. cover with frame, inside dimensions 300 x 200mm and the cover weighing not less than 2.72 Kg. The cover and frame shall be of sound and good casting and shall have truly square machined seating faces.

B.1.8.2. Excavation:

The excavation for gully traps shall be done true to dimensions and levels as indicated on plans or as directed by the Architect & Bank.

B.1.8.3. Fixing:

The gully trap shall be fixed on cement concrete foundation 600 x 600 cm square and not less than 10 cm thick. The mix for the concrete will be 1:5:10 (1 cement : 5 fine sand: 10 graded stone aggregate 40mm nominal size). The jointing of gully outlet to the branch drain shall be done similar to jointing of S.W. pipe as directed in 2.1.3.

B.1.8.4. Brick masonry chamber:

After fixing and testing gully and branch drains, a brick masonry chamber 300 x 200 (inside) in best quality locally available bricks of strength not less than 35 Kg/Sqcm in cement mortar 1:5 (1 cement : 5 fine sand) shall be built with a 10 cm. thick brick work round the gully trap from the top of the bed concrete upto ground level. The space between the chamber walls and the trap shall be filled in with cement concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stones aggregate 400mm nominal size). The upper portion of the chamber i.e., above the top level of the trap shall be plastered inside with cement mortar 1:4 91 cement : 4 coarse sand),

finished with a floating coat of neat cement. The corners and bottom of the chamber shall be rounded off as to slope towards the grating and or a hopper.

C.I. cover with frame 300 x 200mm (inside) shall then be fixed on the top of the brick masonry with cement concrete 1:2:4 (1 cement : 2 coarse sand: 4 graded stone aggregate 20mm nominal size and rendered smooth. The finished top of cover shall be left about 4 cm above the adjoining ground level so as to exclude the surface water from entering the gully trap.

B.1.8.5. Measurements:

The work shall be enumerated including excavation.

B.1.8.6. Rate:

The rate shall include the costs of all materials and labour involved in all operations described above, including excavation in all soils, morrum, soft rock, boulders or decomposed rock, hard rock and disposal as directed. If so specified and provided for in bill of quantities the excavation in hard rock shall be measured and paid for separately on stack basis after 40% deduction for voids.

B.1A.0 DROP CONNECTION:

B.1A.1. In cases where branch pipe sewer enters the manhole of main piper sewer at a level higher than the main sewer by more than 600mm, a drop connection should be provided. A typical drawing for drop connection shall be supplied to the contractor.

For 150 and 250mm main lines, if the difference in levels between the main – sewer water line (peak-flow-level) and the invert level of branch line is less than 60 cm, a drop connection may be provided within the manhole by giving a ramp. If the difference in level is more than 60 cm., the drop should be provided externally.

B.1A.1.1. The Excavation:

The excavation shall be done for the drop connection at the place where the branch line meets the manhole. The excavation shall be carried upto the bed concrete of the manhole and to the full width of the branch.

B.1A.1.2. Laying:

At the end of branch sewer line a stoneware “T” shall be fixed to the line, which shall be extended through the wall of the manhole by a horizontal piece of C.I.pipe to form an inspection or cleaning eye. The open end shall be provided with a chain and lid. The stone ware drop pipe shall be connected to the tee at the top and to the S.W.bend at the bottom. The bend shall be extended through the wall of the manhole by a piece of C.I. pipe, which shall discharge into the channel. Necessary channel shall be made with cement concrete 1:2:4 (1 cement : 2 fine sand : 4 graded stone aggregate 20mm nominal size) finished smooth (with a floating coat of neat cement), to connect the main channel. The joints between S.W. pipes and C.I./S.W. fittings shall be cement jointed. The joint between S.W. tee and S.W. branch line shall be made with cement mortar 1:1 (1 cement :1 fine sand) as per para B.1.3. for S.W.pipes. The exposed portion of the drop connection shall be encased all round with a single brick work in C.M. 1:4 and pointed. The holes made in the walls of the manholes shall be made good with brick work in cement mortar 1:6 (1 cement : 6 coarse sand) and plastered

with cement mortar 1:4 (1 cement : 4 coarse sand) on the inside of the manhole wall. The excavated earth shall be backfilled in the trench in level with the original ground level.

B.1A.2. Measurements:

Prop connections shall be enumerated. The “depth” beyond 60 cm shall be measured in running meters correct to a cm under relevant items.

B.1A.3. Rates:

The rates shall include the cost of labour and materials involved in all the operations described above but excluding the cost of excavation and refilling.

B.3. MANHOLES, INSPECTION CHAMBERS, STORM WATER GULLIES ETC.

B.3.1. Inspection Chambers:

B.3.1.1. Where depth of sewer is less than 1.5m rectangular chambers shall be used having size as specified. Usual sizes are 450 x 900 or 600 x 900. These shall be constructed in the sewer line at such places and levels and dimensions as indicated on the drawing. Sizes specified shall be clear internal dimensions of the chamber.

B.3.2. Manholes:

B.3.2.1. Where depth of sewer exceeds 1.5m circular conical manholes shall be provided. Various types and sizes of manholes are specified for different depths. Typical drawing of various types of manholes shall be supplied to the contractors. In the absence of such drawings the standard drawings of the MCH sewerage department of local body if available shall be followed.

B.3.2.2. Manholes and inspection chambers are provided on roads or where heavy vehicular traffic is expected are provided with “heavy duty” C.I. airtight frame and cover.

For those built on foot paths carriage drives and cycle tracks “medium duty” covers are provided. For locations within domestic premises or areas not subjected to wheel traffic loads they shall be provided with “light duty” covers.

B.3.3. Construction of manholes, Inspection chambers and gullies:

B.3.3.1. Excavation:

This shall be done to dimensions and levels on the drawing.

B.3.3.2. Bed concrete:

Base of the manhole shall be constructed in P.C.C. 1:4:6 may fulfil this as specified, and of thickness as specified and shown on drawings or as directed.

B.3.3.3. Brick work:

Brick work shall be in CM 1:6 constructed with second class bricks of crushing strength not less than 35 Kg per sqcm. Brick masonry in arches and arching over the pipes shall be in CM

1:3. Walls shall be generally built in 230mm thickness for inspection chambers and manholes upto a depth of 2.1m and 350mm thick for depths over 2.1m. However the exact thickness shall be based on structural design and shall be specified by the Architect & Bank.

B.3.3.4 Plastering:

Walls of manholes shall be plastered inside with 12mm thick cement plaster 1:4 and finished smooth with a floating coat of neat cement. Where ground water table is high external surfaces of manholes shall also be plastered in CM 1:4.

B.3.3.5. Vatas:

75mm fillet shall be made with CM 1:3 all round the external joints between the bed concrete and brick masonry walls for manholes.

B.3.3.6. Benching:

Channels and benching inside the manhole or inspection chamber shall be done in CC 1:2:4 and rendered smooth with neat cement. Depth of channels and benching shall be as per the table given below:

Size of drain in mm	Top of channel at center in cm. above bed concrete	Depth of benching at side walls in C.M. above bed concrete.
100	15	29
150	20	30
200	25	35
250	30	40
300	35	45

B.3.3.7. P.C.C.Cap:

PCC M 150 cap of 150mm thickness shall be provided on top of manholes for fixing the manhole frame.

B.3.3.8. Footrests:

Footrests shall be of C.I. rings, weighing 5.41 Kg each and made up of 20mm dia M.S. square of round bars, as specified. These shall be embedded in 1:3:6 cement concrete and properly secured. Footrests shall be placed 300mm apart vertically and 375mm horizontally in staggered fashion. First footrest shall be 450mm below top. Foot rests shall be painted with coal tar or bituminous paint and the portion embedded shall be painted with thick cement slurry before fixing.

B.3.3.9. Manhole frames and covers:

Approximate weights for various dimensions of frames and covers of various duties shall be as specified in the respective items.

Covers shall have raised chequered design on the top surface to provide adequate non slip grip. The cover shall be capable of easy opening and closing, and it shall be fitted in the frame in a workmanlike manner. Covers shall be gas and water tight. Size of the cover shall

be the clear internal dimensions of frame. 2½% variation in weights shall be permissible. Covers and frames shall be coated with a black anticorrosive paint of bituminous composition. The coating shall be smooth and tenacious. The covers shall be so fixed as to be flush with ground surface. After completion, the manhole covers shall be sealed by means of grease.

B.3.3.10. Testing:

Manhole after it is raised above highest expected sub soil water level in the monsoon, shall be tested for water tightness. The mouths of all pipes entering the manhole shall be suitably plugged with brick masonry or wooden or any other type of plug. Manhole under test shall then be filled with water upto general sub-soil water level and the level observed for one hour. If the level does not drop by more than 50mm in one hour, it shall be deemed as water tight. During testing the pit around shall be kept free of water, and contractor shall observe the places where leakages takes place and take steps to correct the same.

B.3.4. Measurements:

Manholes, Inspection Chambers, gullies etc., shall be enumerated under relevant items in the schedule of quantities. Depth shall be measured from top of C.I. cover to the invert level of channel. Depth shall be measured to correct centimeter. The extra depths shall be measure as an extra, over the depth specified under enumerated item, and paid for running meter, under a separate item, following the main item.

B.3.5. Rate:

The rate shall include the cost of materials and labour involved in all operations from (2) to (9) under B.3.3. above, upto specified depth in the item. Payment for extra depths shall be paid separately under relevant item. Excavation and refilling is clubbed with the item of manhole Para 2.8.8 of “Water Supply” shall apply. If the duty of the cover in the item is changed during execution by the Architect & Bank, amount due to difference in weight of the cover shall be paid extra or deducted, as the case may be.

B.4.0. SOIL, WASTE, RAIN WATER, VENT AND ANTI-SIPHONAGE PIPES AND FITTINGS:

B.4.1. All soil, waste, rain water, vent and anti-siphonage pipes and fittings used within sunken floor areas or within plumbing shafts vertical run, shall be send cast iron socket and spigot type pipes conforming to IS 1729 – 1964 or its subsequent revision. All cast iron pipes and fittings shall be of the best approved Indian make of soil variety and free from flaws, air bubbles, cracks, sand-holes and other defects and truly cylindrical and uniform in thickness. They shall not be brittle, but shall allow for heavy cutting, chipping and drilling and shall not be less than the diameter, mentioned in the schedule of quantities, and shall be of the largest length available, and shall be fixed against the wall with special “U” clamps – 25mm wide, 3mm thick and hot dip galvanized, by means or round headed flat nails on brickwalls.

B.4.2. Jointing shall be carried out with molten lead. The spigot of the pipe or fitting must be forced well home into socket of next pipe or fitting (as may be the case) and must be centered, so that the joint may be of even thickness around. Atleast, one complete lap of clean white hemp spun yarn without being forced through the joint. As many laps as may be needed, to leave a space of not less than 25mm for the lead shall then be placed in the joint and caulked tight. The joints shall then be run with molten lead in sufficient quantity so that

after being caulked, the lead may project about 1/8” beyond the face of the socket, against the outside of the spigot, but must be flush with the outside edge of the socket.

- B.4.3.A. The joints, if so specified in the respective items, shall be done in cement mortar in place of lead. In case of cement jointing, the joints shall be done as specified in b.5.2, but after the hemp soaked in thick cement slurry is forced in the socket for one complete lap, a stiff mixture of cement mortar in proportion 1:1 (1 part of cement to 1 part of clean fine sand) is filled in the remainder of the socket. When the socket is filled, a fillet shall be formed round the joint, with a trowel and finished smooth cured well.
- B.4.3.B. Clean outs at the head of C.I. S/S horizontal pipes running under the floor shall be of cast brass screwed in type. Floor and wall cleanouts shall be of cast brass screwed type. The connecting pipes shall be G.I. threaded coupling to suit the cleanout with lead caulked joint.
- B.4.4. Inspection chambers, gully traps, etc., within the building shall be of approved make cast iron chambers with bolts, nuts to close the cover, all to be fabricated as per actual requirement.
- B.4.5. Supports, pedestals and base for inspection chambers, gully traps and pipes shall be in 1:2:4 cement concrete mix.
- B.4.6. Pipe sleeves and inserts, etc., through RCC walls either external or internal shall be of C.I. or M.S. provided with water bar flange.
- B.4.7. During installation, open ends of pipes shall be plugged with wood cut into required shape and gunny bags and to be maintained to be free from dirt.
- B.4.8. G.I. waste pipes and fittings shall be of “C” class I.T.C. or equivalent with G.I.a unions, tall pieces reducers and connections to be provided between joints with either lead or C.I. pipes.
- B.4.9. The sizes of branch waste pipe for different fittings shall be as follows:
- | | | |
|----------------|---|--------|
| Lavatory Basin | - | 32 dia |
| Urinal | - | 40 dia |
| Sink | - | 40 dia |
| Nahani trap | - | 75 dia |
- B.4.10. W.C. pan connectors shall be to suit the requirements as per drawing, with 40mm dia vent horn for connection to the antisiphonage pipe and with pan connector of C.I. or lead.
- B.4.11. Connection to the sewage or storm water collection sumps to be perfectly water tight.
- B.4.12. Rain water flashing shall be with C.I.dome shape grating and extension piece as specified in the item.
- B.4.13. All rainwater pipes and fittings shall be soil type variety conforming to I.S. 1729 – 1964 or equivalent. This shall apply to pipes outside buildings or within the buildings or for separate shafts.

- B.4.14. The floor traps for toilet blocks shall be of cast iron with C.I./brass grating, bolted down design. The traps shall be ‘P’ type and of dimensions as given in table 26 of IS 1729 – 1979 (clause 7.1).
- B.4.15. Where toilet slabs are sunk, the floor trap shall be of 100 x 75mm heavy duty type with C.I. “P” trap and C.P. brass grating of bolted down design.
- B.4.16. Bathroom C.P.grating shall be of bolted down design out of heavy cast brass, with chromium plating of best approved standard.
- B.4.17. Cast iron grating shall be flat with perfect edges and of best quality procurable and of the specified width and thickness and in the available lengths.
- B.4.18. Spigotted and socketed 75mm, 100mm and 150mm C.I. pipes shall be of heavy pattern for the portions below the floor and embedded and laid over 150mm cement concrete 1:2:4 with width of concrete being

For 75mm dia pipes	-	320mm wide
For 100mm dia pipes	-	400mm wide
For 150mm dia pipes	-	450mm wide
For 200mm dia pipes	-	600mm wide.

The pipes shall be laid to a slope of minimum 1 in 100 and preferably to 1 in 50, and connected to the drain. On no account should lime or lime concrete come in direct contact.

B.4.19 **Measurements:**

All pipes shall be measured along their lengths, including length over the fittings and be paid under relevant items. Alternatively, straight pipes shall be laid measured along their lengths along centre line, excluding length, over fittings and fittings shall be enumerated and paid per number. Whatever method of measurements is to be followed for the to item in the schedule, the description of respective items in the schedule shall be worded accordingly. Traps, clean outs etc., shall be enumerated separately and paid separately per number.

B.4.20. **Rate:**

The rate shall include the costs of all materials and labour involved in all the operations described above, including excavation in all soils, morrum, soft rock, boulders or decomposed rock, hard rock and disposal as directed. If so specified and provided for in bill of quantities the excavation in hard rock will be measured and paid for separately on stack basis after 40% deduction for voids.

B.5. **ECO – DRAIN PIPES :**

Nu-drain pipes are made as per IS 15328 and marked with ISI mark. These pipes are available in different stiffness classes as given in the table below. Pipes up to 250mm sizes are available with plain and socketed ends. Pipes supplied with socket ends are available both in solvent weld and rubber ring. Separate coupler with unique design of click ring and rubber-sealing rings are available up to 250mm sizes which makes the system absolutely

watertight. 315 and 400mm size pipes are supplied only with plain end and solvent weld type coupler. The pipes are available in 3m and 6m lengths.

Dimensions and Stiffness class of U-Drain pipes as per – IS 15328

Nominal Ring Stiffness (KN/M ²)	2	4	8
SDR	51	41	34
OD mm (D)	Wall thickness in mm (t)		
110	-	-	3.2+0.5
125	-	3.2+0.5	3.2+0.7
160	3.2+0.5	4.0+0.6	4.7+0.7
200	3.9+0.6	4.9+0.7	5.9+0.8
250	4.9+0.7	6.2+0.8	7.3+1.0
315	6.2+0.8	7.7+1.0	9.2+1.2
400	7.9+1.0	9.8+1.2	11.7+1.4

Dimensions and Stiffness Class of Eco-Drain Pipes as per IS:16098

Nominal Ring Stiffness SN (KN/M ²)	4	8
OD mm (D)	Wall thickness in mm (t)	
110	-	3.50
160	4.30	---
200	5.60	---
250	6.50	---
315	8.00	---

Eco – drain pipes are not solid wall pipes but have a unique wall structure i.e with a number of “holes” in the wall thickness in longitudinal direction. As a result, the eco-drain pipes are noticeably lighter and less expensive than any existing PVC pipe of similar stiffness and many times lighter than a concrete pipe, with equivalent load carrying capacity. Because of numerous advantages these pipes are widely accepted and used in several European countries. These pipes are available in 110mm to 315mm sizes and meet the requirements of International Standards, (comply to IS-15328) and have equivalent stiffness and flexibility in combination with a weight reduction from 10% to 35%, depending on size. These pipes are interchangeable with solid wall pipes and are compatible with regular PVC fittings. They are made available in different stiffness classes. In addition to UPVC pipes, PE pipes in 63 to 450mm as per IS 14333 are also available.

6. SANITARY FIXTURES AND FITTINGS:

6.1 Unless otherwise specified, the sanitary fixtures shall conform to following specifications:

6.1.1. Water closets (European type) shall be of vitreous china of approved pattern, quality and colour. The closet shall be fixed with C.P.brass screws in floor for floor mounted type, and

mounted on C.I. chair brackets with bolts for wall mounted type and shall be provided with solid plastic seat and cover with chrome-plated pillar brass hangers as specified.

- 6.1.2. Indian pattern shall be of similar quality of specified above. The pan shall be 675/575mm in length with “S” or “P” trap of materials same as that of the pan. The W.C. with the trap shall be fitted and fixed in position and built round solid with brick and cement, to required level after all connections are made. The finished floor of the water closet shall be of 25mm below the level of the room or passage in front of it.
- 6.1.3. Both types of closets should conform to the requirements of IS 771 (Part I): 1979 for glazed vitreous china sanitary appliances.
- 6.1.4. The flushing cisterns shall conform to the requirements of I.S.774 – 1984. High level cisterns shall be of cast iron, unless other specified. Low level cisterns shall be of the same material as the water closet. The cisterns shall be mosquito proof and shall fulfill the requirements of the local authority.
- 6.1.5. The flush pipes shall be 32mm dia and of lead if concealed, and if exposed brass/C.I.
- 6.1.6. Where flush valves are specified, there shall be of the best approved quality procurable with C.P. control valve and C.P. flush pipe. Prior approval of Architect shall be obtained before placing orders.

7. **MODE OF MEASUREMENT:**

- 7.1 All drain pipes shall be measured in linear lengths along the centre line of the drainage line laid. Deductions shall be made for chambers and fittings lengths etc. The rate shall include all work as specified in the respective items.
- 7.2. Stoneware or cast iron, bends, junctions, sewer traps etc., shall be measured in numbers and paid separately, only if item for pipe works does not specifically include “Fittings/Fixtures”.
- 7.3. All cast iron spigots and sockets or flanged pipes for water supply, shall be measured in linear lengths along the centre line of completed work. Deductions shall be made for fittings lengths if fittings/ specials etc., are provided for separately in the schedules/bill of quantities. The rate shall include lead caulking or jointing with nut and bolts, rubber gaskets, etc., complete as specified in the respective items.
- 7.15. Same rate shall be applicable for pipes of same size and material laid in any building at any level or floor.
- 7.4. Cast iron fittings such as spigot and socket fittings, flanged fittings like tees, bends, tapers, cross etc., shall not be measured in numbers and paid for separately unless otherwise provided for in the bill of quantities/schedules.
- 7.5 The rock cutting shall be measured in cum of the stacks of excavated rock. Deduction for voids will be 40% of the gross stack volume. Only the rock which is removed by chiseling or blasting etc., shall be measured for this item of work, boulders shall not be considered as a rock. The excavated rock will become the owner’s property.

- 7.6 All cast iron pipes, such as soil, waste, vent and rain water shall be measured in linear lengths along the centre line, to nearest cm as completed including length over fittings. The rates shall include all joints and clamps, etc., as specified in the respective items.
- 7.7 Length over cast iron fittings, for soil, waste, vent or rain water pipes like single or double waves of various degrees, bends, cowls etc., shall be measured in meters, as extra over the item for 7.6 above, if so provided for in the schedule/bill of quantities. Otherwise, the rate for these shall be same as for respective pipe work.
- 7.8 Plan cement concrete for supports and for encasement or bedding etc., shall be measured as specified in the respective items in the schedule of quantities.
- 7.9 Lead pipes shall be measured in linear length and shall be of weights as per specifications of the respective item in installation work. The rate shall include making of necessary offsets, bends etc.
- 7.10 All sanitary fittings and fixtures shall be measured in numbers, only if so provided in the Schedule/bill of quantities, and the rate shall include all the work specified and described under item in the schedule of quantities.
- 7.11 All G.I. pipes shall be measured in linear lengths along the centre line of the pipe, including G.I. fittings. The rate for pipe line upto and including 50mm dia shall be inclusive of all G.I. fittings. In the case of pipe line of dia above 50mm dia G.I. fittings will be measured in nos., pipe lengths will be measured after deducting the lengths over fittings from linear measurements only if provided in the schedule/bill of quantities. The rates, in all cases, will be inclusive of all work as specified in the respective items. Lengths over valves shall be excluded.
- 7.12 All peet valves, ball valves, non-return valves, sluice valves, pressure reducing valves etc., shall be measured in numbers after excluding them from linear measurement, and paid for separately.
- 7.13 The diameters of pipes and fittings mentioned in the specification are the inside nominal diameters in all cases, unless otherwise stated. H.D P.E. pipes shall be specified as outside diameter and class.
- 7.14 In case fittings of C.I., G.I or stoneware of unequal bore, the largest bore shall be measured if paid separately.
- 7.15 Same rate shall be applicable for pipes of same size and material laid in any building at any level or floor.

D. **TOOLS AND MATERIALS AND STORAGE:**

- a. The contractor at his own cost and charge shall provide all materials, tools, tackles, scaffolding, labour and water, necessary for execution and completion of the whole work in all respects.

- b. The contractor shall pay the fees for testing the materials and bear the costs of the samples, and as well of packing and despatching/delivering in the respective laboratories/test houses, if tests are directed by the Architects, local authorities or any other statutory authorities.
- c. The contractor at his cost shall obtain, from time to time various permissions and the completion certificates as per rules of all local and statutory authorities.
- d. The contractor shall arrange proper and adequate storage facilities at site for all materials.
- e. Any materials, brought at site, shall not be removed without the written authority of the architects/Bank. Materials either damaged or rejected shall be immediately removed from the site. Materials, paid in the interim bills as on site but not used, shall be the property of the Bank and the contractor only shall be liable for any loss or damage thereto.
- f. All the brackets and hangers for pipes shall be fixed to the walls or RCC, using “Dash” fasteners, wherever necessary.
- g. Surplus material from the site shall be carted away by the contractor without any cost to the Bank. On complete of work, storage “space” provided to the contractor shall be handed over to the Bank, clear and fit for occupation.

TECHNICAL SPECIFICATIONS – LIFT WORKS

The supply and erection of lift shall conform to the latest lift act in force and modern lift practice in all respects. Technical specifications for various items of work given in the Bill of Quantities are to be read in conjunction with the specifications given below. Each item of work shall be executed according to the relevant Indian Standard (IS) specifications.

Document Number	Standard Title
<u>IS 9878:1981</u>	Safety gears and governors for electric passenger and goods lifts
<u>IS14665:Part1:2000</u>	Electric Traction Lifts-Part1:Guidelines for Outline Dimensions of Passenger, Goods, Service and Hospital Lifts
<u>IS14665:Part2:Sec1and2:2000</u>	Electric Traction Lifts - Part 2 : Code of Practice for Installation, Operation and Maintenance- Section1:Passenger and Goods Lifts -Section2:Service Lifts
<u>IS14665:Part3:Sec1and2:2000</u>	Electric Traction Lifts-Part3:Safety Rules- Section1:Passenger and Goods Lifts-Section2: Service Lifts
<u>IS14665:Part4:Sec1to9:2001</u>	Electric Traction Lifts - Part 4 : components - Section 1 : Lifts Buffers - Section 2 : Lift Guide Rails and Guide Shoes - Section 3 :Lift Car frame, Car, Counter weight and Suspension-Section4: Lift Safety Gears and Governors-Section5
<u>IS14665:Part5:1999</u>	Electric Traction Lifts-Specification-Part5: Inspection Manual
<u>IS 2365:1977</u>	Specification for Steel Wire Suspension Ropes for Lifts, Elevators and Hoists
<u>IS4289:Part1:1984</u>	Specification for Flexible Cables for Lifts and Other Flexible Connections- Part1 : Elastomer Insulated Cables
<u>IS4289:Part2:2000</u>	Flexible Cables for Lifts and Other Flexible Connections-Specification- Part2:PVC Insulated Circular Cables
<u>IS 8151:1976</u>	Single-speed three-phase induction motors for driving lifts
<u>IS 9228:1979</u>	Specification for Mono Seat Chairs for Chairlifts Used in Winter Sports

Guarding and protecting hoist way shall be responsibility of the lift contractor from the date of commencement of work at site.

Variable Voltage, Variable Frequency(V3F)

Level ling device: As per 2.31.1 of IS1860-1980

Terminal buffers: Terminal buffers shall be installed as a means of stopping the car and counter weight at the extreme elimits of travel and shall be spring or oil buffers. Buffers in the pit shall be mounted on steel channels or suitable concrete blocks.

Guide: Steel 'Tee' section guides shall be provided for the car and counter - weight. At least the guides for the car should be machined.

Ropes: Hoisting suspension ropes as per IS14665(Part4/sec.1to9):2001

Reverse phase and phase: Reverse phase & phase failure relay shall be provided to protect the machine against phase reversal and failure of any phase.

Miscellaneous: All electrical wiring shall have flame resisting moisture proof insulation and will be run in heavy gaugemetal conduit/ casing. The trailing cable between the car and lift well will be multi core type designed for lift services and will have flame resisting moisture proof covering. Cables should conform to relevant IS amended up to date. All wiring and earthing etc. shall conform to IE rules and regulations.

