



जवाहरलाल नेहरू एल्युमिनियम अनुसंधान विकास एवं अभिकल्प केन्द्र, नागपुर

(स्वायत्त संस्थान, खान मंत्रालय, भारत सरकार के आधीन) अमरावती रोड, वाडी, नागपुर - ४४० ०२३ (भारत)

Jawaharlal Nehru Aluminium Research Development and Design Centre

(Autonomous Body Under Ministry of Mines, Government of India)

Amravati Road, Wadi, Nagpur - 440 023 (India)

दुरभाष / Phone : 07104 - 220763 (Direct) फैक्स / Fax : 07104 - 220942

ई मेल / Email : directjn_ngp@sancharnet.in वेबसाईट / Website : www.jnarddc.gov.in

Ref : 02/JNARDDC/S&P/2024-25/P-30

Date: 22.05.2024

CORRIGENDUM NO 01

EXTENSION FOR THE SUBMISSION OF ONLINE BID

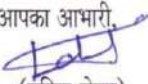
Following corrigendum is being issued for the “ Construction of PEB Shed” in Two bid system through our tender no 02/JNARDDC/S&P/2024-25/P-30 dated 26 Apr 2024

Clause existing in tender	Clause amended (Read As)
Last date of receipt online quotation was 19.05.2024 (23:58 Hrs)	Last date of receipt online quotation will be was 02 .06.2024 (23:58 Hrs)
Opening Date : 20 May 2024 (12.00 Hrs)	Opening Date : 03 June 2024 (12.00 Hrs)

Remaing terms and conditions will be same.

Web Site: www.jnarddc.gov.in and. <https://mines.euniwizarde.com> }Email: purchasejnarddcnagpur@gmailcom } - for complete details.

Thanking you

आपका आभारी,

(ललित मोहन)
सचिव खरीद एवं भंडार



जवाहरलाल नेहरू एल्युमिनियम अनुसंधान विकास एवं अभिकल्प केन्द्र, नागपुर

(स्वायत्त संस्थान, खान मंत्रालय, भारत सरकार के आधीन) अमरावती रोड, वाडी, नागपुर - ४४० ०२३ (भारत)

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Ref : 02/JNARDDC/S&P/2024-25/P-30

26/04/2024

Subject: Invitation of Online Quotation for “the construction of Construction of PEB Shed”

Dear Sir,

The Centre is interested in the Construction of PEB Shed. Bid is invited from Civil Govt contractor (registered with CPWD/MES/ Railway and other Govt organization) in in two bid system. Tender terms and conditions and scope of works (BoQ) are given in annexure -B

Description of Item	Qty
Construction of PEB shed Shed (Size : 10.50 x 17 x 4.85 mtr) BoQ and Site plan and drawing is attached with tender documents	Qty as per BoQ attached

You are therefore requested to send your competitive offer for above on JNARDDC e-Tender portal. <https://mines.euniwizarde.com> latest by **19.05.2024 (23:58 Hrs)**

The offers, in the prescribed format, shall be submitted online at <https://mines.euniwizarde.com/> as per the tender document. **No tender will be accepted in hard copy, fax, e-mail or any other such means.** The intending, bidders must be registered with e-Procurement website <https://mines.euniwizarde.com/> The tender document is also available on JNARDDC website: <http://www.jnarddc.gov.in/> and CPP Portal <https://eprocure.gov.in/cppp/>

EMD : Rs. 1.0 Lakh (Rupees One Lakh only) should be paid in favour of JNARDDC by way of online/ D.D. Without EMD tender will be rejected.
(Terms & Conditions is given in Annexure ‘A &B’).

Opening Date : 20 May 2024 (12.00 Hrs)

Bids should be submitted online through <https://mines.euniwizarde.com/> .

1. Techinal Bid (Cover I)
2. Price Bid (Cover II)
3. EMD (Online/DD)

Web Site: www.jnarddc.gov.in and. <https://mines.euniwizarde.com> }Email: purchasejnarddcnagpur@gmail.com / purchase@jnarddc.gov.in } - for complete details


(ललित मोहन)
, सचिव खरीद एवं भंडार

ANNEXURE – A
जवाहरलाल नेहरू एल्युमिनियम अनुसंधान
विकास एवं अभिकल्प केंद्र, नागपुर
www.jnarddc.gov.in (07104-297014)