TECHNICAL PARAMETERS FOR LIFT

Specification(A): STREAM/20P/8S/SS/1MPS/MRL (Deeper Cabin)	
PRODUCT	: GeN2-Stream_MRL-1MPS
DETAILS	: GeN2-Stream_MRL-1MPS
CAPACITY (kgs)	: 1360 Kg, 20 persons.
SPEED (mps)	: 1 MPS
Units	: 1 No.s
RISE (m)	: 23.1m apx.
STOPS	: 8 Stops With (all opening on the same side) (B2,B1,G,1,2,3,4,5,6)
CONTROLLER TYPE	: LVA/ACD
DRIVE	: VF Regenerative (Closed Loop)
POWER SUPPLY	: 400/415 Volts (3 Phase AC)
OPERATION	: Full collective operation
CAR GROUP	: Two car (Duplex)
MACHINE	: PM Gearless
TRACTION MEDIA	: Flat Coated Steel Belt
CAR FINISH	: <ul style="list-style-type: none"> • Rear Mid Panel = Stainless Steel #4(Hairline) • Rear Corner Panels = Stainless Steel #4(Hairline) • Side Mid Panels = Stainless Steel #4(Hairline) • Side Corner Panels = Stainless Steel #4(Hairline) • Front Panels = Stainless Steel #4(Hairline)
FALSE CEILING TYPE	: CD61 type false ceiling
FALSE CEILING FINISH	: Stainless Steel #4(Hairline)
VENTILLATION	: Cross flow fan
HAND RAILS	: Stainless Steel Mirror Finish Handrails on rear car panels
FLOORING	: GRINITE BY CUSTOMER SCOPE
CAR DOOR FINISH	: Stainless Steel #4(Hairline)
LANDING DOORS FINISH	: Stainless Steel #4(Hairline)
PIT DEPTH	: 1600 mm
OVERHEAD	: 4500 mm (Minimum Required)
HOISTWAY DIMENSIONS (W x D - mm)	: 2050 mm W x 3000 mm D (Available Measurements After Plastering)
CAR DIMENSIONS (W x D x H - mm)	: 1300 mm W x 2400 mm D x 2400 mm H

CAR & HOISTWAY DOOR TYPE	: Telescopic Opening Doors
DOOR OPENING (W x H - mm)	: 1100 mm W x 2100 mm H
DOOR OPERATOR	: DC Door Operator
COP	: FLAT17 COP FOR GEN2 STREAM LITE in Stainless Steel #4(Hairline)
CAR POSITION INDICATOR	: Monochrome LCD-Blue Background & White font
HALL FIXTURES	: O2000
HALL FIXTURE FACE PLATE	: Stainless Steel #4(Hairline)
HALL BUTTON ARRANGEMENT	: LCD Monochrome type
STANDARD FEATURES	: Anti-nuisance Car Call Protection Independent Service (for Duplex only) Overload Device Nudging Emergency Firemen's Service Emergency Car Light Unit Infrared Curtain Door Protection Door Time Protection Emergency Alarm Button Extra Door Time of Lobby & Parking Door Open/Close Button Manual Rescue Operation Belt Inspection Drive Auto Fan Cut Off
OPTIONS INCLUDED	: Automatic Rescue operation, Intercom, Smooth Stops Two Hours Fire Rated Doors New Elevator Code IS 17900

Product line item 300	E3
Capacity / Number of passengers	1360 kg / 20
Speed	1.0 m/s
Number of Stops / Entrances	9 / 9 (B2, B1, G, 1, 2, 3, 4, 5,6)
Main stop	3 (G)
Travel height	23.1 m
Machine room	Machine room less
Headroom	4500 mm
Pit depth	1400 mm
Shaft dimensions W x D	2100 mm x 3000 mm
Building tolerance	-25 mm / +25 mm
Shaft Wall	Concrete floors+bricks
Car dimensions W x D x H	1250 mm x 2400 mm x 2100 mm
Car Door size W x H	900 mm x 2000 mm
Car Door Type	Door center opening, 2 panels
Landing door fire protection classification	IS17518-2 based on equivalent EN81-58 E120 certification [Two hours fire rated]
Counterweight location	On the left side
Car access sides	1
Door drive	V3F Drive
Drive and control	Full Collective control - Simplex
Controller position	In the right door jamb (LDU)
Controller location	Landing at floor 8 on side 1
System earthing	TN-S (3L+PE+N)
3- Phase power supply	415 V 50 Hz
1- Phase power supply	230 V 50 Hz
Number of trips per hour	120
Installation method	Scaffoldless with hoisting device
Inverter type	VAF0xx REGEN
Machine Type	Permanent Magnet (PM)
Communication Options Selected	Passenger release alt. landing Intercom TAI 1; 3 ways Remote Monitoring Device Alarm by horn in hoistway
Control options Selected	Automatic Releveling Automatic return to main floor Door pre-opening Auto.door closing final time Position indicator car 1 Travel direction indicator car Auto. Rescue Device (ARD) Fire emergency switch
Maintenance period	12 months

Decoration line	Navona
Ceiling type	Round Spot
Car ceiling finish	Stainless Steel AISI441 Mercury Hairline
Car lighting	LED
Car Front Finish	Stainless Steel AISI441 Mercury Hairline Front Cathedral
Side wall	Stainless Steel AISI441 Mercury Hairline
Rear wall	Stainless Steel AISI441 Mercury Hairline
Floor	Artificial Granite Galaxy Black
Skirting finish	Aluminum Painted R9006 Flush
Fixtures	FI GS 120 - Touch Sensitive Glass Buttons
Fixtures	FI GS 120 - Touch Sensitive Glass Buttons Half Height Glass White Glass Display Standard resolution matrix Display Glass Height 0 mm
Button_Description	Touch sensitive glass buttons Glass
Landing Operating panel version	Linea 120 Touch Dot Matrix Low resolution Glass White Glass Display Touch Screen Glass Surface vertical in wall Yes
Mirror	Half Height with Width Equivalent to Rear Center Panel
Handrail	Straight Stainless Steel AISI304 Mercury Hairline Back Wall
Car door	Stainless Steel AISI441 Mercury Hairline
Car door sill	Aluminium
Landing door	Stainless Steel AISI441 Mercury Hairline (8 door(s))
Landing door frame dimensions	60 mm x 60 mm
Car Fan Position	Front and rear

Specification(B): STREAM/20P/8S/SS/1MPS/MRL(Wider Cabin)	
PRODUCT	: GeN2-Stream_MRL-1MPS
DETAILS	: GeN2-Stream_MRL-1MPS
CAPACITY (kgs)	: 1220 Kg, 18 persons.
SPEED (mps)	: 1 MPS
Units	: 1 No.s
RISE (m)	: 23.1m apx.
STOPS	: 9 Stops With (all opening on the same side) (B2,B1,G,1,2,3,4,5,6)
CONTROLLER TYPE	: LVA/ACD
DRIVE	: VF Regenerative (Closed Loop)
POWER SUPPLY	: 400/415 Volts (3 Phase AC)
OPERATION	: Full collective operation
CAR GROUP	: Two car (Duplex)
MACHINE	: PM Gearless
TRACTION MEDIA	: Flat Coated Steel Belt
CAR FINISH	: <ul style="list-style-type: none"> • Rear Mid Panel = Stainless Steel #4(Hairline) • Rear Corner Panels = Stainless Steel #4(Hairline) • Side Mid Panels = Stainless Steel #4(Hairline) • Side Corner Panels = Stainless Steel #4(Hairline) • Front Panels = Stainless Steel #4(Hairline)
FALSE CEILING TYPE	: CD61 type false ceiling
FALSE CEILING FINISH	: Stainless Steel #4(Hairline)
VENTILLATION	: Cross flow fan
HAND RAILS	: Stainless Steel Mirror Finish Handrails on rear car panels
FLOORING	: GRINITE BY CUSTOMER SCOPE
CAR DOOR FINISH	: Stainless Steel #4(Hairline)
LANDING DOORS FINISH	: Stainless Steel #4(Hairline)
PIT DEPTH	: 1600 mm
OVERHEAD	: 4500 mm (Minimum Required)
HOISTWAY DIMENSIONS (W x D - mm)	: 2475 mm W x 2100 mm D (Available Measurements After Plastering)
CAR DIMENSIONS (W x D x H - mm)	: 1800 mm W x 1700 mm D x 2400 mm H

CAR & HOISTWAY DOOR TYPE	:	Centre Opening Doors
DOOR OPENING (W x H - mm)	:	1000 mm W x 2100 mm H
DOOR OPERATOR	:	DC Door Operator
COP	:	FLAT17 COP FOR GEN2 STREAM LITE in Stainless Steel #4(Hairline)
CAR POSITION INDICATOR	:	Monochrome LCD-Blue Background & White font
HALL FIXTURES	:	O2000
HALL FIXTURE FACE PLATE	:	Stainless Steel #4(Hairline)
HALL BUTTON ARRANGEMENT	:	LCD Monochrome type
STANDARD FEATURES	:	<ul style="list-style-type: none"> Anti-nuisance Car Call Protection Independent Service (for Duplex only) Overload Device Nudging Emergency Firemen's Service Emergency Car Light Unit Infrared Curtain Door Protection Door Time Protection Emergency Alarm Button Extra Door Time of Lobby & Parking Door Open/Close Button Manual Rescue Operation Belt Inspection Drive Auto Fan Cut Off
OPTIONS INCLUDED	:	<ul style="list-style-type: none"> Automatic Rescue operation, Intercom. Smooth Stops Two Hours Fire Rated Doors New Elevator Code IS 17900

Product line item 100	E1
Capacity / Number of passengers	1020 kg / 15
Speed	1.0 m/s
Number of Stops / Entrances	9 / 9 (B2, B1, G, 1, 2, 3, 4, 5,6)
Main stop	3 (G)
Travel height	23.1 m
Machine room	Machine room less
Headroom	4500 mm
Pit depth	1400 mm
Shaft dimensions W x D	2500 mm x 2100 mm
Building tolerance	-25 mm / +25 mm
Shaft Wall	Concrete floors+bricks
Car dimensions W x D x H	1800 mm x 1650 mm x 2100 mm
Car Door size W x H	800 mm x 2000 mm
Car Door Type	Door center opening, 2 panels
Landing door fire protection classification	IS17518-2 based on equivalent EN81-58 E120 certification [Two hours fire rated]
Counterweight location	On the left side
Car access sides	1
Door drive	V3F Drive
Drive and control	Full Collective control - Simplex
Controller position	In the right door jamb (LDU)
Controller location	Landing at floor 8 on side 1
System earthing	TN-S (3L+PE+N)
3- Phase power supply	415 V 50 Hz
1- Phase power supply	230 V 50 Hz
Number of trips per hour	120
Installation method	Scaffoldless with hoisting device
Inverter type	VAF0xx REGEN
Machine Type	Permanent Magnet (PM)
Communication Options Selected	Passenger release alt. landing Intercom TAI 1; 3 ways Remote Monitoring Device Alarm by horn in hoistway
Control options Selected	Automatic Releveling Automatic return to main floor Door pre-opening Auto.door closing final time Position indicator car 1 Travel direction indicator car Auto. Rescue Device (ARD) Fire emergency switch
Maintenance period	12 months

Decoration line	Navona
Ceiling type	Round Spot
Car ceiling finish	Stainless Steel AISI441 Mercury Hairline
Car lighting	LED
Car Front Finish	Stainless Steel AISI441 Mercury Hairline Front Cathedral
Side wall	Stainless Steel AISI441 Mercury Hairline
Rear wall	Stainless Steel AISI441 Mercury Hairline
Floor	Artificial Granite Galaxy Black
Skirting finish	Aluminum Painted R9006 Flush
Fixtures	FI GS 120 - Touch Sensitive Glass Buttons
Fixtures	FI GS 120 - Touch Sensitive Glass Buttons Half Height Glass White Glass Display Standard resolution matrix Display Glass Height 0 mm
Button_Description	Touch sensitive glass buttons Glass
Landing Operating panel version	Linea 120 Touch Dot Matrix Low resolution Glass White Glass Display Touch Screen Glass Surface vertical in wall Yes
Mirror	Half Height with Width Equivalent to Rear Center Panel
Handrail	Straight Stainless Steel AISI304 Mercury Hairline Back Wall
Car door	Stainless Steel AISI441 Mercury Hairline
Car door sill	Aluminium
Landing door	Stainless Steel AISI441 Mercury Hairline (8 door(s))
Landing door frame dimensions	60 mm x 60 mm
Car Fan Position	Center

Specification(C):		NOVA/8P/8S/SS/MPS/MRL
PRODUCT	:	GeN2-NOVA_MRL-1MPS
DETAILS	:	GeN2-NOVA_MRL-1MPS
CAPACITY (kgs)	:	544 Kg, 8 persons.
SPEED (mps)	:	1 MPS
Units	:	1 No.s
RISE (m)	:	25.2 m apx.
STOPS	:	9 Stops With (all opening on the same side) (B2,B1,G,1,2,3,4,5,6)
CONTROLLER TYPE	:	LVA/ACD
DRIVE	:	VF Regenerative (Closed Loop)
POWER SUPPLY	:	400/415 Volts (3 Phase AC)
OPERATION	:	Full collective operation
CAR GROUP	:	One car (Simplex)
MACHINE	:	PM Gearless
TRACTION MEDIA	:	Flat Coated Steel Belt
CAR FINISH	:	<ul style="list-style-type: none"> • Rear Mid Panel = Stainless Steel #4(Hairline) • Rear Corner Panels = Stainless Steel #4(Hairline) • Side Mid Panels = Stainless Steel #4(Hairline) • Side Corner Panels = Stainless Steel #4(Hairline) • Front Panels = Stainless Steel #4(Hairline)
FALSE CEILING TYPE	:	CD61 type false ceiling
FALSE CEILING FINISH	:	Stainless Steel #4(Hairline)
VENTILLATION	:	Cross flow fan
HAND RAILS	:	Stainless Steel Mirror Finish Handrails on rear car panels
FLOORING	:	GRINITE BY CUSTOMER SCOPE
CAR DOOR FINISH	:	Stainless Steel #4(Hairline)
LANDING DOORS FINISH	:	Stainless Steel #4(Hairline)
PIT DEPTH	:	1600 mm
OVERHEAD	:	4500 mm (Minimum Required)
HOISTWAY DIMENSIONS (W x D - mm)	:	1750 mm W x 1800 mm D (Available Measurements After Plastering)
CAR DIMENSIONS (W x D x H - mm)	:	1100 mm W x 1300 mm D x 2300 mm H

CAR & HOISTWAY DOOR TYPE	:	Telescopic Opening Doors
DOOR OPENING (W x H - mm)	:	800 mm W x 2100 mm H
DOOR OPERATOR	:	DC Door Operator
COP	:	FLAT17 COP FOR GEN2 STREAM LITE in Stainless Steel #4(Hairline)
CAR POSITION INDICATOR	:	Monochrome LCD-Blue Background & White font
HALL FIXTURES	:	O2000
HALL FIXTURE FACE PLATE	:	Stainless Steel #4(Hairline)
HALL BUTTON ARRANGEMENT	:	LCD Monochrome type
STANDARD FEATURES	:	<ul style="list-style-type: none"> Anti-nuisance Car Call Protection Independent Service (for Duplex only) Overload Device Nudging Emergency Firemen's Service Emergency Car Light Unit Infrared Curtain Door Protection Door Time Protection Emergency Alarm Button Extra Door Time of Lobby & Parking Door Open/Close Button Manual Rescue Operation Belt Inspection Drive Auto Fan Cut Off
OPTIONS INCLUDED	:	<ul style="list-style-type: none"> Automatic Rescue operation, Intercom. CCTV Provision Two Hours Fire Rated Doors New Elevator Code IS 17900

Product line item 200	E2
Capacity / Number of passengers	680 kg / 10
Speed	1.0 m/s
Number of Stops / Entrances	9 / 9 (B2, B1, G, 1, 2, 3, 4, 5,6)
Main stop	3 (G)
Travel height	23.1 m
Machine room	Machine room less
Headroom	4500 mm
Pit depth	1400 mm
Shaft dimensions W x D	1800 mm x 1800 mm
Building tolerance	-25 mm / +25 mm
Shaft Wall	Concrete floors+bricks
Car dimensions W x D x H	1200 mm x 1400 mm x 2100 mm
Car Door size W x H	800 mm x 2000 mm
Car Door Type	Door center opening, 2 panels
Landing door fire protection classification	IS17518-2 based on equivalent EN81-58 E120 certification [Two hours fire rated]
Counterweight location	On the left side
Car access sides	1
Door drive	V3F Drive
Drive and control	Full Collective control - Simplex
Controller position	In the right door jamb (LDU)
Controller location	Landing at floor 8 on side 1
System earthing	TN-S (3L+PE+N)
3- Phase power supply	415 V 50 Hz
1- Phase power supply	230 V 50 Hz
Number of trips per hour	120
Installation method	Scaffoldless with hoisting device
Inverter type	VAF0xx REGEN
Machine Type	Permanent Magnet (PM)
Communication Options Selected	Passenger release alt. landing Intercom TAI 1; 3 ways Remote Monitoring Device Alarm by horn in hoistway
Control options Selected	Automatic Releveling Automatic return to main floor Door pre-opening Auto.door closing final time Position indicator car 1 Travel direction indicator car Auto. Rescue Device (ARD) Fire emergency switch
Maintenance period	12 months

Decoration line	Navona
Ceiling type	Round Spot
Car ceiling finish	Stainless Steel AISI441 Mercury Hairline
Car lighting	LED
Car Front Finish	Stainless Steel AISI441 Mercury Hairline Front Cathedral
Side wall	Stainless Steel AISI441 Mercury Hairline
Rear wall	Stainless Steel AISI441 Mercury Hairline
Floor	Artificial Granite Galaxy Black
Skirting finish	Aluminum Painted R9006 Flush
Fixtures	FI GS 120 - Touch Sensitive Glass Buttons
Fixtures	FI GS 120 - Touch Sensitive Glass Buttons Half Height Glass White Glass Display Standard resolution matrix Display Glass Height 0 mm
Button_Description	Touch sensitive glass buttons Glass
Landing Operating panel version	Linea 120 Touch Dot Matrix Low resolution Glass White Glass Display Touch Screen Glass Surface vertical in wall Yes
Mirror	Half Height with Width Equivalent to Rear Center Panel
Handrail	Straight Stainless Steel AISI304 Mercury Hairline Back Wall
Car door	Stainless Steel AISI441 Mercury Hairline
Car door sill	Aluminium
Landing door	Stainless Steel AISI441 Mercury Hairline (8 door(s))
Landing door frame dimensions	60 mm x 60 mm
Car Fan Position	Center

LIST OF APPROVED MANUFACTURERS / NATURAL SOURCES OF MATERIALS TO BE USED IN THE CIVIL WORKS SUBJECT TO THE APPROVAL OF SAMPLES BY THE CONSULTANT.

(ALL THE MATERIALS USED HAVE TO CONFIRM TO GREEN NORMS OF IGBC)

S.No	MATERIAL NAME.	BRAND / MANUFACTURER.
1	CEMENT	ULTRATECH, ACC, RAMCO, INDIA, AMBUJA, NAGARJUNA (43 GRADE FOR PLASTERING AND 53 GRADE FOR RCC WORKS).
2	RMC	ULTRATECH, NAGARJUNA, ACC, L&T
3	CLAY BRICKS	GOOD QUALITY BRICKS.
4	UPVC WINDOWS & SLIDING DOORS	NCL(ONLY VEKA), LG & ENCRAFT.
5	PAINTS	ASIAN, NEROLAC, BIRLA, BERGER,DULUX.
6	HYSD / MILD Steel (TMT)	SAIL / TATA / VIZAG.
7	SAND	RIVER SAND.
8	TEXTURE PAINT	ASIAN, NEROLAC, BIRLA, BERGER.
9	GROUTS & EPOXY	LATECRETE EPOXY, BOSTIK EPOXY,DR FIXIT.
10	WATER PROOFING	FOSROC,LATICRATE,PIDILITE DR FIXIT, BOSTIK.
11	EXTERNAL PUTTY	BIRLA, ASIAN.
12	SINKS	NIRALI, ROCA, JAQUAR, KEROVIT, DURAVIT..
13	VITRIFIED TILES (ANTE SKID)	JOHNSON, KAJARIA, RAK.
14	M.S STRUCTURAL STEEL	JINDAL/SAIL / TATA / VIZAG.
15	STRUCTURAL AND CURTAIN WALL GLAZING ALUMINIUM SECTIONS	JINDAL, NALCO, BALCO, HINDALCO, NALCO, INDAL
16	GLASS FOR CURTAIN GALZING, STRUCTURAL GLAZING, CANOPY, GLASS RAILING AND WINDOWS	SAINT GOBIN,ASHI FLOAT,MODI GUARD.
17	SS RAILING	JINDAL, DORMA (UVO), KICH.
18	PVC PIPES	SUDHAKAR, CLIPSAL,PRINCE.
19	SWG PIPES	INDO or any other approved brand.
20	ANTI- TERMITE APPROVED AGENCIES	PCI/ PECOPP/ GODREJ HI-CARE.
21	ACP	EURO BOND, AULCOBOND, ALSTRONG

22	LIFTS	JOHNSON / OTIS / SCHINDLER / KONE/MITSUBISHI
23	MCBS / RCBO / RCCBS / MCB DISTRIBUTION BOARDS	MDS / L&T- HAGER / SCHNEIDER / HPL / BCH / SIEMENS / ABB / LEGRAND /HAVELLS.
24	CABLES/COPPER CONDUCTOR WIRES	FINOLEX / POLYCAB / ANCHOR / HAVELLS / L & T / RR KABLES / LAPP / QFLEX.
25	SWITCHES/SOCKETS	MK INDIA(LOGIC) / TOYOMA / LEGRAND /ABB / LK / CRABTREE / SIEMENS.
26	PVC CONDUITS & ACCESSORIES	PRECISION (DT) / SUDHAKAR/ AVON PLAST / ATUL / MECURY / VIP.
27	UNDER GROUND CABLES	CCI / POLYCAB / FINOLEX / KEI / RR KABEL /HAVELLS
28	CABLE GLANDS	HMI/COMET /HAVELLS
29	CABLE LUGS	DOWELL'S / 3D /HAVELLS
30	LIGHT FIXTURES	PHILIPS / WIPRO / HAVELLS / GE / CROMPTON.
31	BOM BARRIER	NEPTUNE (FAAC), ESSL, GANDHI AUTOMATIONS, GODREJ.

NOTE : The contractor shall use only above mentioned material make to be approved by the Consultant. All other materials shall confirm to the specifications laid down. The tenderer shall take this into account while tendering rates / prices.

The Architect has got every right to select any of the above Makes for the Project. However the samples of every material including all fixing accessories shall be got approve by Architect before Execution.

ALL MAKE SHALL BE CONFIRMING TO BIS ONLY.

11. LIST OF MANDATORY TESTS

MATERIALS	TEST	TEST PROCEDURE	MIN.QTY.	FREQUENCY
Chemical and physical properties of lime.		I.S.6932 (Part I) : 1973	5 M.T.	10 mt. Or par thereof.
SAND	a. Stilt Content	Field	20 Cum	20 cum or par thereof.
	b. Bulking	Field	20 Cum	50 Cum or par thereof
	c. Particle size distribution.	Field	40 Cum	Every 40 Cum or part, required in RCC work.
COARSE AGGREGATE	a. Particle size distribution	Field	45 Cum	Every 45 cum or par thereof for RCC work. For rest of work as desired.
	b. Crushing value			b. Every 300 Cum
R.C.C.	1. Slump	Field		Once a day as desired.
	2. Cube strength		20 cum in slabs, beams and connected columns	Every 20 cum of a days concrete.
BRICKS	1. Water absorption and Efflorescence		Designation 35	One test for each source of manufacture.
	2. Compressive Strength.		Designation 35	1,00,000 or par thereof. For larger quantities two tests for 1 lot of 1 lakh. One test for every additional 2 lakhs or par thereof.
TIMBER	Moisture Content		1 Cum	Every three cum or part.

MORTICE LOCKS	Testing of springs		50 Nos.	100 or part thereof.
STEEL	a. Tensile strength	IS - 1529	20 Tonne	Every 20 tonne or part.
	b. Bending strength	IS - 1529	20 Tonne	Every 20 tonne or part.

MATERIALS	TEST	TEST PROCEDURE	MIN.QTY.	FREQUENCY
WHITE GLAZED TILES	1. Water absorption	I.S.777	10000 Nos.	10000 or part
	2. Crazing	- do -	- do -	- do -
	3. Impact	- do -	- do -	- do -
FLUSH DOORS	1. End immersion	I.S.2202		
	2. Knife	I.S.4020	No.of shutters used	No.of shutters to be tested.
	3. Adhesion		22 - 65 66 - 100 101 - 180 181 - 300 301 - 500 501 - above	1 2 2 3 4 5
AL.DOORS AND WINDOWS TESTING	Thickness of anodic coating	IS - 5523		If the cost of the fittings exceeds Rs.20,000/-

Note: Minimum quantity give above is the quantity of work which warrants conduction of respective tests.

1. Cost of samples, testing and transport will be borne by the contractors only.
2. Any other materials shall also be got tested by contractors at his own cost as per the instructions of Architects/Bank from time to time.
3. Frequency stated above is minimum and the contractor may have to test materials with any other frequency, as instructed by Architect/Client, without any costs.