Standard Terms & Conditions of the Tender

1. Price bid should be submitted online . **EMD Rs 1,00,000.00 (Rupees One Lakh only) /-** and ~~tender fees (non refundable)~~ Nil should be remitted separately in the JNARDDC account before due last date of tender. Proof of deposited to be uploaded in bid documents. Without EMD, online bid will **be rejected**. All pages of bids should be duly rubber stamped, serially page numbered and signed of the authorized person of the bidder firm.
2. **If the bidder is not a registered vendor of JNARDDC**, then the bidder should have following documents while submitting the offer which is compulsory for vendor registration with JNARDDC. (1) Shop & Establishment / Registration of company certificate / MSME-2006 (issuing certificate of registration for Micro / Macro / Small Scale Industries Certificates) / Certificate of Registration (2) PAN & GST No. (3) I/T Returns (4) Bank Account No. of Firm.
3. The Refundable Earnest Money Deposit (EMD) **Rs 1,00,000.00 (Rupees One Lakh only)** should be remitted by way of online/DD. EMD should be deposited before due last date of tender . **Without EMD, bid will be rejected**. However, EMD is exempted for firms registered with Central Purchase Organization or with **Ministry of Mines or Micro and Small Enterprises (MSEs)/Manufacturer who have their own plant** . Traders are not exempted for the EMD .But the registration certificate should clearly include the name of the item/services they are offering which are manufactured by them and not for selling products manufactured by other firms. Foreign suppliers directly quoting and participating in the tender will also be exempted from EMD . To avail EMD exemption, the bidder has to quote Udyog Aadhar Memorandum (UAM) registration no. issued by MSME and proof of manufacture plant. However, Indian agents / representative quoting on behalf of principals shall pay EMD & Tender Fee. One EMD will be accepted against one bid.
4. The EMD without interest will be returned to the unsuccessful bidder within 30 days of the award of the Contract / Job. EMD of successful bidder will be treated as Performance security deposit. **"Performance Security Deposit"** The **"Performance Security Deposit"** will be released without interest after a period of 60 days beyond the date of completion of all contractual obligations of the supplier including warranty obligations and subject to certification of Indenter / Authorized representative of the Centre.
- 5 **Performacne Security Deposit** : Successful bidder have to deposit **"Performance Security Deposit"** @ **10% of the toal contract value** through cheque/DD or bank guarantee as **performance security deposit** and will be released **without interest after a period of 60 days** beyond the date of completion of all contractual obligations of the supplier including warranty obligations and subject to certification of Indenter / Authorized representative of the Centre. **OR** Alternatively, if the contractor so desires, the security deposit can be made in the following manner.

(i) Initial deposit equivalent to Five percent (5%) of the contract value shall be paid in the form of DD/RTGS/FDR drawn ONLY on any nationalized Bank in favour of the JNARDDC, Nagpur.

(ii) The balance Five percent (5%) amount of the Security Deposit shall be recovered by way of deductions from the first two successive R.A. bills.

5. GOI rules with reference to procurement policy for MSME GFR 2017 rules and public procurement (Preference to make in India) order 2017 shall be applicable". Purchase preference to Micro and Small Enterprises (MSEs): Purchase preference will be given to MSEs as defined in Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012 dated 23.03.2012 issued by Ministry of Micro, Small and Medium Enterprises and its subsequent Orders/Notifications issued by concerned Ministry. If the bidder wants to avail the Purchase preference for services, the bidder must be the Service provider of the offered Service. Relevant documentary evidence in this regard shall be uploaded along with the bid in respect of the offered service. If L-1 is not an MSE and MSE Service Provider (s) has/have quoted price within L-1+ 15% of margin of purchase preference /price band defined in relevant policy, then 100% order quantity will be awarded to such MSE bidder subject to acceptance of L1 bid price. This work is not splitable .

10. **Taxes : Only GST as per Govt rules will be paid .** Other any Govt taxes as applicable shall be applied as notified by Govt. of India.

11. **Deviation table should be enclosed** to outline the deviation (if any) from the tendered technical specification in comparison to the bid quoted. Simply enclosing our spec sheet without providing any details may lead to rejection of the bid.

12. The supplier should provide the **test reports/ batch report /measurement sheet certificate** to ascertain the quality and mixture of materials if applicable . In addition to this, to measure the qty and weight, proof to be **provided along with work done**

13. Validity of the bid should be minimum up to **90 days**.

14. Cost of the item should include all charges (like royalty , cost of machinery , labour , machinery and all tolls, insurance, transportation and test/batch report) **JNARDDC will not pay any charges for the works**

15. Price of quoted item, (without taxes) to be quoted in price bid format. Details of taxes/custom duty, other terms and conditions to be clearly given in offer. Price figure only to be mentioned in price bid format. **Disclosing of price bid except price bid will simply reject the bid.**

16. In case of after issuing the purchase order, **L-1** firm not accepting the order his EMD will be forfeited and **L-2 firm will be given opportunity** to supply the item after negotiation with same price and term and conditions applicable with L-1 firm.

17. **Disputes and Jurisdiction:** - Any legal disputes arising out of any breach of contract pertaining to this tender shall be settled in the court of competent jurisdiction located within the city of Nagpur. Decision of Director will be final in all tenders. For any further clarification the contract personnel shall be the In charge (Purchase & Stores), JNARDDC - purchasejnarddcnagpur@gmail.com.

18. **JNARDDC reserve the rights to increase and decrease the qty as required for this project .** This is estimated qty. Payment will be made as per actual qty executed..

19. JNARDDC reserve the rights to cancel the tender process any time.

20. **Bank details** for online submission of EMD.
IDBI Bank, Civil Lines, Main Branch, Nagpur A/C no. **041104000192392**
A/c name : Jawaharlal Nehru Aluminium Research Development & Design Centre, Nagpur (JNARDDC),
Branch Code : 0041, MICR no. 440259002, IFSC Code IBKL0000041
21. Contact details for any query for the tender
Lalit Mohan (Mob : 8275534549, 07104-220387)
Email : purchasejnarddcnagpur@gmail.com /purchase@jnarddc.gov.in

Instructions for Online Bid Submission:

The bidders are required to submit soft copies of their bids electronically on the e-tender Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the e-Procurement Portal, prepare their bids in accordance with the requirements and submitting their bids online on the e-Procurement Portal.

More information useful for submitting online bids on the e-tender Portal may be obtained at:
<https://mines.euniwizarde.com>.

REGISTRATION

1. Bidders are required to enroll on the e-Procurement Portal (URL: <https://mines.euniwizarde.com>) with clicking on the link “**Online bidder Registration**” on the e-Procurement Portal by paying the **Registration fee of Rs. 2360/- year charge**.
2. As part of the enrolment process, the bidders will be required to choose a unique user name and assign a password for their accounts.
3. Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication with the bidder.
4. Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Only Class III Certificates with signing + encryption key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / TCS / nCode / eMudhra etc.), with their profile.
5. Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC’s to others which may lead to misuse.
6. Bidder then logs in to the site through the secured log-in by entering their user ID/password and the password of the DSC / e-Token.
7. For any Query contact to our helpdesk Number 011-49606060, Email: helpdeskeuniwizade@gmail.com, Mr. Armender – 84482-88980.
8. **The scanned copies of all original documents should be uploaded on portal.**

SEARCHING FOR TENDER DOCUMENTS

1. There are various search options built in the e-Procurement Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Item/work id, Title, Date, etc.
2. Once the bidders have selected the tenders they are interested in, the bidder can pay the processing fee of **Rs.2973**/- (NOT REFUNDABLE) by net-banking / Debit / Credit card and then download the required documents / tender schedules, Bid documents etc. Once both tender fees are paid, it will be moved to the respective “requested” Tab. This would enable the e-tender Portal to intimate the bidders through e-mail in case there is any corrigendum issued to the tender document.

PREPARATION OF BIDS

1. Bidder should take into account any corrigendum published on the tender document before submitting their bids.
2. Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
3. Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF /JPEG formats. Bid Original documents may be scanned with 100 dpi with Colored option which helps in reducing size of the scanned document.
4. To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use “My Documents” available to them to upload such documents.
5. These documents may be directly submitted from the “My Documents” area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

SUBMISSION OF BIDS

1. Bidder should log into the website well in advance for the submission of the bid so that it gets uploaded well in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
2. The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
3. Bidder has to select the payment option as “DD/online” to pay the EMD as applicable and enter details of the instrument.

4. Bidder should prepare the EMD as per the instructions specified in the tender document & submit EMD fee manually/online at department end. ~~The original bid should be posted/couriered/given in person to the concerned official, latest by the last date of bid submission or as specified in the tender documents.~~ The details of the DD/online any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise the uploaded bid will be rejected.

5. *Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BoQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BoQ file, open it and complete the white coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be rejected.

6. The server time (which is displayed on the bidders" dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.

7. All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid opener public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.

8. The uploaded tender documents become readable only after the tender opening by the authorized bid openers.

9. Upon the successful and timely submission of bid click "Complete"(i.e. after Clicking "Submit" in the portal), the portal will give a successful Tender submission acknowledgement & a bid summary will be displayed with the unique id and date & time of submission of the bid with all other relevant details.

10. The tender summary has to be printed and kept as an acknowledgement of the submission of the tender. This acknowledgement may be used as an entry pass for any bid opening meetings.

ANNEXURE – B

Jawaharlal Nehru Aluminium Research Development and Design Centre

Autonomous body under Ministry of Mines

Civil Work Related to Construction of Peb Shed

TENDER TO BE ADDRESSED TO:

**R.Srinivasan,
Secretary cum Admin Office,
Jawaharlal Nehru Aluminium Research Development and Design centre,
Autonomous body under Ministry of Mines
Amrawati Road, Wadi
Nagpur - 440023**

CONSULTANTS:

1.