12. SAFETY CODE

SAFETY MEASURES AT SITE:

1. All personnel at site should be provided with Helmets and Safety Boots with some Identification Mark. Visitors also should be provided with Helmets. It should be ensured that these are used Properly.
2. First Aid Box should be kept at site with all requisite materials.
3. No one should be allowed to inspect / work at a height without Safety Belt.
4. Suitable scaffolds should be provided for workmen for all Works that cannot safely be done from the ground, or from solid construction except such short period Work as can be done safely from ladders. When a ladder is used an extra Mazdoor shall be engaged for holding the ladder and if the ladder is used for carrying materials as well as suitable footholds and handholds shall be provided on the ladder and the ladder shall be given an inclination not steeper than $\frac{1}{4}$ to 1 ($\frac{1}{4}$ horizontal and 1 vertical).
5. Scaffolding or staging more than 3.5 meters above the ground or floors, swung or suspended from an overhead support or erected with stationary support shall have a guard rail properly attached, bolted, braced and otherwise secured at least 1 Meter high above the floor or platform of such scaffolding or staging and extending along the entire length of the outside and ends thereof with only such openings as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the building or structure.
6. Working platforms, Gangways, and Stairways should be so constructed that they do not sag unduly or unequally, and if the height of the platform or the Gangway or the Stairway is more than 3-5 Meters above ground level or floor level they should be closely boarded, should have adequate width and should be suitably fenced, as described.
7. Every opening in the floor of a building or in a working platform be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing or railing whose minimum height shall be 1 Meter.
8. Safe means of access shall be provided to all working platforms and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9 Meters in length while the width between side rails in rung ladder shall in no case be less than 30cms for ladder up to and including Meters in length. For longer ladders this width should be increased at least 6mm for each additional 30 cms. Uniform step spacing shall not exceed 30 cms.
9. Adequate precautions shall be taken to prevent danger from electrical equipments. For electrical on line works gloves, rubber mats, and rubber shoes shall be used.
10. All trenches 1.2 Meters or more in depth shall at all times be supplied with at least one ladder for each 30 Meters length or fraction thereof. Ladder shall be extended from bottom of the trench to at least 1 Meter above the surface of the ground. The sides of the trenches, which are 1.5 Meters or more in depth shall be stepped back to give suitable slope, or securely held

by timber bracing, so as to avoid the danger of sides collapsing. The excavated materials shall not be placed within 1.5 Meters of the edge of the trench or half of the depth of the trench whichever is more cuttings shall be done from top to bottom. Under no circumstances undermining or under cutting shall be done.

11. Before any demolition work is commenced and also during the process of the work :-

- a) All roads and open areas adjacent to the Work Site shall either be closed or suitably protected;
- b) No electrical cable or apparatus which is liable to be a source of danger over a cable or apparatus used by the operator shall remain electrically charged.
- c) All practical steps shall be taken to prevent danger to persons employed from risk of fire or explosion or flooding. No floor, roof or other part of the building shall be so overloaded with debris or materials as to render it unsafe.
- d) All necessary personal safety equipment as considered adequate by the Site Engineer should be kept available for the use of the persons employed on the Site and maintained in a condition suitable for immediate use; and the Contractor should take adequate steps to ensure proper use of equipment by those concerned.
- e) Workers employed on mixing Asphaltic materials, cement and lime mortars shall be provided with protective footwear and protective goggles.
- f) Those engaged in white washing and mixing or stacking of cement bags or any materials which is injurious to the eyes shall be provided with protective goggles.
- g) Those engaged in welding works shall be provided with Welder's protective eyeshields.
- h) Stone breakers shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.
- i) When workers are employed in sewers and manholes, which are in use, the Contractor shall ensure that the manhole covers are opened and are ventilated at least for an hour before the workers are allowed to get into the manholes and the manholes so opened shall be cordoned off with suitable railing and provided with warning signals and boards to prevent accident to the Public.

12. Use of hoisting machines and tackle including their attachments, anchorage and support shall conform to the following standard or conditions:-

- a) These shall be of good mechanical construction, sound material and adequate strength and free from patent defect and shall be kept in good repairs and in good working order.
- b) Every rope used in hoisting or lowering materials or as a means of suspension shall be of durable quality and adequate strength, and free from patent defects.

c) Every crane driver or hoisting appliance operator shall be properly qualified and no person under the age of 21 years should be in-charge of any hoisting machine including any scaffold, winch or give signals to the operator.

d) In case of every hoisting machine and of every chain ring hook, shackle swivel and pulley block used in hoisting or lowering or as means of suspension the safe working load shall be ascertained by adequate means.

e) Every hoisting machine and all gear referred to above shall be plainly marked with the safe working load. In case of hoisting machine having a variable safe working load, each safe working load of the conditions under which it is applicable shall be clearly indicated. No part of any machine or of any gear referred to above in this paragraph shall be loaded beyond the safe working load except for the purpose of testing.

f) Motor, Gearing, Transmission, Electric wiring and other dangerous parts of hoisting appliances should be provided with efficient safeguards, hoisting appliances should be provided with such means as will reduce to the minimum the risk of accidental descent of the load, adequate precautions should be taken to reduce to the minimum the risk of any part of a suspended load becoming accidentally displaced.

g) When workers are employed on electrical installation, which are already energized, insulating mats, wearing apparel such as gloves, sleeves, and boots as may be necessary should be provided. The workers should not wear any rings, watches and carry keys or other materials, which are good conductors of electricity.

13. All scaffolds, ladders and other safety devices, mentioned or described herein shall be maintained in safe condition and no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities shall be provided at or near places of work.

13. LABOUR LAWS AND RULES

The Site Engineer/Architect shall ensure that the contractor maintains relevant records and fulfils all conditions and requirements in accordance with

- a. The relevant labour codes such as 1. Code on Wages 2019 2. Code on social security-2020, 3. Occupational Safety, Health and Working Conditions Code-2020, 4. Industrial Relations code-2020
- b. Bank's Liability Act
- c. Contract Labour (Regulations & Abolition) Act 1970 and Central Rules 1971.
- d. Apprentices Act 1961.
- e. Any other Act or enactment relating thereto and rules framed thereunder from time to time.

The Site Engineer/Architect shall refrain from involving himself and the supervisors under him by comments/advice/attempts at mediation in any kind of labor dispute at site. His job is only to report to his superiors any happenings of the sort in an objective manner.

BANK'S RESPONSIBILITY – CONTRACT LABOUR (REGULATIONS AND ABOLITION) ACT 1970 AND RULES 1971

With a view to ensuring that the provisions of the Act are not contravened, the Site Engineer/Architect should give particular attention to the following points and see that all the provisions of the Act are enforced:

1. Principal Bank (Banks) is registered as per the Act.
2. Contractor holds a license under the Act from the Local Labor Commissioner for the appointment of Contract labor.
3. Required notice boards, registers and records as provided in section 29 of the Act are maintained by the contractor.
4. Payment of proper wages as per the rules is effected within the prescribed time limits by the contractor.
5. Prescribed facilities and amenities are provided by the contractor.
6. Proper efforts are made by the contractor to set right contravention of law, as soon as the notice pointing out the same is received from the Labour Enforcement Officer, and reports "on action taken" are sent to the Labour Enforcement officer at the earliest with copies to the Bank.

14. FORMAT OF GUARANTEE TO BE EXECUTED BY THE FIRM/CONTRACTOR IN RESPECT OF THE WORK OF PRE-CONSTRUCTION ANTI TERMITE TREATMENT

This agreement made this _____ day of _____ Two thousand _____ between _____ (Name of Bank) a body corporate constituted under the _____ (Name of the Act) Act 19 having its Head Office at _____ (herein after called 'The Bank') of the one part and _____ (Name of Firm/ Contractor) (Hereinafter called the Guarantor) of the other part.

WHEREAS THIS AGREEMENT is supplementary to a contract (hereinafter called the contract dated _____ and made between the Bank of the one part and the Guarantor of the other part) where by the Firm/Contractor interalia understood to render the building/structure completely free from any infestation of termites. And whereas the Guarantors agreed to give guarantee to the effect that the said building/structure shall remain free from any infestation of termites for a minimum period of ten years from the date of completion of pre-construction antitermite treatment carried out as per the relevant I.S. code.

Now the Guarantor hereby agrees to make good all defects and render the building/ structure free from any infestation of termites, during this period of guarantee and to the satisfaction of the Bank. The guarantor also agrees to take up such rectification work at his own cost, and within one week from the date of issue of notice from the Bank, calling upon him to rectify the defects. The decision of the Bank as to the cost payable by the Guarantor will be final and binding, in case the guarantor fails to commence the work as per above notice and the work is got done through some other contractor. That if the Guarantor fails to execute the pre-construction anti-termite treatment of commits breach thereunder, then the Guarantor will indemnify the principal and his successors against all loss, damage, costs, expenses or otherwise, which may be incurred by him by any reason of any default on the part of the guarantor in performance and observance of this agreement. As to the amount of loss and or damage and/or costs incurred by the Bank, the decision of the Bank will be final and binding.

In witness where of these presents have been executed by the obligation _____

and by _____ and for on behalf of the employed on the day, month and year first above written.

Signed and delivered by _____ (Bank) by the hands of Sri _____ in the presence of _____.

Signed, and delivered by the hand of _____ (Contractor) in the presence of _____.

Signed, and delivered by _____ (Bank) by the hands of Sri _____ in the presence of _____.

Signed and delivered by the hand of _____ (Contractor) in the presence of _____.

15. FORM OF GUARANTEE FOR WATERPROOFING

Name of the Project:

Free Maintenance Guarantee – Water proofing work

by _____

We _____ hereby guarantee that the surfaces treated by us for waterproofing in the above work, for M/s _____ the general building contractor for the above work, shall remain entirely water tight. Should, however, due to any unforeseen defect left out in the work carried out by us during the period of ten years from the date of virtual completion of the work i.e. from _____ to _____ the same shall be rectified by us without any extra cost to the _____ (name of the Bank).

However, we shall not be responsible in any way if our work is tamper with or if the body of the structure is damaged due to sinking, cracking and/or by any other act of God beyond our control.

Signature of the
Waterproofing Contractor

Signature of the General
Building Contractor

16. FORM OF BANK GUARANTEE

Place:

Date:.....

(On non-judicial stamp paper of Rs.-----/-)

BANK GUARANTEE IN LIEU OF SECURITY DEPOSIT

B.G.No. _____ Value Rs. _____

TELANGANA GRAMEENA BANK

(Address)

Sub: Bank Guarantee of Rs.....towards Security Deposit for the work offer TELANGANA GRAMEENA BANK

(Name of Branch/Office)

Dear Sir,

WHEREAS (Name and address of contractor/ vendor) (hereinafter called the Contractor) have entered into contract for (Name of Work) with TELANGANA GRAMENNA BANK (TGB) as mentioned in the letter of TGB's Consultants (Name & address of consultants) vide their letter No..... datedandthe correspondence and tender relating thereto which is hereinafter referred to as "the said contract"the Contractor has now agreed to produce a Bank Guarantee amounting to 2% of the contract valueless earnest money deposit of Rs.....(Rupees only), to TELANGANA GRAMEENA BANK for performing theirpart of the contract obligations.

AND WHEREAS in terms of said contract, the contractor is required to furnish to TELANGANA GRAMEENA BANK a Guarantee of a Scheduled Bank for a value of Rs..... to be valid upto (date). AND WHEREAS (Name of Bank and its branch) having their office at (address) the Guarantor, at the request of the contractor hereby furnishes a PBG in favour of **TELANGANA GRAMEENA BANK** and Guarantees in the manner hereinafter appearing.

In consideration of the premise, we (name of Bank and its branch) having our office at (address) here after called the "Guarantor" (which expression shall include its successors and assigns) here by expressly, irrevocably &unreservedly undertake and guarantee under that if the Contractor fails to execute the work according to his obligations under the said contract, then notwithstanding any dispute between **TELANGANA GRAMEENA BANK** and the contractor the Guarantor shall, on demand without demur and without reference to the contractor pay to **TELANGANA GRAMEENA BANK** immediately any sum claimed by **TELANGANA GRAMEENA BANK** under the said contract up to a maximum amount of Rs. _____ (Rupees _____ only).

In case the amount demanded by TELANGANA GRAMEENA BANK is not paid within 48 hours of receipt of demand, the Guarantor agrees to pay the aforesaid amount of Rs. _____/- (Rupees _____ only).

i) Such payment shall be notwithstanding any right the contractor may have directly against Telangana Grameena Bank or any disputes raised by the Contractor with TELANGANA GRAMEENA BANK or any suits or proceedings pending in any competent court or before any arbitrator. TELANGANA GRAMEENA BANK's written demand shall be conclusive evidence to the Guarantor that such payment is payable under the terms of the Contract and shall be binding in all respect on the guarantor.

(ii) The Guarantor shall not be discharged or released from the undertaking and Guarantee, by any arrangement, variations made between TGB and the Contractor and or indulgence shown to the contractor by TGB, with or without the consent and knowledge of the guarantor or by alterations in the obligations of the contractor by any forbearance, whether as to payment, time performance or otherwise.

(iii) This guarantee shall remain valid until or as may be caused to be extended by the contractor or until discharged by TGB in writing whichever is earlier.

(iv) This guarantee shall be a continuing guarantee and shall not be revocable during its currency except with the previous written consent of TGB.

(v) This guarantee shall not be affected by any change in the constitution of the contractor, by absorption with any other body or corporation or dissolution or otherwise and this guarantee will be available to or enforceable against such body or corporation.

(vi) In order to give effect to this guarantee TGB will be entitled to act as if the Guarantor were the Principal debtor and the Guarantor hereby waives all and any of its rights or surety ship.

(vii) This guarantee shall continue to be in force notwithstanding the discharge of the contractor by operation of law and shall cease only on payment of the full amount by the Guarantor to TGB of the amount hereby secured.

(viii) This guarantee shall be in addition to and not in substitution for any other guarantee or security for the contractor given or to be given to TGB in respect of the said contract.

(ix) Any notice by way of request and demand or otherwise here under may be sent by post or any other mode or communication to the guarantor addressed as aforesaid and if sent by post it shall be deemed to have been given at the time when it would be delivered in due course of post and in providing such notice when given by post it shall be sufficient to prove that the envelope containing the notice was posted and a certificate signed by an officer of TGB that the envelope was so posted shall be conclusive.

(x) These presents shall be governed by and constructed in accordance with Indian Law. Notwithstanding anything contained hereinbefore the liability of the guarantor under this guarantee is restricted to a sum of Rs. _____.

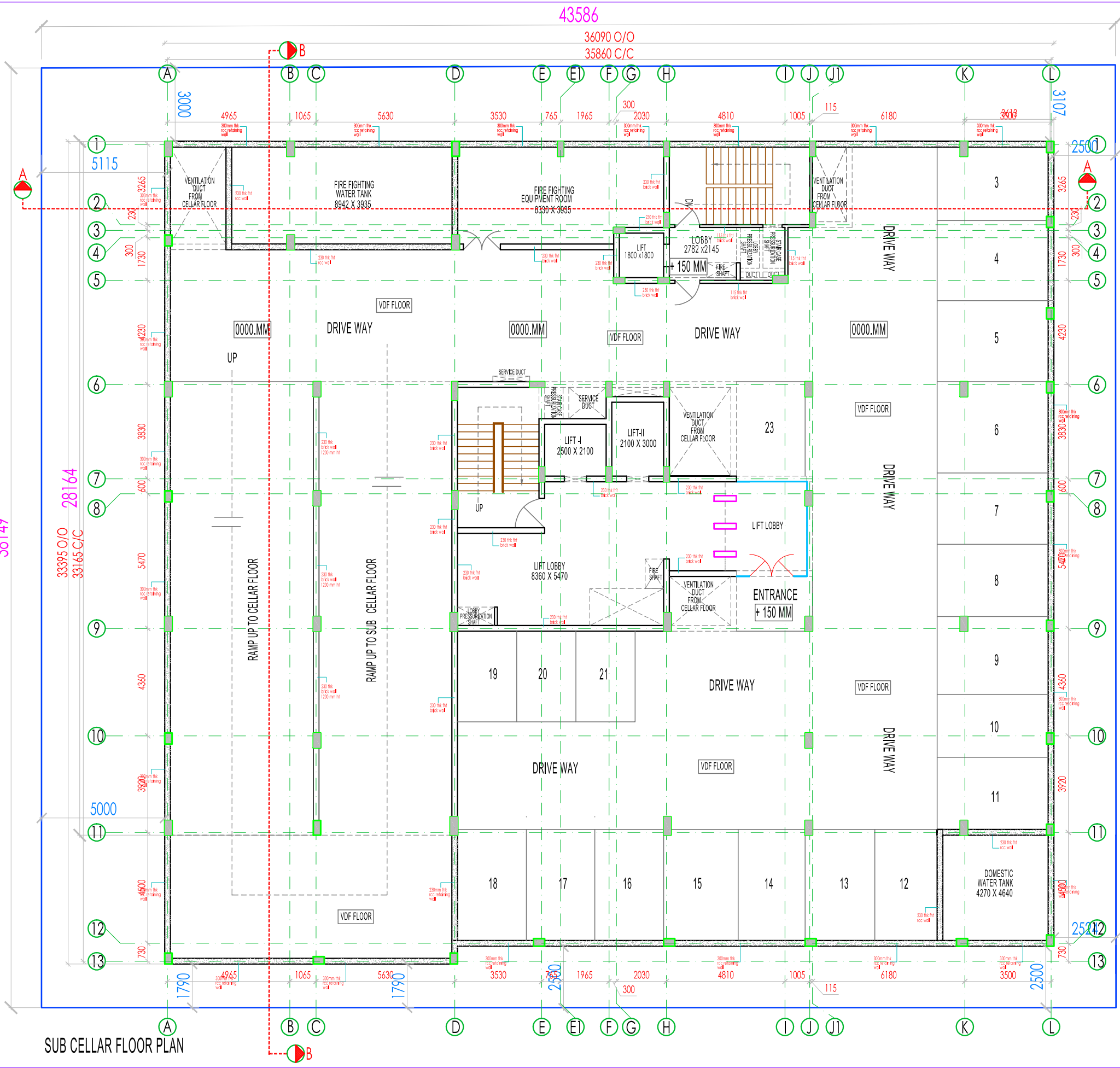
This guarantee will remain valid upto _____ unless a demand or claim under this guarantee is made in writing on or before _____ the guarantor shall be discharged from all liability under the guarantee thereafter.

Dated the

For (Name of Bank)
(Signature/s with designation/s of signatory/ies)
(Name and Stamp of Bank)

LIST OF DRAWINGS

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2	CELLAR FLOOR PLAN	ABHI/TGB/HO /TD/AR/02	2
3	SITE PLAN / STILT FLOOR PLAN	ABHI/TGB/HO /TD/AR/03	3
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5	SECOND FLOOR PLAN	ABHI/TGB/HO /TD/AR/05	5
6	THIRD FLOOR PLAN	ABHI/TGB/HO /TD/AR/06	6
7	FOURTH FLOOR PLAN	ABHI/TGB/HO /TD/AR/07	7
8	FIFTH FLOOR PLAN	ABHI/TGB/HO /TD/AR/08	8
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S.NO	STRUCTURAL DRAWINGS	DRAWING NO	SHEET NO
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13	STILT FLOOR SLAB DETAILS	ABHI/TGB/HO /TD/STR/13	28
14	STILT FLOOR SLAB BEAM DETAILS	ABHI/TGB/HO /TD/STR/14	29
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2	FRONT AND RIGHT CORNER VIEW		2
3	FRONT AND LEFT CORNER VIEW		3
4	FRONT AND LEFT CORNER VIEW		4



SUB CELLAR FLOOR PLAN

CLIENT:
TELANGANA GRAMEENA BANK
 HEAD OFFICE NALLAKUNTA
 HYDERABAD

CONSULTANTS:
STRUCTURAL CONSULTANT:
ZAKI & ASSOCIATES
 STRUCTURAL ENGINEERS.

PLUMBING CONSULTANT:

ELECTRICAL CONSULTANT:

HVAC CONSULTANT:

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KEY MAP:

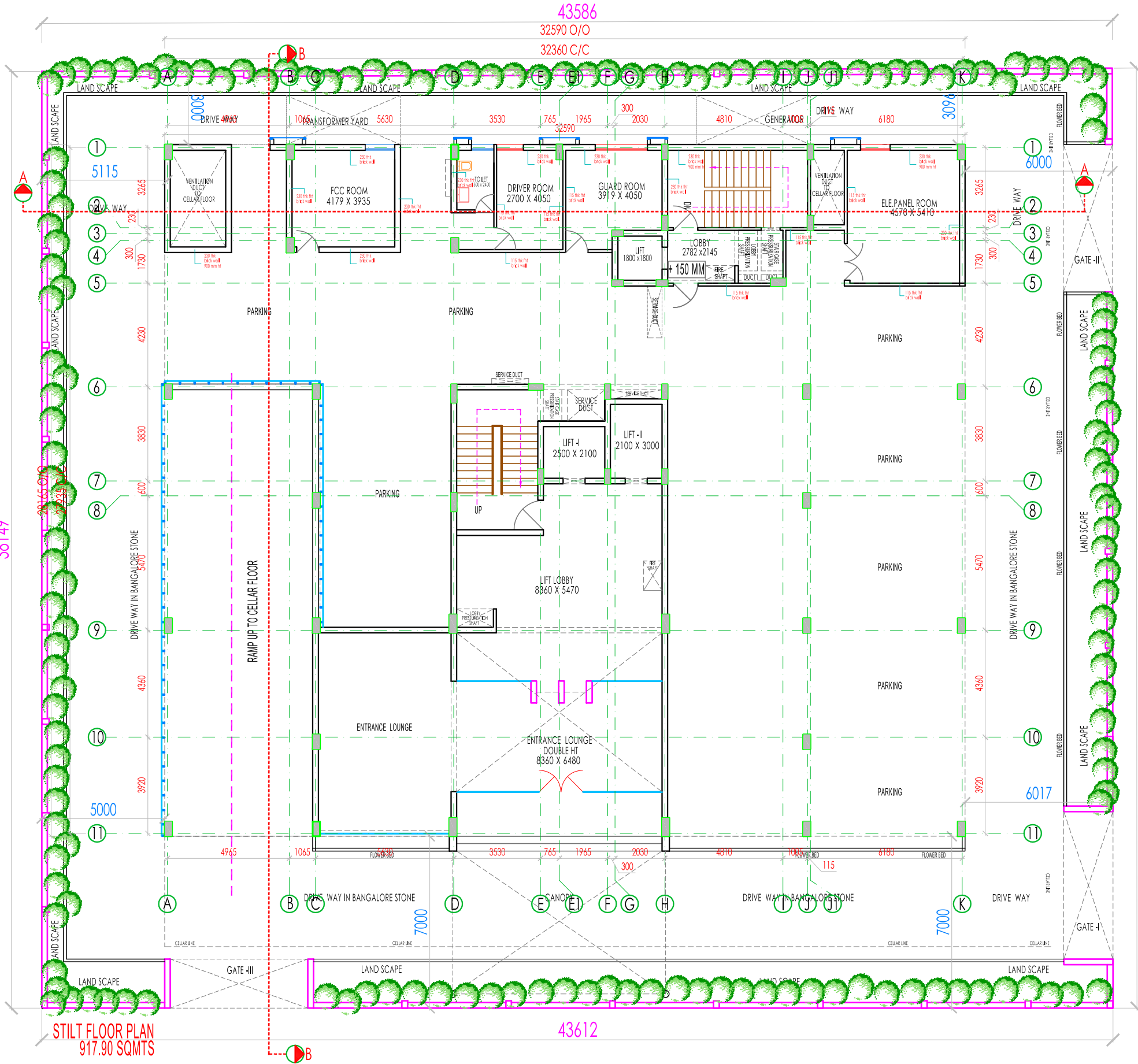
NORTH:	DEALT	SREENATH
	DRAWN BY	BHANU
	CHECKED BY	SREENATH
SCALE:	DATE:	
FIT TO SCALE	14-05-2026	

PROJECT:
 PROPOSED CONSTRUCTION OF HEAD OFFICE OF
 TELANGANA GRAMEENA BANK IN SY NO
 417&420 PLOT NO 79
 IN UPPAL BHAGAYATH LAYOUT UPPAL HYDERABAD

DWG TITLE:
 TENDER DRAWING
 SUB CELLAR FLOOR PLAN

DWG NO:
 ABHI/TGB/HO/TD/AR/01

SHEET NO:
 01



38149

38278
30.0M WIDE EAST ROAD
100'-0" WIDE EAST ROAD

STILT FLOOR PLAN
917.90 SQMTS

43612

18.0M WIDE EAST ROAD
60'-0" WIDE EAST ROAD

CLIENT:
TELANGANA GRAMEENA BANK
HEAD OFFICE NALLAKUNTA
HYDERABAD

CONSULTANTS:
STRUCTURAL CONSULTANT:
ZAKI & ASSOCIATES
STRUCTURAL ENGINEERS.

PLUMBING CONSULTANT:

ELECTRICAL CONSULTANT:

HVAC CONSULTANT:

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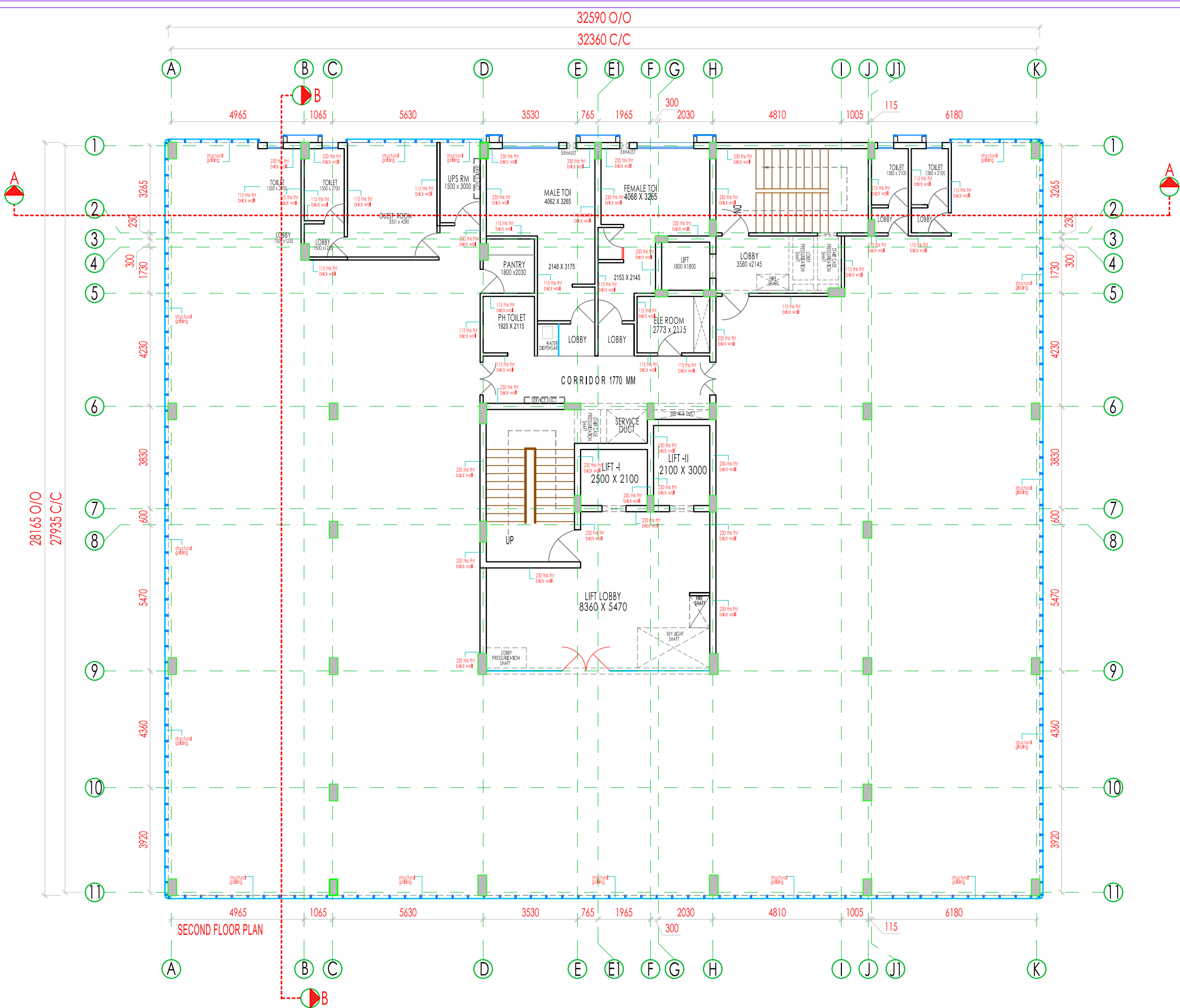
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SCALE: FIT TO SCALE	DATE: 14-05-2026

PROJECT:
PROPOSED CONSTRUCTION
OF HEAD OFFICE OF
TELANGANA GRAMEENA
BANK IN SY NO
417&420PLOT NO 79
IN UPPAL BHAGAYATH
LAYOUT UPPAL HYDERABAD

DWG TITLE:
TENDER DRAWING
SITE PLAN
STILT FLOOR PLAN

DWG NO:
ABHI/TGB/HO/TD/AR/03

SHEET NO:
03



28165 O/O
27935 C/C

SECOND FLOOR PLAN

CLIENT:
TELANGANA GRAMEENA BANK
 HEAD OFFICE NALLAKUNTA
 HYDERABAD

CONSULTANTS:
 STRUCTURAL CONSULTANT:
ZAKI & ASSOCIATES
 STRUCTURAL ENGINEERS.

PLUMBING CONSULTANT:

ELECTRICAL CONSULTANT:

HVAC CONSULTANT:

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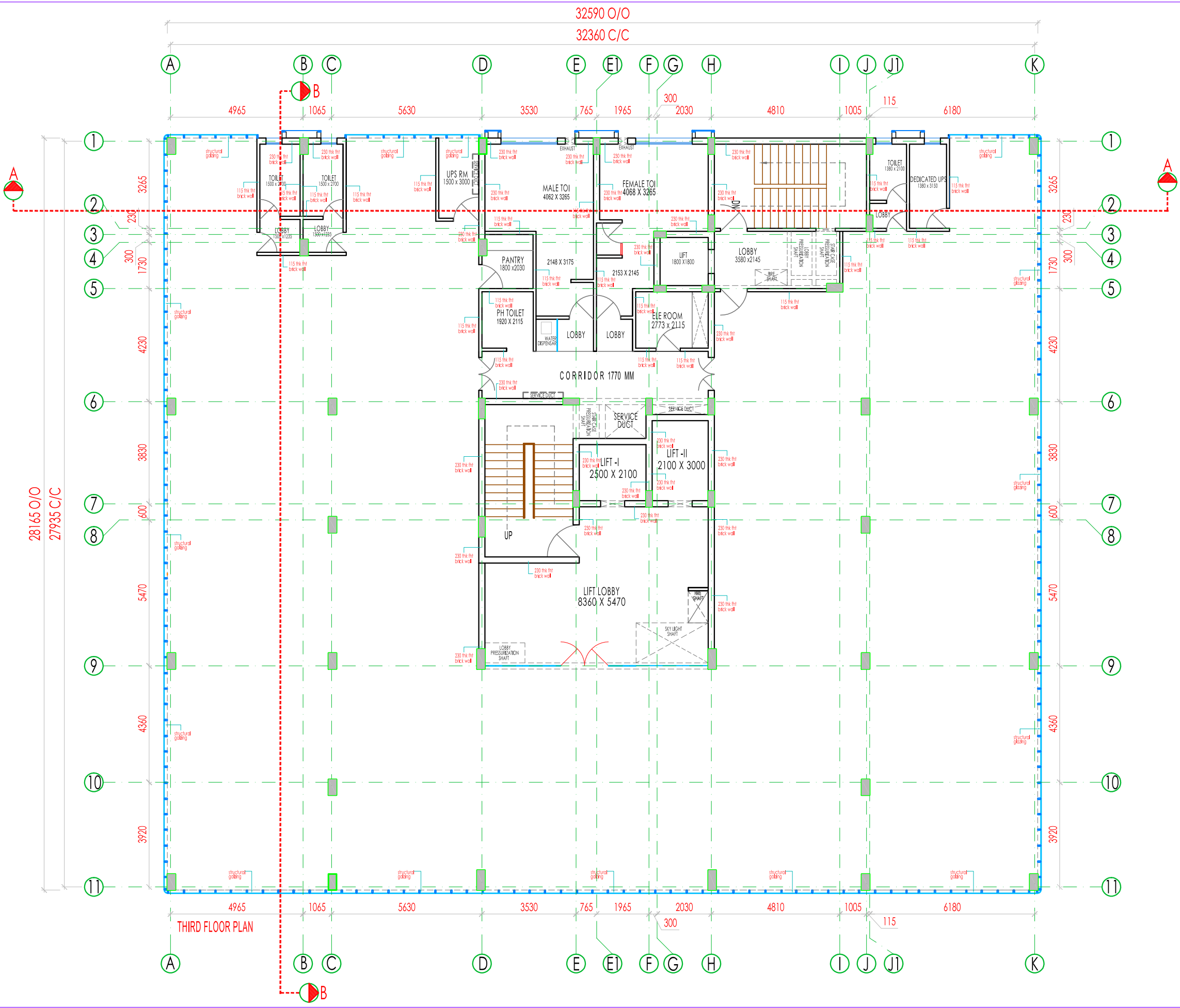
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	DRAWN BY BHANU
	CHECKED BY SREENATH
SCALE: FIT TO SCALE	DATE: 14-05-2026

PROJECT:
 PROPOSED CONSTRUCTION OF HEAD OFFICE OF
 TELANGANA GRAMEENA BANK IN SY NO
 417&420 PLOT NO 79
 IN UPPAL BHAGAYATH LAYOUT UPPAL HYDERABAD

DWG TITLE:
 TENDER DRAWING
 SECOND FLOOR PLAN

DWG NO:
 ABHI/TGB/HO/TD/AR/05

SHEET NO:
 05



28165 O/O
27935 C/C

THIRD FLOOR PLAN

CLIENT:
TELANGANA GRAMEENA BANK
 HEAD OFFICE NALLAKUNTA
 HYDERABAD

CONSULTANTS:
 STRUCTURAL CONSULTANT:
ZAKI & ASSOCIATES
 STRUCTURAL ENGINEERS.

PLUMBING CONSULTANT:

ELECTRICAL CONSULTANT:

HVAC CONSULTANT:

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	DRAWN BY	BHANU
	CHECKED BY	REENATH

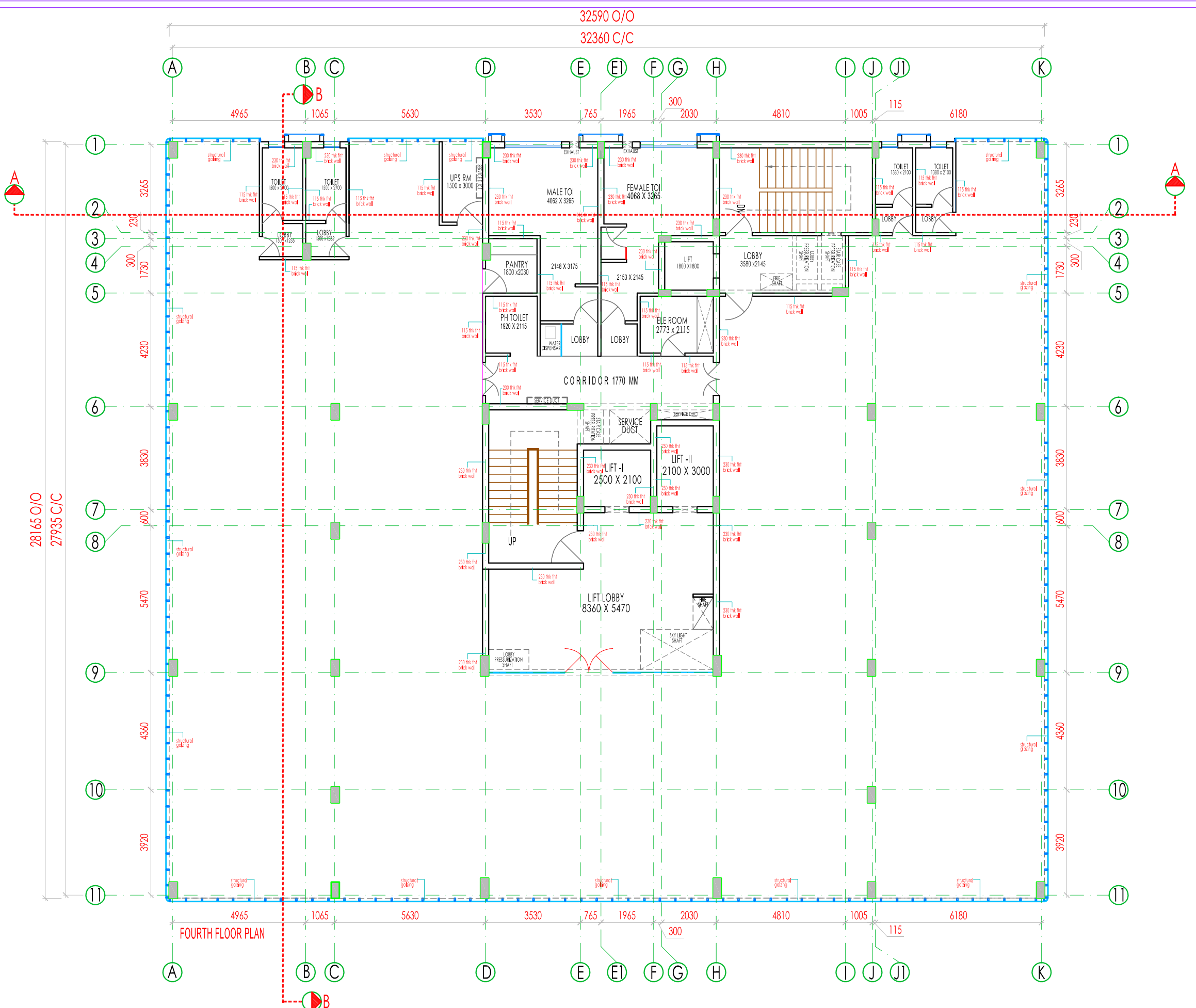
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FIT TO SCALE	14-05-2026

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 TELANGANA GRAMEENA
 BANK IN SY NO
 417&420 PLOT NO 79
 IN UPPAL BHAGAYATH
 LAYOUT UPPAL HYDERABAD

DWG TITLE:
 TENDER DRAWING
 THIRD FLOOR PLAN

DWG NO:
ABHI/TGB/HO/TD/AR/06

SHEET NO:
06



FOURTH FLOOR PLAN

CLIENT:
TELANGANA GRAMEENA BANK
 HEAD OFFICE NALLAKUNTA
 HYDERABAD

CONSULTANTS:
 STRUCTURAL CONSULTANT:
ZAKI & ASSOCIATES
 STRUCTURAL ENGINEERS.

PLUMBING CONSULTANT:
 ELECTRICAL CONSULTANT:
 HVAC CONSULTANT:

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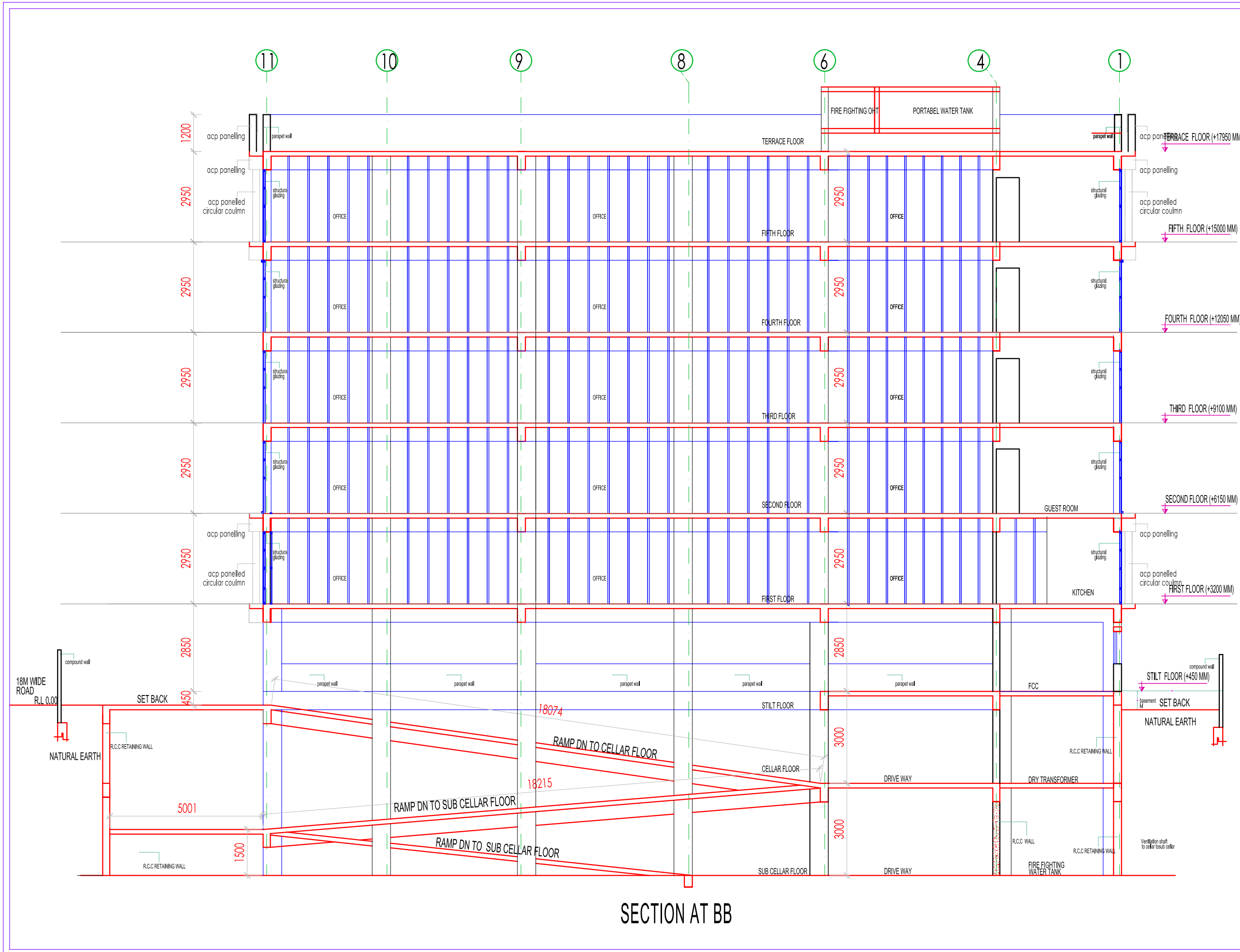
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SCALE: FIT TO SCALE	DATE: 14-05-2026	

PROJECT:
PROPOSED CONSTRUCTION OF HEAD OFFICE OF TELANGANA GRAMEENA BANK IN SY NO 417&420 PLOT NO 79 IN UPPAL BHAGAYATH LAYOUT UPPAL HYDERABAD

DWG TITLE:
TENDER DRAWING FOURTH FLOOR PLAN

DWG NO:
ABHI/TGB/HO/TD/AR/07

SHEET NO:
07



SECTION AT BB

CLIENT :
TELANGANA GRAMEENA BANK
 HEAD OFFICE NALLAKUNTA
 HYDERABAD

CONSULTANTS :

STRUCTURAL CONSULTANT :
ZAKI & ASSOCIATES
 STRUCTURAL ENGINEERS.

PLUMBING CONSULTANT :

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 Urban Planners, Project Managers
 Himayatnagar, Hyderabad
 abhikramarchitects@gmail.com

KEY MAP:

NORTH:	DEALT BY:	SREENATH
	DRAWN BY:	BHANU
	CHECKED BY:	SREENATH

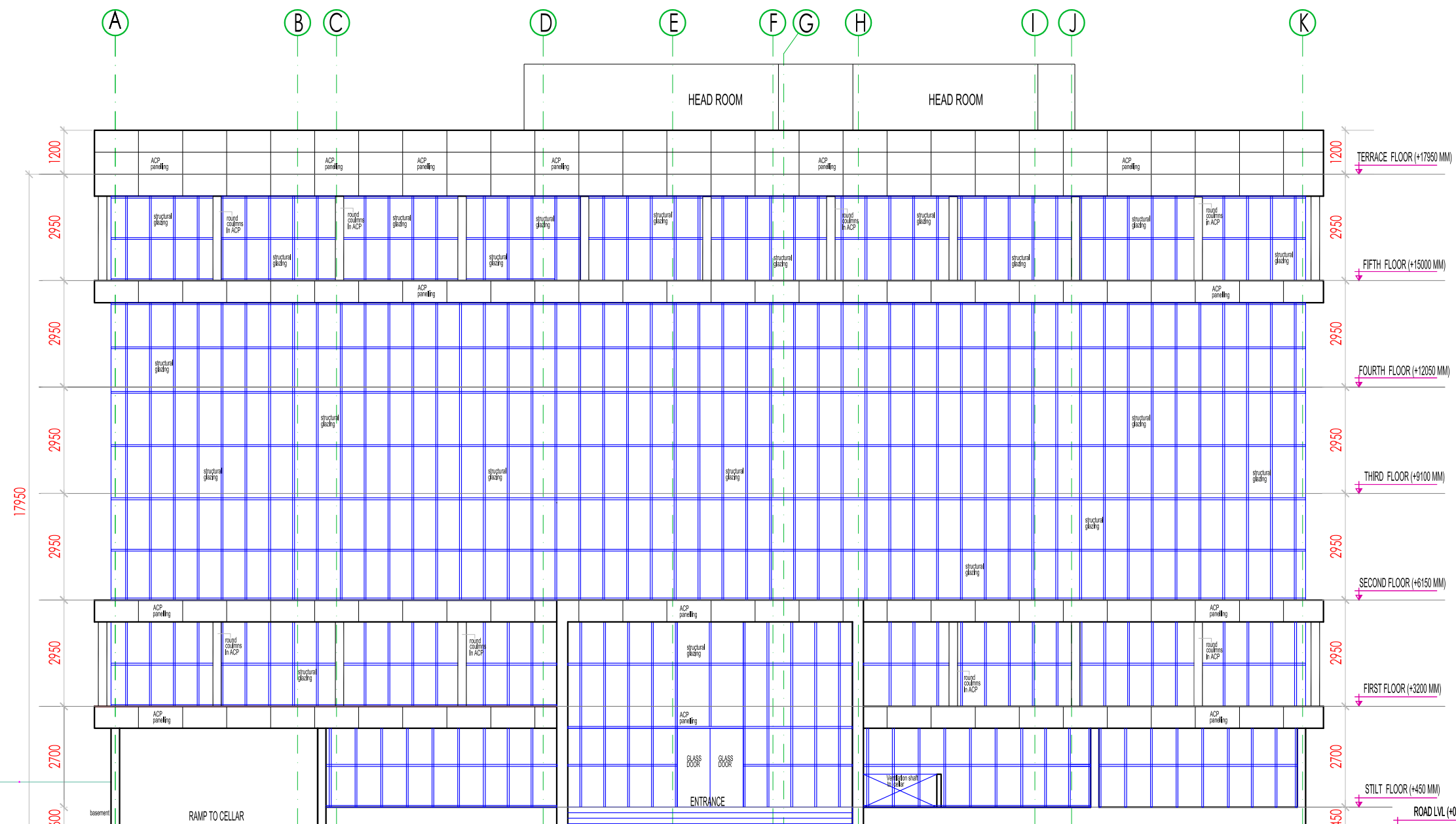
SCALE: FIT TO SCALE **DATE:** 14-05-2026

PROJECT:
 PROPOSED CONSTRUCTION OF HEAD OFFICE OF
 TELANGANA GRAMEENA BANK IN SY NO
 417&420 PLOT NO 79 IN UPPAL BHAGAYATH
 LAYOUT UPPAL HYDERABAD

DWG TITLE:
 TENDER DRAWING
 SECTION AT BB

DWG NO:
 ABHI/TGB/HO/TD/AR/11

SHEET NO:
 11



FRONT ELEVATION EAST

CLIENT :
TELANGANA GRAMEENA BANK
 HEAD OFFICE NALLAKUNTA
 HYDERABAD

CONSULTANTS :

STRUCTURAL CONSULTANT :
ZAKI & ASSOCIATES
 STRUCTURAL ENGINEERS.

PLUMBING CONSULTANT :

ELECTRICAL CONSULTANT :

HVAC CONSULTANT :

NOTE:
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NO.	DATE	REMARKS

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KEY MAP:

NORTH:	DEALT SREENATH
	DRAWN BY BHANU
	CHECKED BY SREENATH

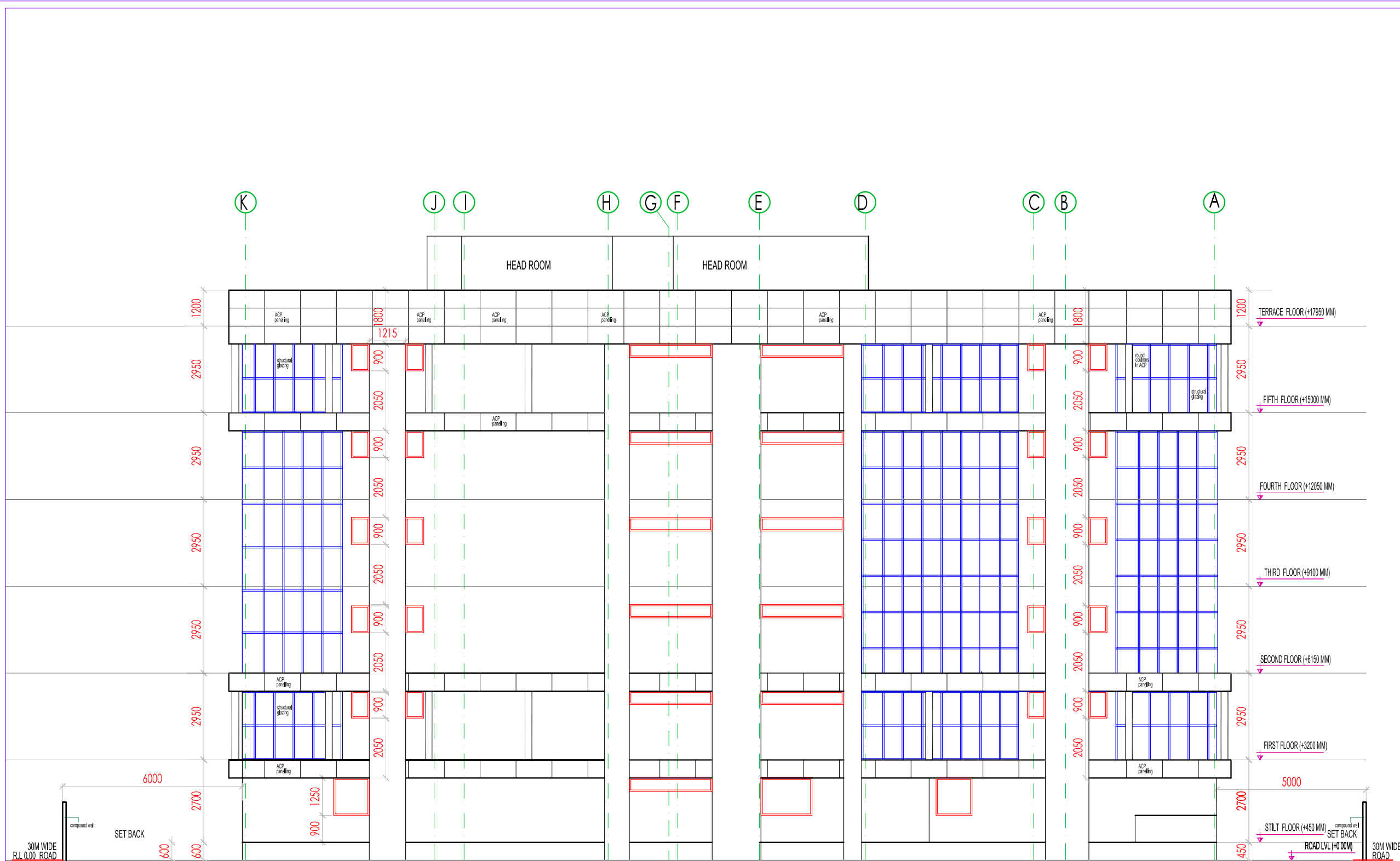
SCALE: FIT TO SCALE **DATE:** 14-05-2026

PROJECT:
 PROPOSED CONSTRUCTION OF HEAD OFFICE OF
 TELANGANA GRAMEENA BANK IN SY NO
 417&420 PLOT NO 79
 IN UPPAL BHAGAYATH LAYOUT UPPAL HYDERABAD

DWG TITLE:
 TENDER DRAWING
 FRONT ELEVATION

DWG NO:
 ABHI/TGB/HO/TD/AR/12

SHEET NO:
 12



REAR ELEVATION WEST

CLIENT:
TELANGANA GRAMEENA BANK
 HEAD OFFICE NALLAKUNTA
 HYDERABAD

CONSULTANTS:
 STRUCTURAL CONSULTANT:
ZAKI & ASSOCIATES
 STRUCTURAL ENGINEERS.

PLUMBING CONSULTANT:

 ELECTRICAL CONSULTANT:

 HVAC CONSULTANT:

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 abhikramarchitects@gmail.com

KEY MAP:

NORTH:	DEALT	SREENATH
	DRAWN BY	BHANU
	CHECKED BY	SREENATH

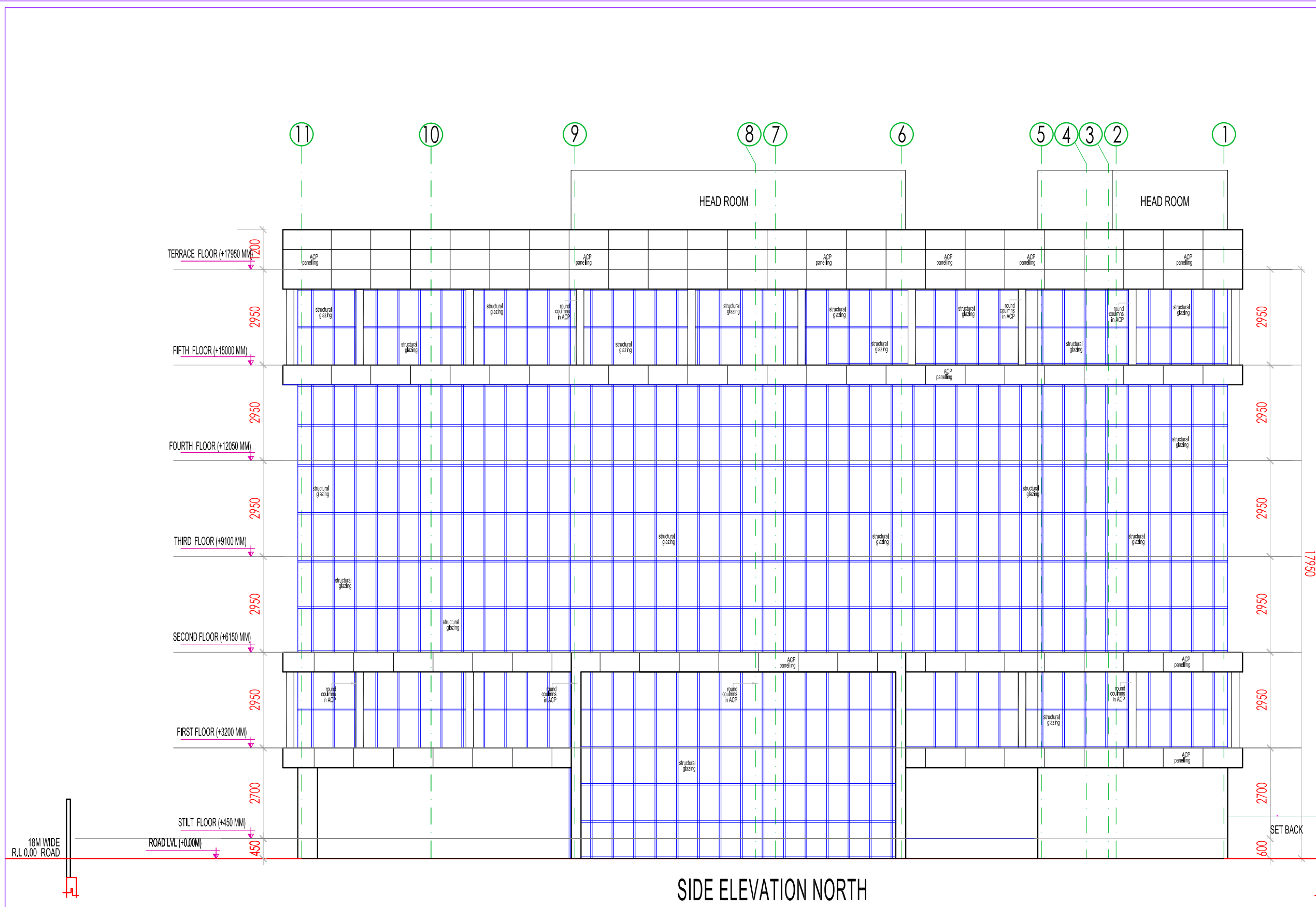
SCALE: DATE:
FIT TO SCALE 14-05-2026

PROJECT:
PROPOSED CONSTRUCTION OF HEAD OFFICE OF TELANGANA GRAMEENA BANK IN SY NO 417&420 PLOT NO 79 IN UPPAL BHAGAYATH LAYOUT UPPAL HYDERABAD

DWG TITLE:
TENDER DRAWING REAR ELEVATION


DWG NO:
ABHI/TGB/HO/TD/AR/13

SHEET NO:
13



SIDE ELEVATION NORTH

CLIENT :
TELANGANA GRAMEENA BANK
 HEAD OFFICE NALLAKUNTA
 HYDERABAD



CONSULTANTS :

STRUCTURAL CONSULTANT :
ZAKI & ASSOCIATES
 STRUCTURAL ENGINEERS.

PLUMBING CONSULTANT :

ELECTRICAL CONSULTANT :

HVAC CONSULTANT :

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 Himayatnagar, Hyderabad
 abhikramarchitects@gmail.com

KEY MAP:

NORTH:	DEALT SREENATH
	DRAWN BY BHANU
	CHECKED BY SREENATH

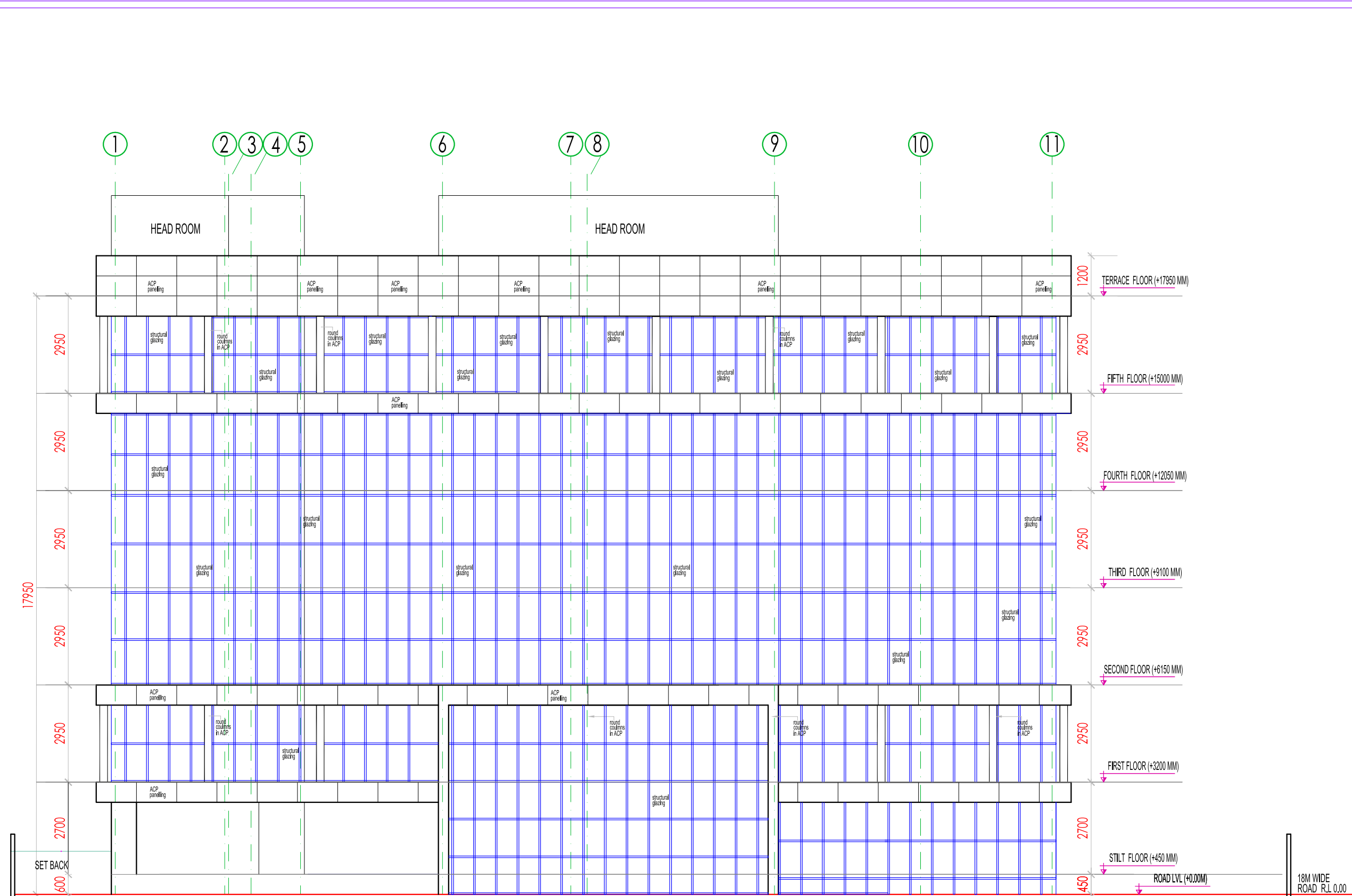
SCALE: FIT TO SCALE **DATE:** 14-05-2026

PROJECT:
 PROPOSED CONSTRUCTION OF HEAD OFFICE OF
 TELANGANA GRAMEENA BANK IN SY NO 417&420 PLOT NO 79 IN UPPAL BHAGAYATH LAYOUT UPPAL HYDERABAD

DWG TITLE:
 TENDER DRAWING
 RIGHT SIDE ELEVATION

DWG NO:
 ABHI/TGB/HO/TD/AR/14

SHEET NO:
 14



SIDE ELEVATION SOUTH

CLIENT:
TELANGANA GRAMEENA BANK
 HEAD OFFICE NALLAKUNTA
 HYDERABAD

తెలంగాణ గ్రామీణ బ్యాంక్
 TELANGANA GRAMEENA BANK
 Scheduled Bank Owned by Government

CONSULTANTS:
 STRUCTURAL CONSULTANT:
ZAKI & ASSOCIATES
 STRUCTURAL ENGINEERS.

PLUMBING CONSULTANT:

ELECTRICAL CONSULTANT:

HVAC CONSULTANT:

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	DRAWN BY	BHANU
	CHECKED BY	SREENATH

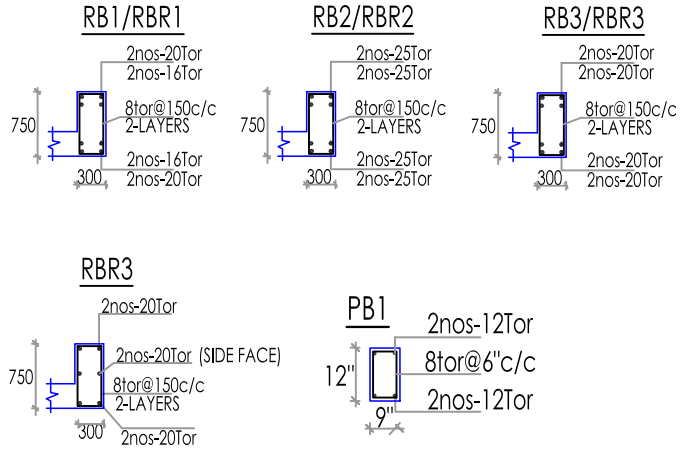
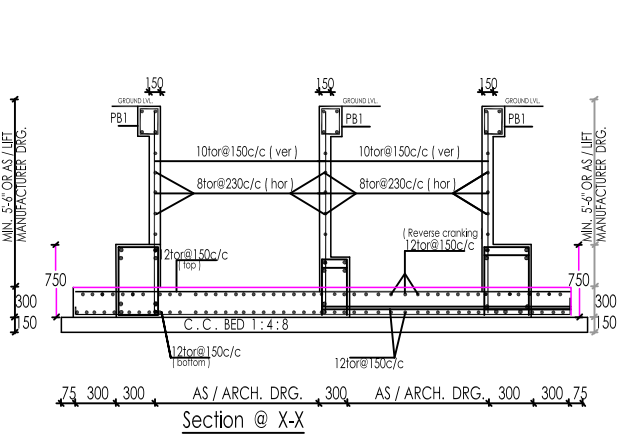
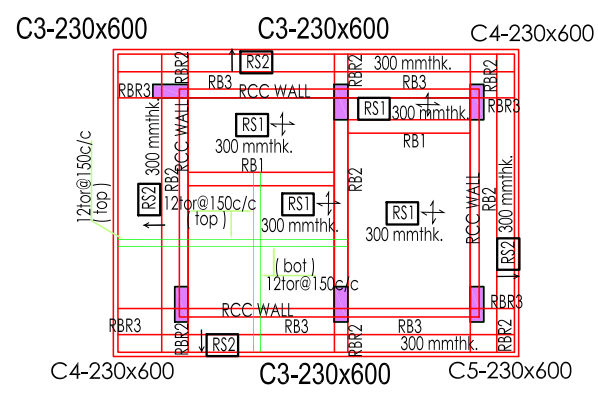
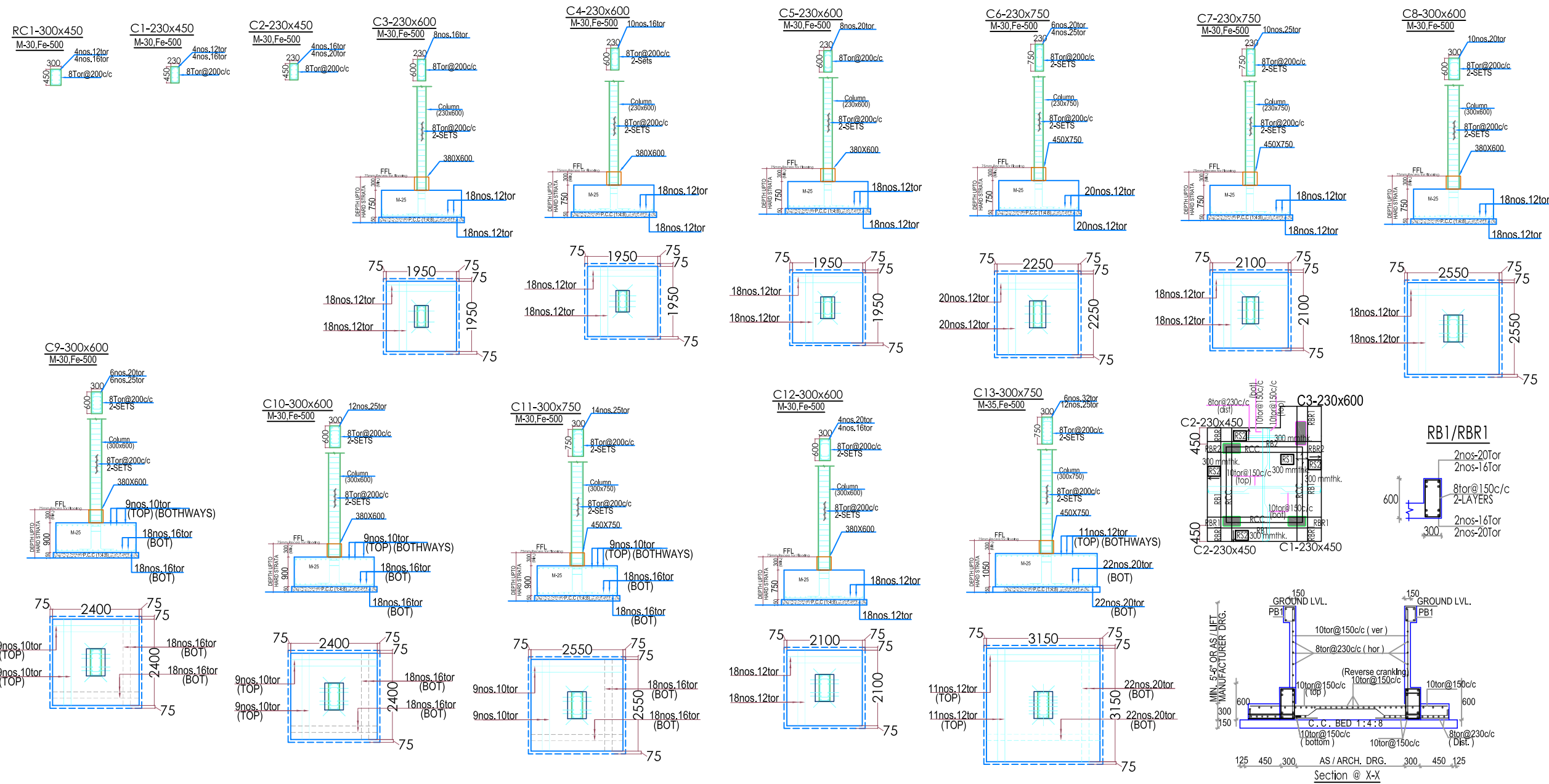
SCALE: DATE:
FIT TO SCALE 14-05-2026

PROJECT:
PROPOSED CONSTRUCTION OF HEAD OFFICE OF TELANGANA GRAMEENA BANK IN SY NO 417&420 PLOT NO 79 IN UPPAL BHAGAYATH LAYOUT UPPAL HYDERABAD

DWG TITLE:
TENDER DRAWING LEFT SIDE ELEVATION

DWG NO:
ABHI/TGB/HO/TD/AR/15

SHEET NO:
15



PROJECT/CLIENT:					
TELANGANA GRAMEENA BANK HEAD OFFICE AT HYDERABAD					
TITLE: COLUMN FOOTING DETAILS					
NOTE: FOUNDATIONS ARE DESIGNED FOR 2c+S+5 FLOORS ONLY SBC IS CONSIDERED AS 450KN/M ² (SUBJECT TO BE CHANGED AS PER SITE CONDITION) DO NOT SCALE THE DRG, FOLLOW WRITTEN DIMENSIONS ONLY STRUCTURE IS DESIGNED FOR SEISMIC FORCES AS PER IS:1893, ZONE II COVERING FOR MAIN REINFORCEMENT COLUMNS 40mm, FOOTING 50mm CURING SHALL BE DONE FOR 21 DAYS					
DATE:	R.NO	REVISION	DATE:	DEALT:	DRAWN:
23-04-2026	100	AS PER ARCHIT	23-04-2026	TEJA	MUZAFFAR
ARCHITECT:			CHECKED:		
ZAKI & ASSOCIATES STRUCTURAL ENGINEERS, 4th Floor, Anasuya Commercial Complex, Beside Remedy Hospital, Hmayathnagar, Hydr. # 23224772.			TEJA		
ZAKI AHMED CONSULTING ENGINEER			S-02		

CLIENT:
TELANGANA GRAMEENA BANK
 HEAD OFFICE NALLAKUNTA
 HYDERABAD

CONSULTANTS:
STRUCTURAL CONSULTANT:
ZAKI & ASSOCIATES
 STRUCTURAL ENGINEERS.

PLUMBING CONSULTANT:

ELECTRICAL CONSULTANT:

HVAC CONSULTANT:

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 abhikramarchitects@gmail.com

KEY MAP:

NORTH:	DEALT:	SREENATH
	DRAWN BY:	BHANU
	CHECKED BY:	SREENATH
SCALE:	DATE:	
FIT TO SCALE	14-05-2026	

PROJECT:
PROPOSED CONSTRUCTION OF HEAD OFFICE OF TELANGANA GRAMEENA BANK IN SY NO 417&420 PLOT NO 79 IN UPPAL BHAGAYATH LAYOUT UPPAL HYDERABAD

DWG TITLE:
TENDER DRAWING FOOTING DETAILS

DWG NO:
ABH/TGB/HO/TD/STR/02

SHEET NO:
17

COLUMN REDUCTION DETAILS

Columns upto	Column After	Column After	Column After	Column After	Column After	Column After	Column After
C1-230X450 M-30, Fe-500 4nos. 12lor 230 8lor@200c	C1-230X450 M-30, Fe-500 4nos. 12lor 230 8lor@200c	C1-230X450 M-25, Fe-500 4nos. 12lor 230 8lor@200c	C1-230X450 M-25, Fe-500 4nos. 12lor 230 8lor@200c	C1-230X450 M-25, Fe-500 4nos. 12lor 230 8lor@200c	C1-230X450 M-25, Fe-500 4nos. 12lor 230 8lor@200c	C1-230X450 M-25, Fe-500 4nos. 12lor 230 8lor@200c	C1-230X450 M-25, Fe-500 4nos. 12lor 230 8lor@200c
C2-230X450 M-30, Fe-500 4nos. 18lor 230 8lor@200c	C2-230X450 M-30, Fe-500 4nos. 18lor 230 8lor@200c	C2-230X450 M-25, Fe-500 4nos. 18lor 230 8lor@200c	C2-230X450 M-25, Fe-500 4nos. 18lor 230 8lor@200c	C2-230X450 M-25, Fe-500 4nos. 18lor 230 8lor@200c	C2-230X450 M-25, Fe-500 4nos. 18lor 230 8lor@200c	C2-230X450 M-25, Fe-500 4nos. 18lor 230 8lor@200c	C2-230X450 M-25, Fe-500 4nos. 18lor 230 8lor@200c
C3-230X600 M-30, Fe-500 8nos. 18lor 230 8lor@200c	C3-230X600 M-30, Fe-500 8nos. 18lor 230 8lor@200c	C3-230X600 M-25, Fe-500 8nos. 18lor 230 8lor@200c	C3-230X600 M-25, Fe-500 8nos. 18lor 230 8lor@200c	C3-230X600 M-25, Fe-500 8nos. 18lor 230 8lor@200c	C3-230X600 M-25, Fe-500 8nos. 18lor 230 8lor@200c	C3-230X600 M-25, Fe-500 8nos. 18lor 230 8lor@200c	C3-230X600 M-25, Fe-500 8nos. 18lor 230 8lor@200c
C4-230X600 M-30, Fe-500 10nos. 18lor 230 8lor@200c	C4-230X600 M-30, Fe-500 10nos. 18lor 230 8lor@200c	C4-230X600 M-25, Fe-500 10nos. 18lor 230 8lor@200c	C4-230X600 M-25, Fe-500 10nos. 18lor 230 8lor@200c	C4-230X600 M-25, Fe-500 10nos. 18lor 230 8lor@200c	C4-230X600 M-25, Fe-500 10nos. 18lor 230 8lor@200c	C4-230X600 M-25, Fe-500 10nos. 18lor 230 8lor@200c	C4-230X600 M-25, Fe-500 10nos. 18lor 230 8lor@200c
C5-230X600 M-30, Fe-500 8nos. 20lor 230 8lor@200c	C5-230X600 M-30, Fe-500 8nos. 20lor 230 8lor@200c	C5-230X600 M-25, Fe-500 8nos. 20lor 230 8lor@200c	C5-230X600 M-25, Fe-500 8nos. 20lor 230 8lor@200c	C5-230X600 M-25, Fe-500 8nos. 20lor 230 8lor@200c	C5-230X600 M-25, Fe-500 8nos. 20lor 230 8lor@200c	C5-230X600 M-25, Fe-500 8nos. 20lor 230 8lor@200c	C5-230X600 M-25, Fe-500 8nos. 20lor 230 8lor@200c
C6-230X750 M-30, Fe-500 8nos. 20lor 230 8lor@200c	C6-230X750 M-30, Fe-500 8nos. 20lor 230 8lor@200c	C6-230X750 M-25, Fe-500 8nos. 20lor 230 8lor@200c	C6-230X750 M-25, Fe-500 8nos. 20lor 230 8lor@200c	C6-230X750 M-25, Fe-500 8nos. 20lor 230 8lor@200c	C6-230X750 M-25, Fe-500 8nos. 20lor 230 8lor@200c	C6-230X750 M-25, Fe-500 8nos. 20lor 230 8lor@200c	C6-230X750 M-25, Fe-500 8nos. 20lor 230 8lor@200c
C7-230X750 M-30, Fe-500 10nos. 25lor 230 8lor@200c	C7-230X750 M-30, Fe-500 10nos. 25lor 230 8lor@200c	C7-230X750 M-25, Fe-500 10nos. 25lor 230 8lor@200c	C7-230X750 M-25, Fe-500 10nos. 25lor 230 8lor@200c	C7-230X750 M-25, Fe-500 10nos. 25lor 230 8lor@200c	C7-230X750 M-25, Fe-500 10nos. 25lor 230 8lor@200c	C7-230X750 M-25, Fe-500 10nos. 25lor 230 8lor@200c	C7-230X750 M-25, Fe-500 10nos. 25lor 230 8lor@200c
C8-300X600 M-30, Fe-500 10nos. 20lor 300 8lor@200c	C8-300X600 M-30, Fe-500 10nos. 20lor 300 8lor@200c	C8-300X600 M-25, Fe-500 10nos. 20lor 300 8lor@200c	C8-300X600 M-25, Fe-500 10nos. 20lor 300 8lor@200c	C8-300X600 M-25, Fe-500 10nos. 20lor 300 8lor@200c	C8-300X600 M-25, Fe-500 10nos. 20lor 300 8lor@200c	C8-300X600 M-25, Fe-500 10nos. 20lor 300 8lor@200c	C8-300X600 M-25, Fe-500 10nos. 20lor 300 8lor@200c
C9-300X600 M-30, Fe-500 8nos. 20lor 300 8lor@200c	C9-300X600 M-30, Fe-500 8nos. 20lor 300 8lor@200c	C9-300X600 M-25, Fe-500 8nos. 20lor 300 8lor@200c	C9-300X600 M-25, Fe-500 8nos. 20lor 300 8lor@200c	C9-300X600 M-25, Fe-500 8nos. 20lor 300 8lor@200c	C9-300X600 M-25, Fe-500 8nos. 20lor 300 8lor@200c	C9-300X600 M-25, Fe-500 8nos. 20lor 300 8lor@200c	C9-300X600 M-25, Fe-500 8nos. 20lor 300 8lor@200c
C10-300X600 M-30, Fe-500 12nos. 25lor 300 8lor@200c	C10-300X600 M-30, Fe-500 12nos. 25lor 300 8lor@200c	C10-300X600 M-25, Fe-500 12nos. 25lor 300 8lor@200c	C10-300X600 M-25, Fe-500 12nos. 25lor 300 8lor@200c	C10-300X600 M-25, Fe-500 12nos. 25lor 300 8lor@200c	C10-300X600 M-25, Fe-500 12nos. 25lor 300 8lor@200c	C10-300X600 M-25, Fe-500 12nos. 25lor 300 8lor@200c	C10-300X600 M-25, Fe-500 12nos. 25lor 300 8lor@200c
C11-300X750 M-30, Fe-500 14nos. 25lor 300 8lor@200c	C11-300X750 M-30, Fe-500 14nos. 25lor 300 8lor@200c	C11-300X750 M-25, Fe-500 14nos. 25lor 300 8lor@200c	C11-300X750 M-25, Fe-500 14nos. 25lor 300 8lor@200c	C11-300X750 M-25, Fe-500 14nos. 25lor 300 8lor@200c	C11-300X750 M-25, Fe-500 14nos. 25lor 300 8lor@200c	C11-300X750 M-25, Fe-500 14nos. 25lor 300 8lor@200c	C11-300X750 M-25, Fe-500 14nos. 25lor 300 8lor@200c
C12-300X600 M-30, Fe-500 4nos. 20lor 300 8lor@200c	C12-300X600 M-30, Fe-500 4nos. 20lor 300 8lor@200c	C12-300X600 M-25, Fe-500 4nos. 20lor 300 8lor@200c	C12-300X600 M-25, Fe-500 4nos. 20lor 300 8lor@200c	C12-300X600 M-25, Fe-500 4nos. 20lor 300 8lor@200c	C12-300X600 M-25, Fe-500 4nos. 20lor 300 8lor@200c	C12-300X600 M-25, Fe-500 4nos. 20lor 300 8lor@200c	C12-300X600 M-25, Fe-500 4nos. 20lor 300 8lor@200c
C13-300X750 M-35, Fe-500 8nos. 20lor 12nos. 25lor 300 8lor@200c	C13-300X750 M-30, Fe-500 8nos. 20lor 12nos. 25lor 300 8lor@200c	C13-300X600 M-25, Fe-500 8nos. 20lor 12nos. 25lor 300 8lor@200c	C13-300X600 M-25, Fe-500 8nos. 20lor 12nos. 25lor 300 8lor@200c	C13-300X600 M-25, Fe-500 8nos. 20lor 12nos. 25lor 300 8lor@200c	C13-300X600 M-25, Fe-500 8nos. 20lor 12nos. 25lor 300 8lor@200c	C13-300X600 M-25, Fe-500 8nos. 20lor 12nos. 25lor 300 8lor@200c	C13-300X600 M-25, Fe-500 8nos. 20lor 12nos. 25lor 300 8lor@200c

PROJECT: TELANGANA GRAMEENA BANK HEAD OFFICE AT HYDERABAD

TITLE: COLUMN REDUCTION DETAILS

DATE: 14-05-26

SCALE: HIT TO SCALE

PROJECT ENGINEER: ZAKI AHMED

STRUCTURAL ENGINEER: ZAKI & ASSOCIATES

PROJECT MANAGER: ZAKI AHMED

CONSULTING ENGINEER: ZAKI AHMED

NO: S-03

CLIENT: TELANGANA GRAMEENA BANK
HEAD OFFICE NALLAKUNTA
HYDERABAD

PROJECT: PROPOSED CONSTRUCTION OF HEAD OFFICE OF TELANGANA GRAMEENA BANK IN SY NO 417Z420PLOT NO 79 IN UPPAL BHAGAVATH LAYOUT, UPPAL, HYDERABAD.

DRAWING TITLE: TENDER DRAWING COLUMN REDUCTION DETAILS

DRIVING NUMBER: ABH/IT/GB/HO/TD/STR03

SHEET NUMBER: 18

SCALE: HIT TO SCALE

CAD FILE

ARCHITECT: abhikram-s

ARCHITECT: ANILKUMAR, INTERIOR DESIGNER, VALUER, URBAN PLANNER, PROJECT MANAGER

CONTACT: 9440110909, HYDERABAD

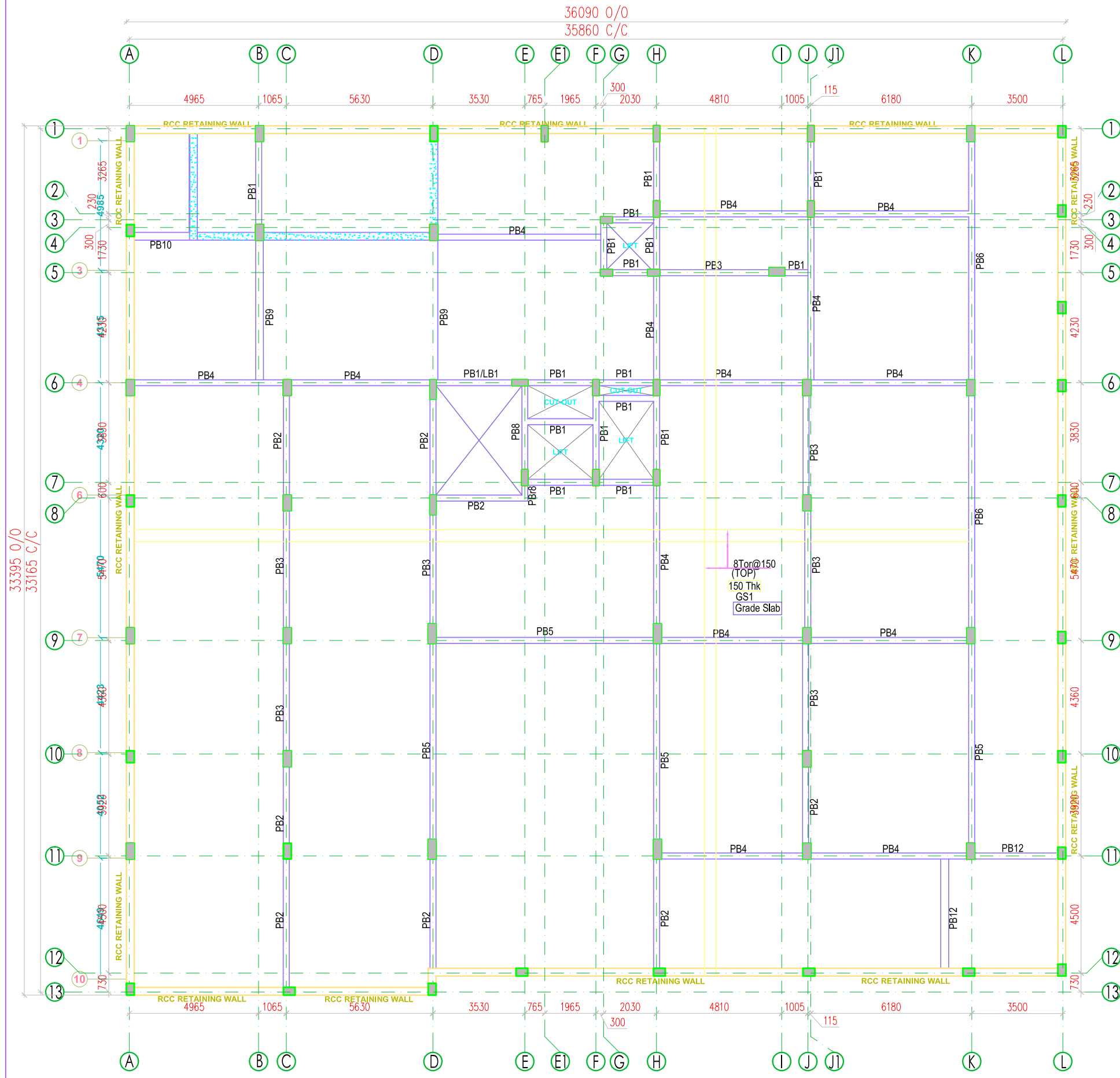
EMAIL: abhikramarchitects@gmail.com

DESIGNED & CHECKED BY: E.SREENATH

INITIALS: BHANU

DATE: 14-05-26

SIGNED BY: [Signature]



CLIENT:
TELANGANA GRAMEENA BANK
 HEAD OFFICE NALLAKUNTA
 HYDERABAD

CONSULTANTS:
 STRUCTURAL CONSULTANT:
ZAKI & ASSOCIATES
 STRUCTURAL ENGINEERS.

PLUMBING CONSULTANT:

ELECTRICAL CONSULTANT:

HVAC CONSULTANT:

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KEY MAP:

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	DRAWN BY:	BHANU
	CHECKED BY:	SREENATH

SCALE:	DATE:
FIT TO SCALE	14-05-2026

PROJECT:
PROPOSED CONSTRUCTION OF HEAD OFFICE OF TELANGANA GRAMEENA BANK IN SY NO 417&420 PLOT NO 79 IN UPPAL BHAGAYATH LAYOUT UPPAL HYDERABAD

DWG TITLE:
TENDER DRAWING PLINTH BEAM DETAILS

DWG NO:
ABHI/TGB/HO/TD/STR/04

SHEET NO:
19

PROJECT/CLIENT:
TELANGANA GRAMEENA BANK HEAD OFFICE AT HYDERABAD

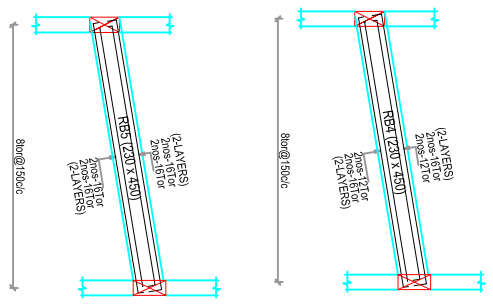
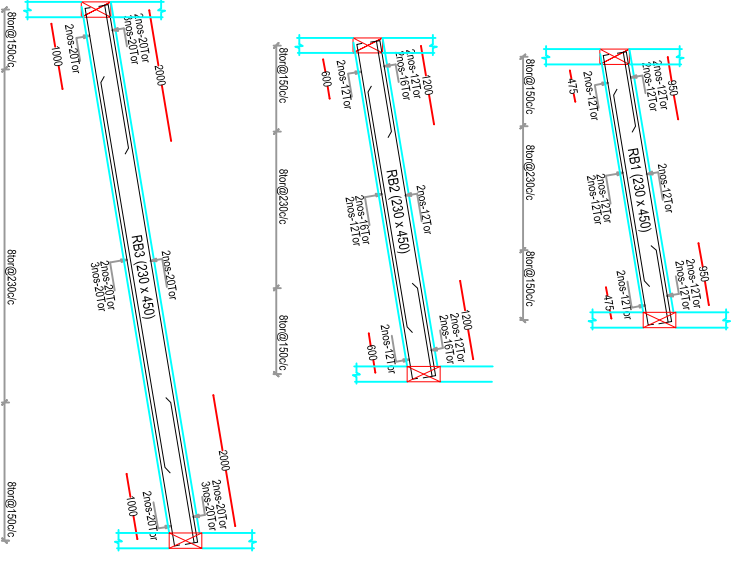
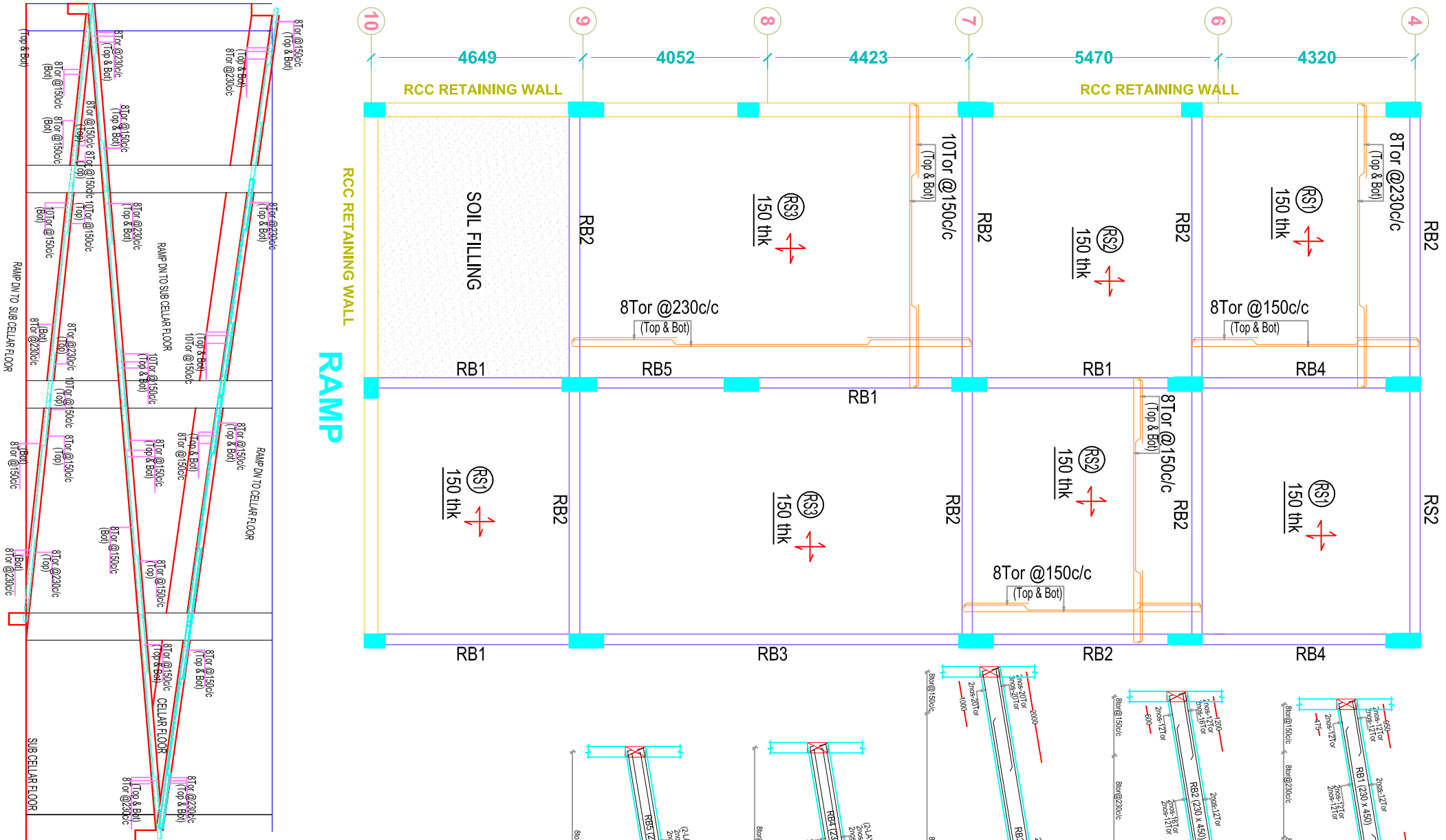
TITLE:
PLINTH BEAM DETAILS

- NOTE:
- CRANKING OF BARS SHOULD BE DONE @ 1/4 TH OF THE SPAN @ AN ANGLE OF 45°.
 - MIX SHALL BE M20 (1:1:2:3) WITH W/C RATIO 0.40.
 - COVERING FOR MAIN STEEL SHALL BE 1/2 FOR SLABS.
 - CURING SHALL BE DONE FOR 21 DAYS.

DATE:	R/N/O:	REVISION:	DATE:	DEALT:	DRAWN:	CHECKED:
10-01-2026	00	AS PER ARCHT	23-04-2026	TEJA	MUZAFFAR	TEJA
03-01-2026	01	AS PER ARCHT				
23-04-2026	01	AS PER ARCHT				

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 Ph: 23224772.
ZAKI AHMED
 CONSULTING ENGINEER

S-04



PROJECT/CLIENT :
TELANGANA GRAMEENA BANK HEAD OFFICE AT HYDERABAD

TITLE : **RAMP BEAM DETAILS**

NOTE:

- CRANKING OF BARS SHOULD BE DONE @ 1/4 TH OF THE SPAN @ AN ANGLE OF 45°.
- MAX SHALL BE M20 (1:1:2) WITH W/C RATIO 0.40.
- COVERING FOR MAIN STEEL SHALL BE 12 FOR SLABS.
- CURING SHALL BE DONE FOR 21 DAVS.

DATE	BY	REVISION	DATE	DEALT	DRAWN	CHECKED
25-04-2026	AS PER ARCHD	00	25-04-2026	TEJA	MUZAFFAR	TEJA

ARCHITECT :
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CLIENT :	PROJECT :	Job number :	Sheet number
TELANGANA GRAMEENA BANK HEAD OFFICE NALLAKUNTA HYDERABAD	PROPOSED CONSTRUCTION OF HEAD OFFICE OF TELANGANA GRAMEENA BANK IN SV NO 4178&200/LOT NO 79 IN UPPAL BHAGAVATH LAYOUT, UPPAL, HYDERABAD.	Drawing number ABHI/GB/HO/TD/STR06	21



DRIVING TITLE :
RAMP DETAILS

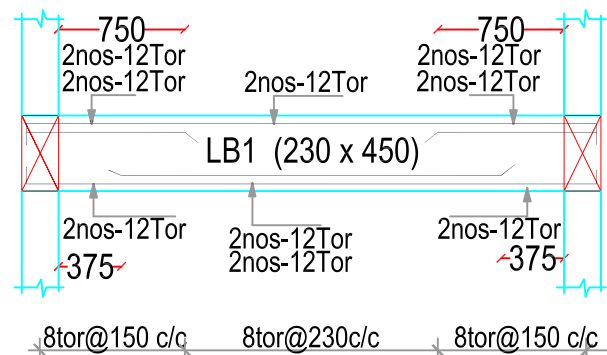
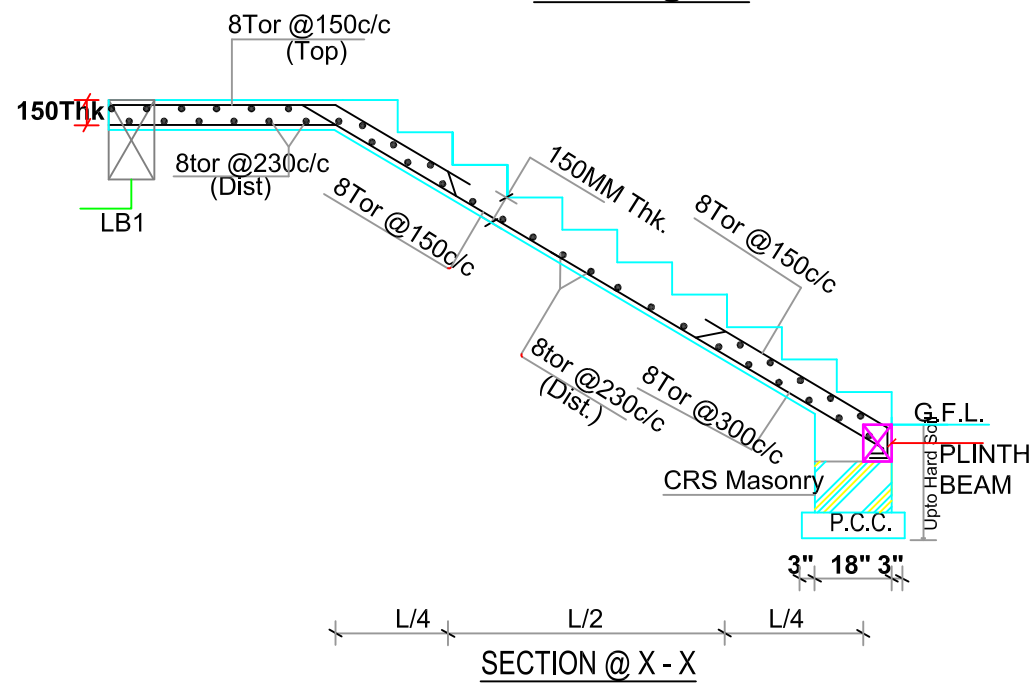
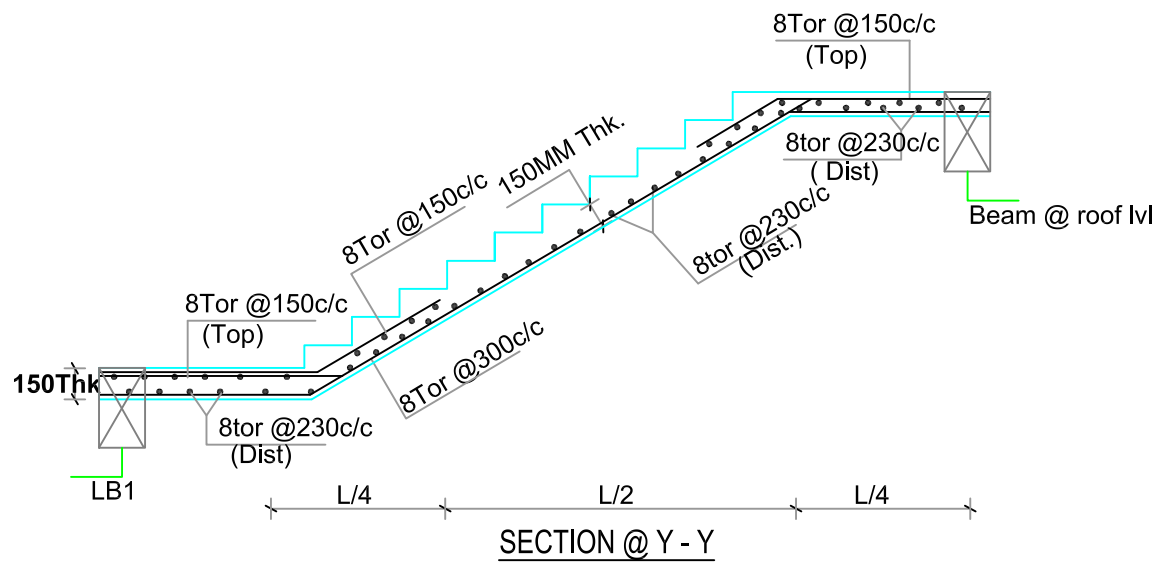
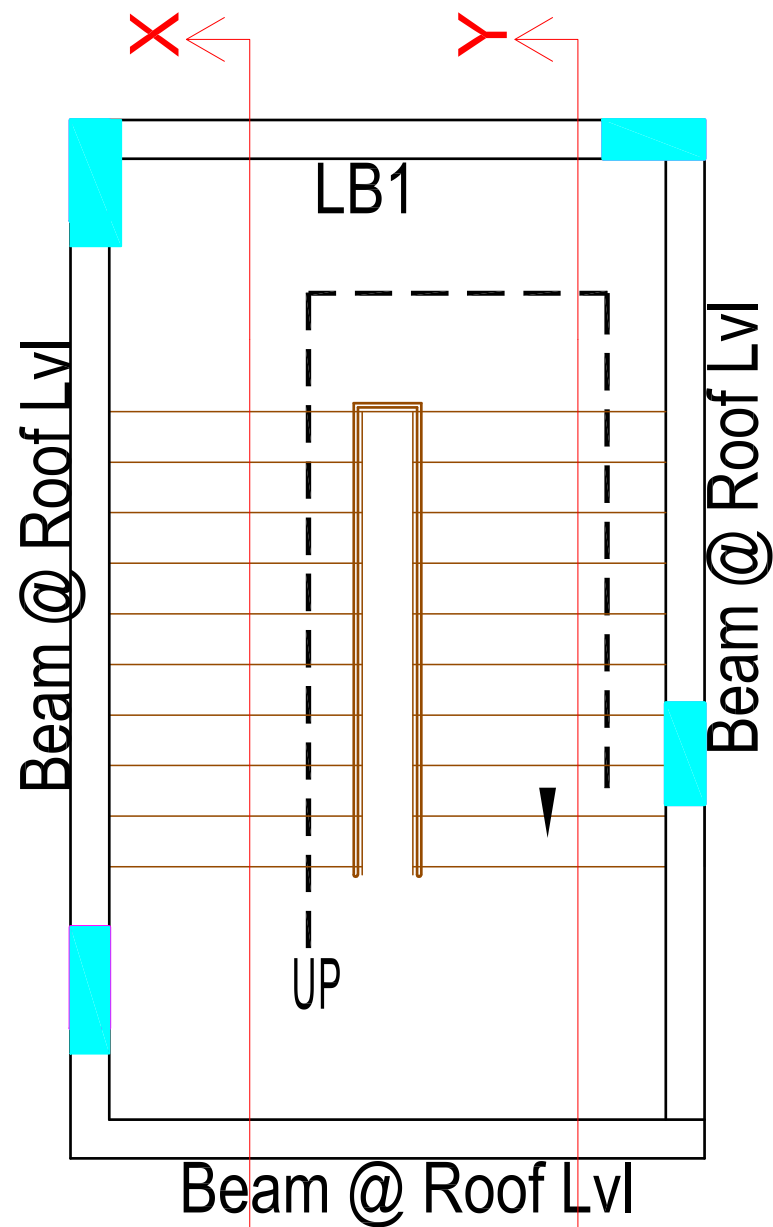
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drawn by	initials	signed by	date
BHANU			14-05-26

approved & checked by
E.SREENATH

CAD file

scale
 1:1 TO SCALE



PROJECT/CLIENT : TELANGANA GRAMEENA BANK HEAD OFFICE AT HYDERABAD					
TITLE : STAIRCASE-1 DETAILS					
NOTE: ① CRANKING OF BARS SHOULD BE DONE @ 1/4 TH OF THE SPAN @ AN ANGLE OF 45°. ② MIX SHALL BE M20 (1:1:1/2.3) WITH W/C RATIO 0.40. ③ COVERING FOR MAIN STEEL SHALL BE 1/2 FOR SLABS. ④ CURING SHALL BE DONE FOR 21 DAYS.					
DATE	R.NO	REVISION	DATE	DEALT	CHECKED
23-04-2026	00	AS PER ARCHT	23-04-2026	TEJA	TEJA
ARCHITECT : ZAKI & ASSOCIATES STRUCTURAL ENGINEERS, 4th Floor, Anasuya Commercial Complex, Beside Remedy Hospital, Himayathnagar, Hydr. No: 23224772. ZAKI AHMED CONSULTING ENGINEER					S-06

CLIENT:
TELANGANA GRAMEENA BANK
HEAD OFFICE NALLAKUNTA
HYDERABAD

CONSULTANTS:
STRUCTURAL CONSULTANT:
ZAKI & ASSOCIATES
STRUCTURAL ENGINEERS.

PLUMBING CONSULTANT :

ELECTRICAL CONSULTANT :

HVAC CONSULTANT :

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NO.	DATE	REMARKS

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	DRAWN BY	BHANU
	CHECKED BY	SREENATH

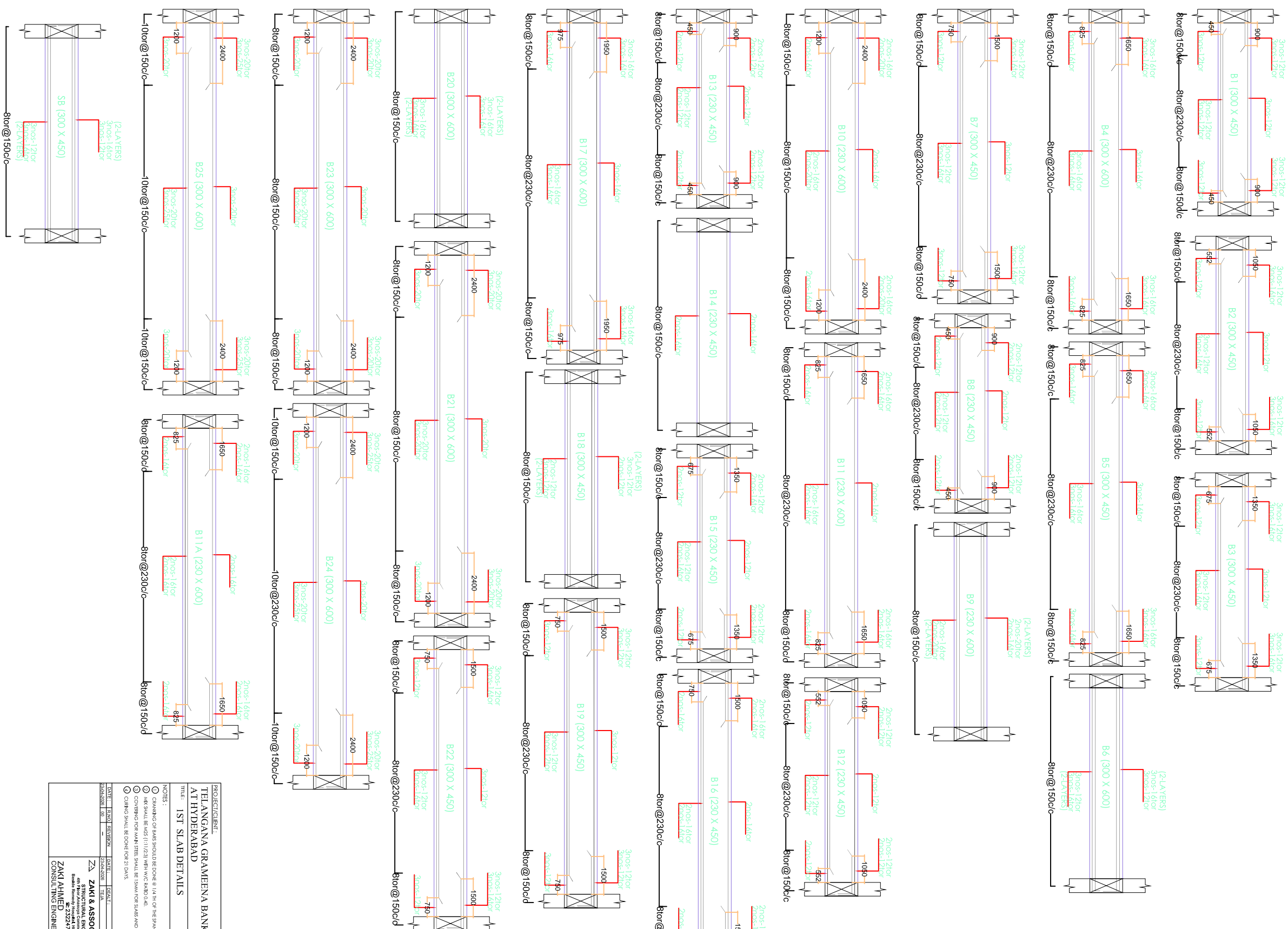
SCALE:	DATE:
FIT TO SCALE	14-05-2026

PROJECT:
PROPOSED CONSTRUCTION
OF HEAD OFFICE OF .
TELANGANA GRAMEENA
BANK IN SY NO
417&420 PLOT NO 79
IN UPPAL BHAGAYATH
LAYOUT UPPAL HYDERABAD

DWG TITLE:
**TENDER DRAWING
STAIRCASE 1 DETAILS**

DWG NO:
ABHI/TGB/HO/TD/STR/07

SHEET NO:
22



PROJECT CLIENT: **TELANGANA GRAMEENA BANK**
 PROPOSED CONSTRUCTION OF HEAD OFFICE OF
 TELANGANA GRAMEENA BANK IN SY NO 417&420/10
 NO 79 IN UPPAL BHAGAVATH LAYOUT, UPPAL,
 HYDERABAD.

PROJECT: **PROPOSED CONSTRUCTION OF HEAD OFFICE OF
 TELANGANA GRAMEENA BANK IN SY NO 417&420/10
 NO 79 IN UPPAL BHAGAVATH LAYOUT, UPPAL,
 HYDERABAD.**

DRAWING TITLE: **TENDER DRAWING
 SUB CELLAR SLAB BEAM DETAILS**

Job number: _____
 Drawing number: **ABH/ITGB/HO/TD/STR/10**
 Sheet number: **25**

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drawn by: **BHANU**
 designed & checked by: **E.SREENATH**
 approved by: _____

initials: _____ signed by: _____
 date: **14-05-26**

scale: **1/10 SCALE**

CAD file: _____

PROJECT CLIENT: **TELANGANA GRAMEENA BANK HEAD OFFICE
 AT HYDERABAD**
 TITLE: **1ST SLAB DETAILS**

NOTES:
 1. CHANGING OF BARS SHOULD BE DONE @ 1/4 TH OF THE SPAN IN AN ANGLE OF 45°
 2. BARS SHALL BE LAPS 1/17TH WITH W/LC BAR @ 0.40
 3. COVERING FOR MAIN STEEL SHALL BE 25MM FOR SLABS AND 25MM BEAM.
 4. CHAINS SHALL BE DONE FOR 21 DAYS.

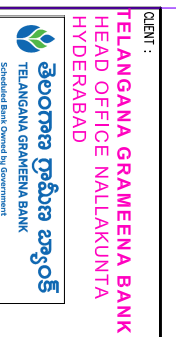
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 DATE: _____ TIME: _____ SCALE: _____ CHECKED: _____ DRAWN: _____

ZAKI & ASSOCIATES
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 CONSULTING ENGINEER

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 abhikramarchitects@gmail.com



CLIENT: **TELANGANA GRAMEENA BANK**
 HEAD OFFICE NALLAKUNTA
 HYDERABAD

PROJECT: **PROPOSED CONSTRUCTION OF HEAD OFFICE OF
 TELANGANA GRAMEENA BANK IN SY NO 417&420/10
 NO 79 IN UPPAL BHAGAVATH LAYOUT, UPPAL,
 HYDERABAD.**

DRAWING TITLE: **TENDER DRAWING
 SUB CELLAR SLAB BEAM DETAILS**

Job number: _____
 Drawing number: **ABH/ITGB/HO/TD/STR/10**
 Sheet number: **25**

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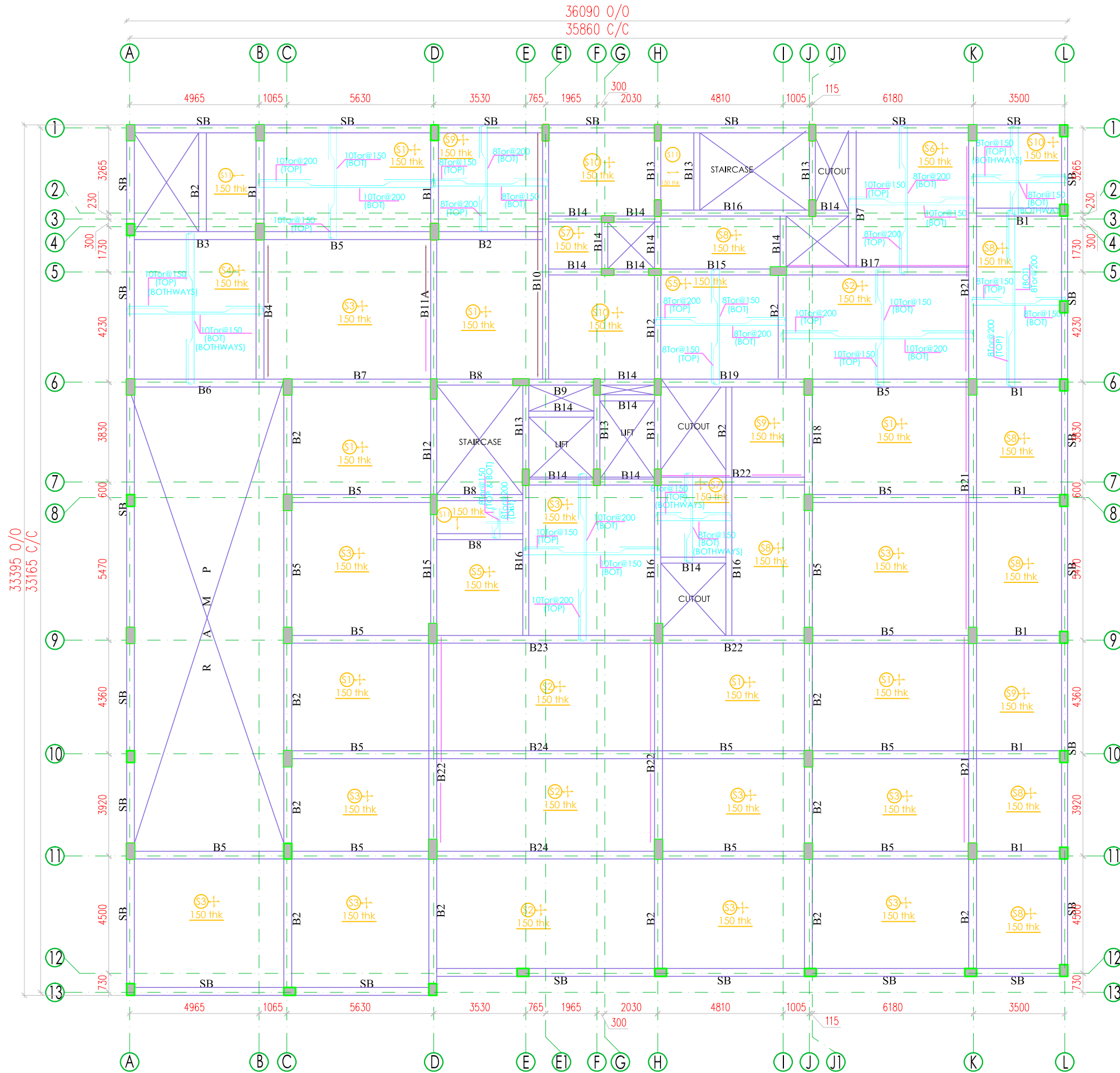
drawn by: **BHANU**
 designed & checked by: **E.SREENATH**
 approved by: _____

initials: _____ signed by: _____
 date: **14-05-26**

scale: **1/10 SCALE**

CAD file: _____

ARCHITECT: **Abhikram-s**
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 Hyderabad
 abhikramarchitects@gmail.com



33395 O/O
33165 C/C

36090 O/O
35860 C/C

CLIENT:
TELANGANA GRAMEENA BANK
HEAD OFFICE NALLAKUNTA
HYDERABAD



CONSULTANTS:
STRUCTURAL CONSULTANT:
ZAKI & ASSOCIATES
STRUCTURAL ENGINEERS.

PLUMBING CONSULTANT:

ELECTRICAL CONSULTANT:

HVAC CONSULTANT:

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	DRAWN BY:	BHANU
	CHECKED BY:	SREENATH

SCALE:	DATE:
FIT TO SCALE	14-05-2026

PROJECT:
PROPOSED CONSTRUCTION OF HEAD OFFICE OF .
TELANGANA GRAMEENA BANK IN SY NO 417&420 PLOT NO 79 IN UPPAL BHAGAYATH LAYOUT UPPAL HYDERABAD

DWG TITLE:
TENDER DRAWING
CELLAR SLAB DETAILS

DWG NO:
ABHI/TGB/HO/TD/STR/11

SHEET NO:
26

PROJECT/CLIENT:
TELANGANA GRAMEENA BANK HEAD OFFICE AT HYDERABAD

TITLE: **2ND SLAB DETAILS**

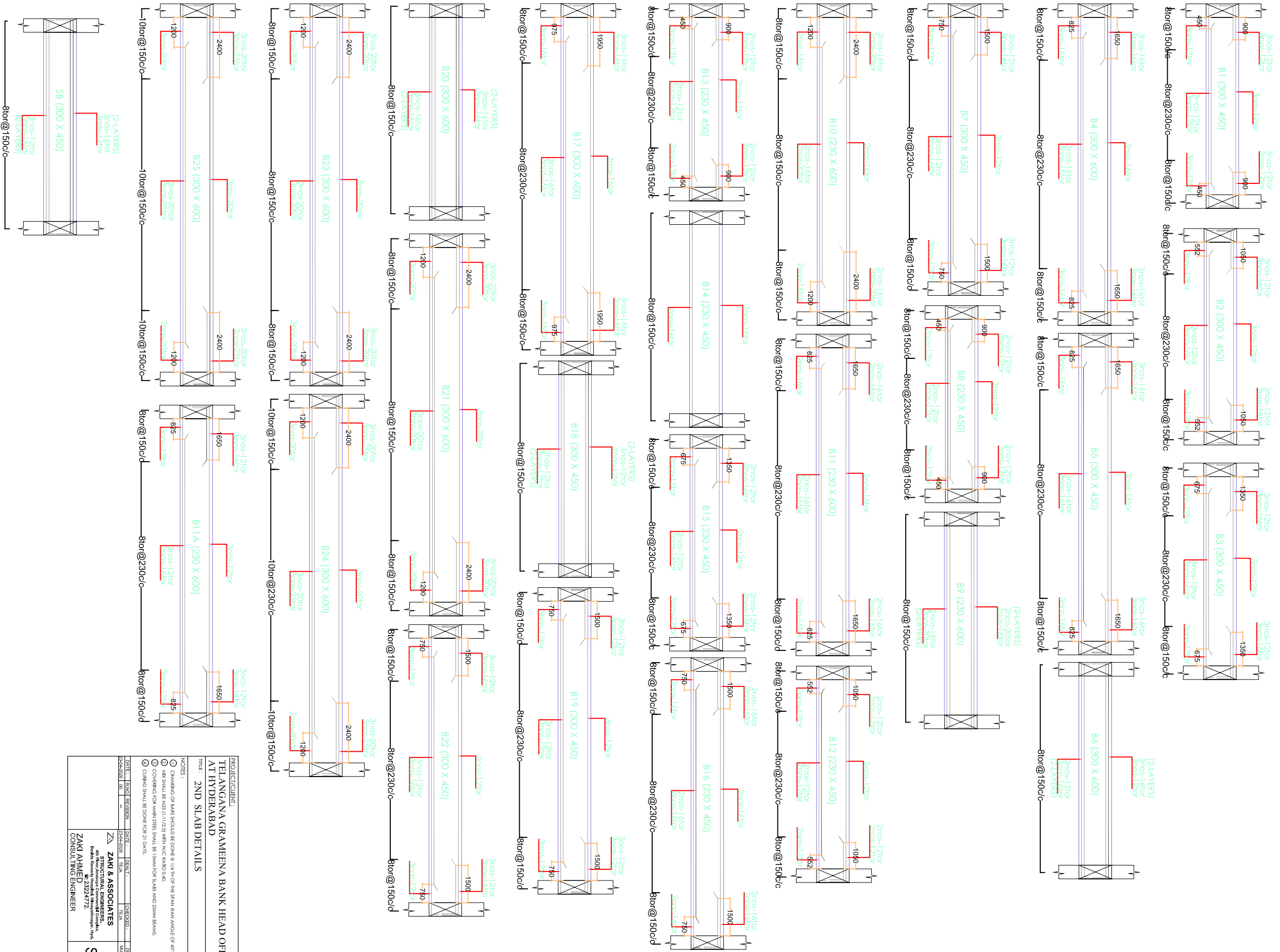
NOTES:
 ① CRANKING OF BARS SHOULD BE DONE @ 1/4 TH OF THE SPAN @ AN ANGLE OF 45°.
 ② MK SHALL BE M25 (1:1:2:3) WITH W/C RATIO 0.40.
 ③ COVERING FOR MAIN STEEL SHALL BE 15MM FOR SLABS AND 25MM BEAMS.
 ④ CURRING SHALL BE DONE FOR 21 DAYS.

DATE:	R.NO:	REVISION:	DATE:	DEALT:	CHECKED:	DRAWN:
25-04-2026	01		23-04-2026	TEJA	TEJA	MUZAFFAR

ZAKI & ASSOCIATES
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CONSULTING ENGINEER

S-09



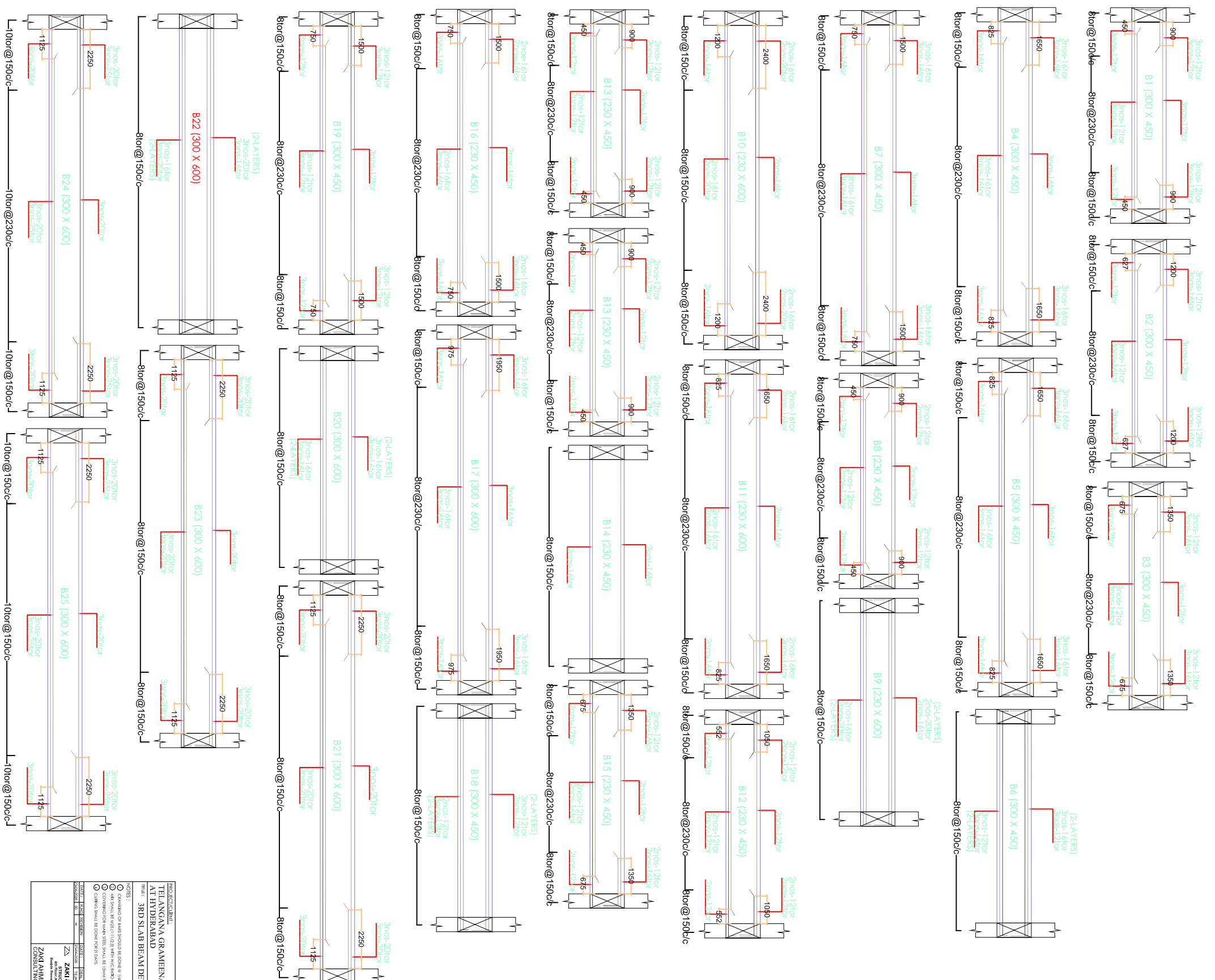
PROJECT/GUANT:
TELANGANA GRAMEENA BANK HEAD OFFICE
AT HYDERABAD

TITLE: 2ND SLAB DETAILS

NOTES:
 1. GRADING OF EAST SHOULD BE DONE @ 1:1% TO THE SPAN END ANGLE OF 45°
 2. JMC SHALL BE MADE (1:1:2) WITH W/C RATIO OF 1:2
 3. COVERING FOR MAIN REIN. SHALL BE 15MM FOR 8, 10 AND 20MM FOR 16, 20
 4. CURING SHALL BE DONE FOR 21 DAYS

DATE	ISSN	DESCRIPTION	DATE	SCALE	CHANGED	ISSN
22-04-2024	00	TEMA				

ZAKI & ASSOCIATES STRUCTURAL ENGINEERS, 10/1-11/12-13/14-15/16-17/18-19/20-21/22-23/24-25/26-27/28-29/30-31/32-33/34-35/36-37/38-39/40-41/42-43/44-45/46-47/48-49/50-51/52-53/54-55/56-57/58-59/60-61/62-63/64-65/66-67/68-69/70-71/72-73/74-75/76-77/78-79/80-81/82-83/84-85/86-87/88-89/90-91/92-93/94-95/96-97/98-99/100-101/102-103/104-105/106-107/108-109/110-111/112-113/114-115/116-117/118-119/120-121/122-123/124-125/126-127/128-129/130-131/132-133/134-135/136-137/138-139/140-141/142-143/144-145/146-147/148-149/150-151/152-153/154-155/156-157/158-159/160-161/162-163/164-165/166-167/168-169/170-171/172-173/174-175/176-177/178-179/180-181/182-183/184-185/186-187/188-189/190-191/192-193/194-195/196-197/198-199/200-201/202-203/204-205/206-207/208-209/210-211/212-213/214-215/216-217/218-219/220-221/222-223/224-225/226-227/228-229/230-231/232-233/234-235/236-237/238-239/240-241/242-243/244-245/246-247/248-249/250-251/252-253/254-255/256-257/258-259/260-261/262-263/264-265/266-267/268-269/270-271/272-273/274-275/276-277/278-279/280-281/282-283/284-285/286-287/288-289/290-291/292-293/294-295/296-297/298-299/300-301/302-303/304-305/306-307/308-309/310-311/312-313/314-315/316-317/318-319/320-321/322-323/324-325/326-327/328-329/330-331/332-333/334-335/336-337/338-339/340-341/342-343/344-345/346-347/348-349/350-351/352-353/354-355/356-357/358-359/360-361/362-363/364-365/366-367/368-369/370-371/372-373/374-375/376-377/378-379/380-381/382-383/384-385/386-387/388-389/390-391/392-393/394-395/396-397/398-399/400-401/402-403/404-405/406-407/408-409/410-411/412-413/414-415/416-417/418-419/420-421/422-423/424-425/426-427/428-429/430-431/432-433/434-435/436-437/438-439/440-441/442-443/444-445/446-447/448-449/450-451/452-453/454-455/456-457/458-459/460-461/462-463/464-465/466-467/468-469/470-471/472-473/474-475/476-477/478-479/480-481/482-483/484-485/486-487/488-489/490-491/492-493/494-495/496-497/498-499/500-501/502-503/504-505/506-507/508-509/510-511/512-513/514-515/516-517/518-519/520-521/522-523/524-525/526-527/528-529/530-531/532-533/534-535/536-537/538-539/540-541/542-543/544-545/546-547/548-549/550-551/552-553/554-555/556-557/558-559/560-561/562-563/564-565/566-567/568-569/570-571/572-573/574-575/576-577/578-579/580-581/582-583/584-585/586-587/588-589/590-591/592-593/594-595/596-597/598-599/600-601/602-603/604-605/606-607/608-609/610-611/612-613/614-615/616-617/618-619/620-621/622-623/624-625/626-627/628-629/630-631/632-633/634-635/636-637/638-639/640-641/642-643/644-645/646-647/648-649/650-651/652-653/654-655/656-657/658-659/660-661/662-663/664-665/666-667/668-669/670-671/672-673/674-675/676-677/678-679/680-681/682-683/684-685/686-687/688-689/690-691/692-693/694-695/696-697/698-699/700-701/702-703/704-705/706-707/708-709/710-711/712-713/714-715/716-717/718-719/720-721/722-723/724-725/726-727/728-729/730-731/732-733/734-735/736-737/738-739/740-741/742-743/744-745/746-747/748-749/750-751/752-753/754-755/756-757/758-759/760-761/762-763/764-765/766-767/768-769/770-771/772-773/774-775/776-777/778-779/780-781/782-783/784-785/786-787/788-789/790-791/792-793/794-795/796-797/798-799/800-801/802-803/804-805/806-807/808-809/810-811/812-813/814-815/816-817/818-819/820-821/822-823/824-825/826-827/828-829/830-831/832-833/834-835/836-837/838-839/840-841/842-843/844-845/846-847/848-849/850-851/852-853/854-855/856-857/858-859/860-861/862-863/864-865/866-867/868-869/870-871/872-873/874-875/876-877/878-879/880-881/882-883/884-885/886-887/888-889/890-891/892-893/894-895/896-897/898-899/900-901/902-903/904-905/906-907/908-909/910-911/912-913/914-915/916-917/918-919/920-921/922-923/924-925/926-927/928-929/930-931/932-933/934-935/936-937/938-939/940-941/942-943/944-945/946-947/948-949/950-951/952-953/954-955/956-957/958-959/960-961/962-963/964-965/966-967/968-969/970-971/972-973/974-975/976-977/978-979/980-981/982-983/984-985/986-987/988-989/990-991/992-993/994-995/996-997/998-999/1000-1001/1002-1003/1004-1005/1006-1007/1008-1009/1010-1011/1012-1013/1014-1015/1016-1017/1018-1019/1020-1021/1022-1023/1024-1025/1026-1027/1028-1029/1030-1031/1032-1033/1034-1035/1036-1037/1038-1039/1040-1041/1042-1043/1044-1045/1046-1047/1048-1049/1050-1051/1052-1053/1054-1055/1056-1057/1058-1059/1060-1061/1062-1063/1064-1065/1066-1067/1068-1069/1070-1071/1072-1073/1074-1075/1076-1077/1078-1079/1080-1081/1082-1083/1084-1085/1086-1087/1088-1089/1090-1091/1092-1093/1094-1095/1096-1097/1098-1099/1100-1101/1102-1103/1104-1105/1106-1107/1108-1109/1110-1111/1112-1113/1114-1115/1116-1117/1118-1119/1120-1121/1122-1123/1124-1125/1126-1127/1128-1129/1130-1131/1132-1133/1134-1135/1136-1137/1138-1139/1140-1141/1142-1143/1144-1145/1146-1147/1148-1149/1150-1151/1152-1153/1154-1155/1156-1157/1158-1159/1160-1161/1162-1163/1164-1165/1166-1167/1168-1169/1170-1171/1172-1173/1174-1175/1176-1177/1178-1179/1180-1181/1182-1183/1184-1185/1186-1187/1188-1189/1190-1191/1192-1193/1194-1195/1196-1197/1198-1199/1200-1201/1202-1203/1204-1205/1206-1207/1208-1209/1210-1211/1212-1213/1214-1215/1216-1217/1218-1219/1220-1221/1222-1223/1224-122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PROJECT NAME: TELANGANA GRAMEENA BANK HEAD OFFICE HYDERABAD
 DRAWING TITLE: 3RD SLAB BEAM DETAILS
 SHEET NUMBER: S-10B
 ARCHITECT: ZAKI & ASSOCIATES
 CONSULTING ENGINEER: ZAKI AHMED
 PROJECT MANAGER: adhikaramchirichet@gmail.com

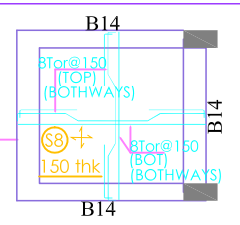
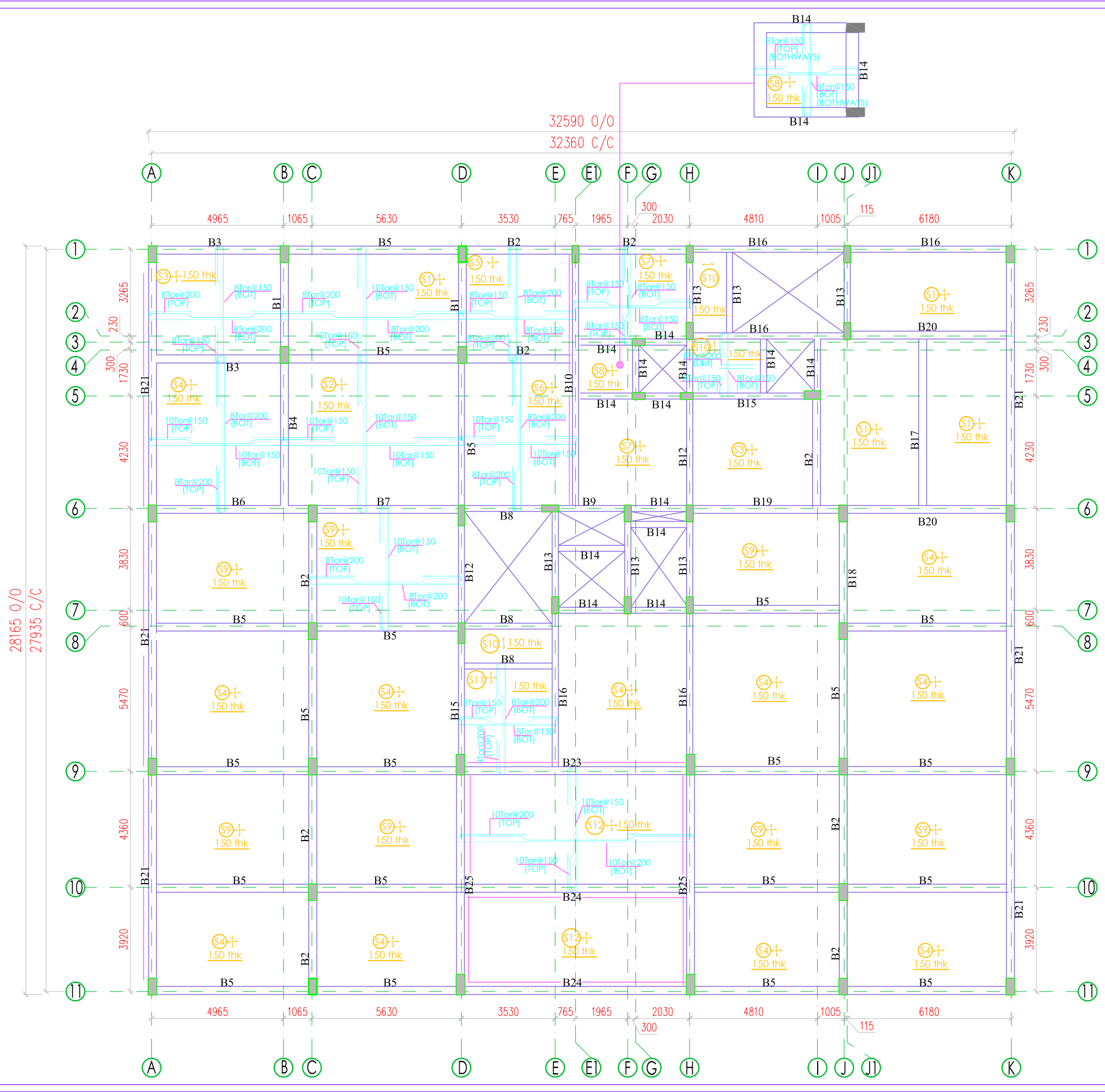
CLIENT :
 TELANGANA GRAMEENA BANK
 HEAD OFFICE NALLAKUNTA
 HYDERABAD

PROJECT :
 PROPOSED CONSTRUCTION OF HEAD OFFICE OF
 TELANGANA GRAMEENA BANK IN SV NO 4178/420/PL OT
 NO 79 IN UPPAL BHAGAVATH LAYOUT, UPPAL,
 HYDERABAD.

DRAWING TITLE :
 TENDER DRAWING
 STILT FLOOR SLAB BEAM DETAILS

Job number:	ABH/IGBH/OT/STR/14	Sheet number:	29
drawn by:	BHANU	initials:	
designed & checked by:	E.SREENATH	signed by:	
approved by:		date:	14-05-26
scale:	1:10 TO SCALE	CAD file:	

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CLIENT:
TELANGANA GRAMEENA BANK
 HEAD OFFICE NALLAKUNTA
 HYDERABAD

CONSULTANTS:
 STRUCTURAL CONSULTANT:
ZAKI & ASSOCIATES
 STRUCTURAL ENGINEERS.

PLUMBING CONSULTANT:

ELECTRICAL CONSULTANT:

HVAC CONSULTANT:

NOTE:
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DISTRIBUTION		
DISTRIBUTION	PRINTS	DATE

REVISION		
NO.	DATE	REMARKS

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KEY MAP:

NORTH:	DEALT:	SREENATH
	DRAWN BY:	BHANU
	CHECKED BY:	SREENATH
SCALE:	DATE:	
FIT TO SCALE	14-05-2026	

PROJECT:
PROPOSED CONSTRUCTION OF HEAD OFFICE OF TELANGANA GRAMEENA BANK IN SY NO 417&420 PLOT NO 79 IN UPPAL BHAGAYATH LAYOUT UPPAL HYDERABAD

DWG TITLE:
TENDER DRAWING TYPICAL FLOOR SLAB DETAILS

DWG NO:
ABHI/TGB/HO/TD/STR/15

SHEET NO:
30

PROJECT/CLIENT:
TELANGANA GRAMEENA BANK HEAD OFFICE AT HYDERABAD

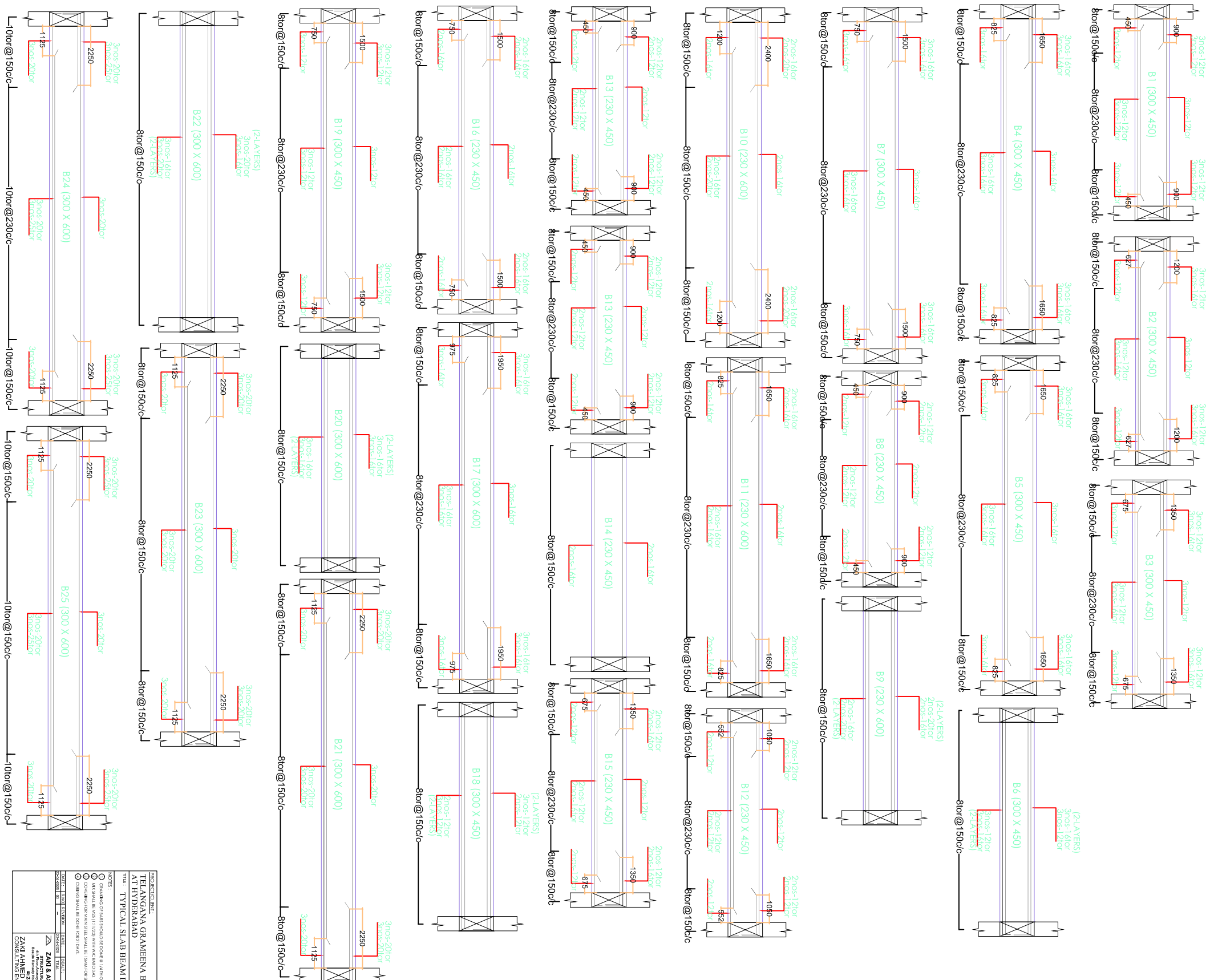
TITLE: **TYPICAL SLAB DETAILS**

NOTES:
 ① CRANKING OF BARS SHOULD BE DONE @ 1/4 TH OF THE SPAN @ AN ANGLE OF 45°.
 ② MIX SHALL BE M25 (1:1:2:3) WITH W/C RATIO 0.40.
 ③ COVERING FOR MAIN STEEL SHALL BE 15MM FOR SLABS AND 25MM BEAMS.
 ④ CURING SHALL BE DONE FOR 21 DAYS.

DATE:	R.NO.	REVISION	DATE:	DEALT:	CHECKED:	DRAWN:
23-04-2026	00	-	23-04-2026	TEJA	TEJA	MUZAFFAR

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ZAKI AHMED
 CONSULTING ENGINEER

S-11



REVISIONS:

NO.	DATE	DESCRIPTION
1	14-05-26	ISSUED FOR TENDERS

NOTES:

- CHANGE OF BAR SIZE/TYPE IS TO BE INDICATED BY A NOTE.
- ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.
- ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
- CHECK SHALL BE DONE FOR ALL DIMENSIONS.

PROJECT INFORMATION:

CLIENT:	TELANGANA GRAMEENA BANK
PROJECT:	PROPOSED CONSTRUCTION OF HEAD OFFICE OF TELANGANA GRAMEENA BANK IN SV NO 417&420PLOT NO 79 IN UPPAL BHAGAVATH LAYOUT, UPPAL, HYDERABAD.
DRAWING TITLE:	TENDER DRAWING TYPICAL FLOOR SLAB BEAM DETAILS
DRAWING NUMBER:	ABH/ITGB/HO/TD/STR/16
SHEET NUMBER:	31
SCALE:	1:10 TO SCALE

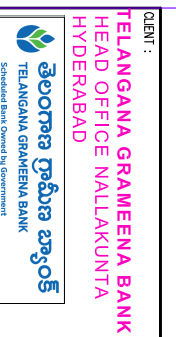
DESIGNER: ZANI & ASSOCIATES
 ZANI AHMED
 CONSULTING ENGINEER

DATE: 14-05-26

PROJECT: TELANGANA GRAMEENA BANK HEAD OFFICE AT HYDERABAD

TITLE: TYPICAL SLAB BEAM DETAILS

NO.: S-11B



CLIENT :
TELANGANA GRAMEENA BANK
HEAD OFFICE NALLAKUNTA
HYDERABAD

PROJECT :
PROPOSED CONSTRUCTION OF HEAD OFFICE OF
TELANGANA GRAMEENA BANK IN SV NO 417&420PLOT
NO 79 IN UPPAL BHAGAVATH LAYOUT, UPPAL,
HYDERABAD.

JOB NUMBER:

Drawing number: ABH/ITGB/HO/TD/STR/16

Sheet number: 31

drawn by: BHANU

designed & checked by: E.SREENATH

approved by:

scale: 1:10 TO SCALE

initials:

signed by:

date: 14-05-26

ARCHITECT :

Abhikram-s
 Architects, Interiors Designers, Valuers,
 Urban Planners, Project Managers
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 abhikramarchitects@gmail.com



CLIENT:
TELANGANA GRAMEENA BANK
 HEAD OFFICE NALLAKUNTA
 HYDERABAD

CONSULTANTS:
 STRUCTURAL CONSULTANT:
ZAKI & ASSOCIATES
 STRUCTURAL ENGINEERS.

PLUMBING CONSULTANT:

ELECTRICAL CONSULTANT:

HVAC CONSULTANT:

NOTE:
 ALL DIMENSIONS ARE TO BE CHECKED & CORRELATED WITH THE RELEVANT ARCHITECTURAL AND STRUCTURAL DRAWINGS AND ANY AMBIGUITY SHALL BE IMMEDIATELY BROUGHT TO THE NOTICE OF THE ARCHITECTS BEFORE THE COMMENCEMENT OF THE WORK.
 THIS DRAWING IS THE PROPERTY OF SINGH DESIGN STUDIO AND IS NOT TO BE COPIED OR USED WITHOUT THEIR PERMISSION.
 PLEASE NOTE THIS DRAWING IS ONLY ISSUED FOR STRUCTURAL COORDINATION.
 PLEASE REFER GENERAL ARRANGEMENT DETAILS DRAWING FOR ALL STRUCTURAL DRAWINGS.

DISTRIBUTION		
DISTRIBUTION	PRINT	DATE

REVISION		
NO.	DATE	REMARKS

ARCHITECTS
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KEY MAP:

NORTH:	DEALT SREENATH
	DRAWN BY BHANU
	CHECKED BY SREENATH
SCALE:	DATE: 14-05-2026

PROJECT:
PROPOSED CONSTRUCTION OF HEAD OFFICE OF TELANGANA GRAMEENA BANK IN SY NO 417&420 PLOT NO 79 IN UPPAL BHAGAYATH LAYOUT UPPAL HYDERABAD

DWG TITLE:
TENDER DRAWING FIFTH FLOOR SLAB DETAILS

DWG NO:
ABHI/TGB/HO/TD/STR/17

SHEET NO:
32

PROJECT/CLIENT:
TELANGANA GRAMEENA BANK HEAD OFFICE AT HYDERABAD

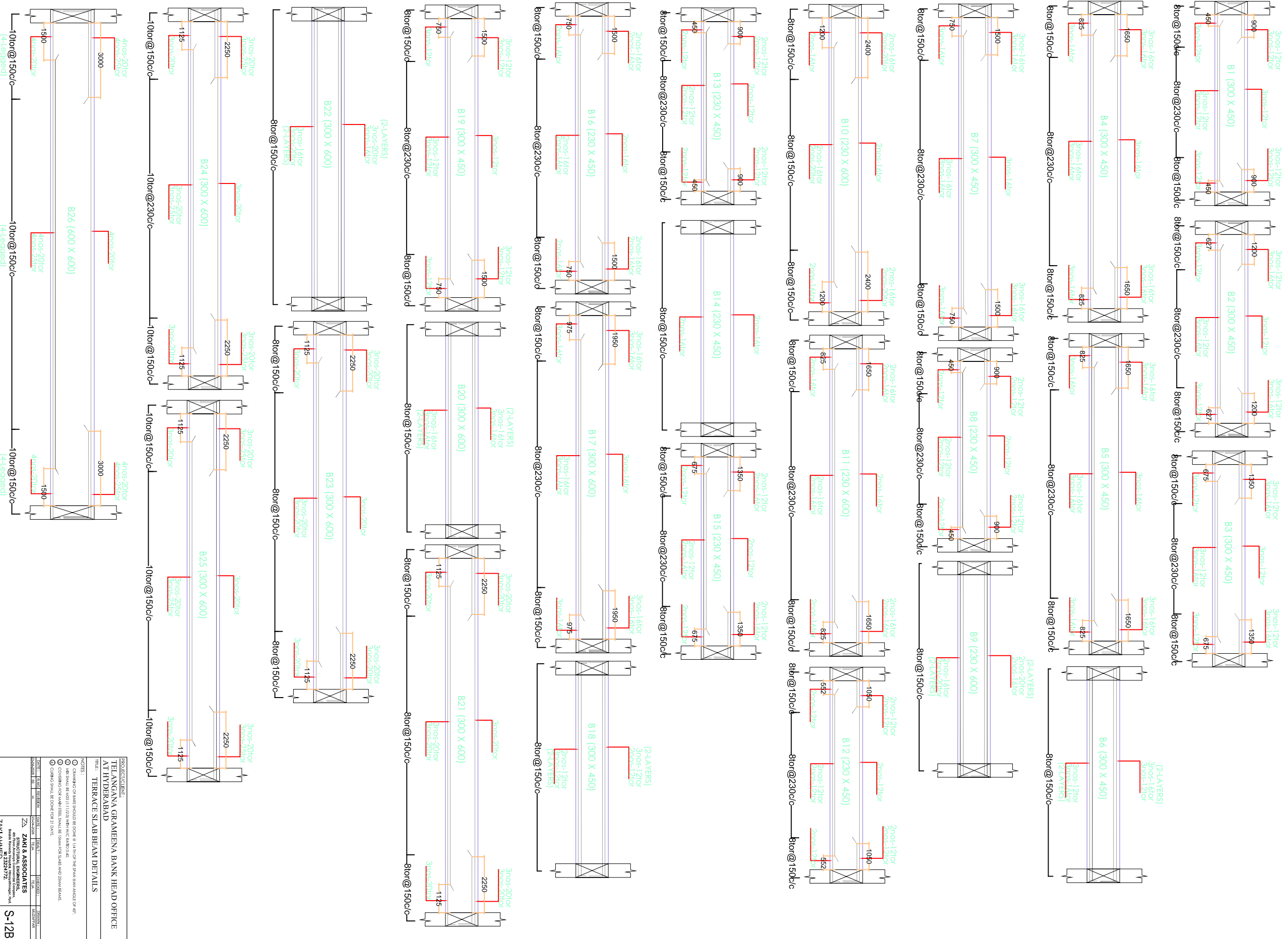
TITLE: **TERRACE SLAB DETAILS**

NOTES:
 ① CRANKING OF BARS SHOULD BE DONE @ 1/4 TH OF THE SPAN @ AN ANGLE OF 45°.
 ② MIX SHALL BE M25 (1:1:2:3) WITH W/C RATIO 0.40.
 ③ COVERING FOR MAIN STEEL SHALL BE 15MM FOR SLABS AND 25MM BEAMS.
 ④ CURING SHALL BE DONE FOR 21 DAYS.

DATE:	R.NO:	REVISION:	DATE:	DEALT:	CHECKED:	DRAWN:
23-01-2026	00		23-04-2026	TEJA	TEJA	MUZAFFAR

ZAKI & ASSOCIATES
 STRUCTURAL ENGINEERS,
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 ☎: 23224772.
ZAKI AHMED
 CONSULTING ENGINEER

S-12



PROJECT:
 TELANGANA GRAMEENA BANK HEAD OFFICE
 AT HYDERABAD
 TITLE: TERRACE SLAB BEAM DETAILS

PROFICIENCY:
 ZAKI & ASSOCIATES
 ARCHITECTURAL ENGINEERS
 202, NTR Road, Hyderabad - 500004
 ZAKI AHMED
 CONSULTING ENGINEER

DATE: 14-05-26
SCALE: 1/10

NO.: S-12B

NOTES:
 1. DIMENSIONS OF BARS SPECIFIED ABOVE IS IN HIGH TENSILE STEEL BARS UNLESS OTHERWISE MENTIONED.
 2. COVER FOR MAIN STEEL SHALL BE 40MM FOR SLAB AND 50MM FOR BEAM.
 3. LAP LENGTH SHALL BE FOUR TIMES DIA.

CLIENT :
 TELANGANA GRAMEENA BANK
 HEAD OFFICE NALLAKUNTA
 HYDERABAD

PROJECT :
 PROPOSED CONSTRUCTION OF HEAD OFFICE OF
 TELANGANA GRAMEENA BANK IN SV NO 417&420/LOT
 NO 79 IN UPPAL BHAGAVATH LAYOUT, UPPAL,
 HYDERABAD.

DRAWING TITLE :
 TENDER DRAWING
 FIFTH FLOOR SLAB BEAM DETAILS

Job number:
 Drawing number
 ABH/17GB/HO/TD/STR/18

Sheet number:
 33

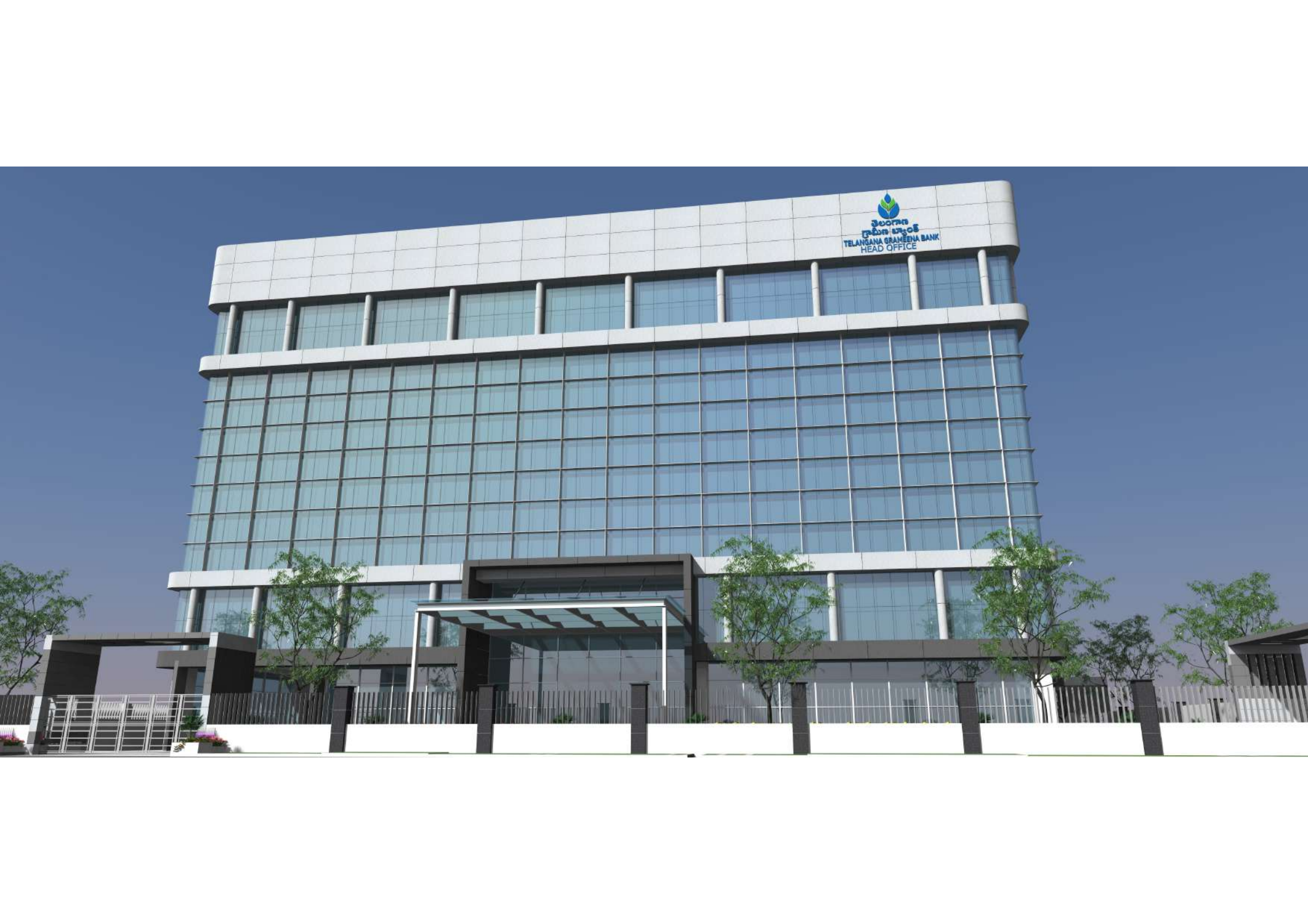
drawn by: BHANU
designed & checked by: E.SREENATH

initials:
signed by:
date: 14-05-26

scale: 1/10 TO SCALE
CAD file:

ARCHITECT :
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 Architects, Interior Designers, Valuers,
 Urban Planners, Project Managers
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 abhikramarchitects@gmail.com





తెలంగాణ గ్రామీణ బ్యాంక్
TELANGANA GRAMEENA BANK
HEAD OFFICE



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TELANGANA GRAMINA BANK
HEAD OFFICE



Logo of the building, featuring a stylized green and blue emblem above the text "Korea University of Science and Technology" and "RESEARCH CENTER".