B M

**BM Ghawade & Associates
105' Majestic Court Besa
Square,
Nagpur- 440037**

Jawaharlal Nehru Aluminium Research Development and Design Centre, Nagpur

Autonomous body under Ministry of Mines

Online electronic bids for below mentioned work are invited by JNARDDC, NAGPUR from contractors eligible for this work. Main Tender Documents shall be downloaded from jnarddc . website. All rights are reserved to accept or reject any or all bids by the JNARDDC, NAGPUR. Conditional Tenders will not be accepted.

Sr.No	Name Of Work	Earnest Money Deposit	Tender Fees	Class of Contractor	Days of completion
1	Construction of PEB Shed JNARDDC Premise at Nagpur	(Rupees One Lakh only)	NIL	Open to all Govt contractor who are eligible for this works	60 Days (Including monsoon season)

(If there are any changes it will be published on above website Only)

- 1) The Pre- Qualification process is applicable for this tender.
- 2) Blank on-line e-Tenders Form shall not be sold physically from the office of the JNARDDC. However bidder has to get on-line e-Tenders Form downloaded from the said web site.
- 4) Estimate of the work, Measurements, Drawings-&-Designs pertaining to this work are made available in the office of JNARDDC. Bidder shall quote his rate accordingly considering site situations to complete the works & contract responsibly. No claim regarding this shall be acceptable.

11. SUBMISSION OF BIDS:

The bid should be submitted through in e-Tendering portal (<https://mines.euniwizarde.com/>) only.

12. METHOD OF PREPARATION OF BID:

a) PRICE BID: Rate of contractor for the construction of PEB shed (including supply of materilas, construction in JNARDDC should be quoted clearly in the Price bid. The contractor shall be responsible for providing all statuary benefit to the manpower/labour employed by him like EPF, ESI etc, as applicable.

b) Any tender with conditions other than those specified in the tender documents, is liable to be summarily rejected.

c) Tender with any unfilled values or incomplete in any manner will be summarily rejected.

13. LATE BIDS:

Tenders should be submitted before the last date and time. It is the sole responsibility of the tenderer that he should ensure timely submission of tender.

14. BID OPENING:

Bid opening and finalization will be according to procedures. The Price bid will be evaluated only for technically qualified bidders. Technical bid will be evaluated subsequent within 15 working days excluding Saturday, Sunday and Closed Holiday if any. After completion of technical bid evaluation, price bid of all technically qualified bidders will be opened on the next working days.

15. BID EVALUATION:

- a. Prior to the detailed evaluation of Technical and Price bids JNARDDC will determine the substantial responsiveness of each bid to the Bid document. Substantially responsive bid is one which confirms to all the terms and conditions of bid document without material deviation. The JNARDDC determination of bid's responsiveness shall be based on the contents of the bid itself without recourse to extrinsic evidence. However the experience certificates / other documents submitted by the bidders may be verified for correctness from issuing authorities/ other sources.
- b. A bid determined as substantially **non-responsive** will be rejected and shall not subsequent to the bid opening be made responsive by the bidder by correction of the non- conformity. However the JNARDDC may waive any minor infirmity or non-conformity or irregularity in a bid which does not constitute a material deviation, provided such waiver does not prejudice or affect the relative ranking of any bidder.
- c. The Price bids of those bidders whose technical bid has been satisfactorily evaluated and found substantially responsive, will be opened.
- d. **The Tender will be awarded to the L1 bidder in normal course.**

16. REJECTION OF TENDERS:

The authority inviting tenders, at his sole discretion shall reserve the right to reject or cancel consideration of any or all tenders:

- a) If the requisite **Earnest Money Deposit** & Tender fees in the manner does not support the tender provided therein.
- b) If the tender is not duly signed, or not found proper or complete to the satisfaction of JNARDDC in any of the requisite matters, particular(s) or procedures or for any reason(s) which shall not be disclosed to the tenderer(s).
- c) If the eligibility condition is not met and/or if documents prescribed to establish the eligibility is not submitted.
- d) If prices are not filled properly in the Price Bid.
- h) Without assigning any reason thereof.

17. SIGNING OF CONTRACT AGREEMENT:

- a. The successful Tenderer shall be required to acknowledge the acceptance of contract within 7 (Seven) working days
- b. The JNARDDC reserves the right to cancel the agreement executed without any compensation what so ever to the contractor any time before the award of the work. Such action of JNARDDC shall not construe the breach of contract.

**Jawaharlal Nehru Aluminium Research Development and Design
Centre.**

**Proposed Construction of PEB shed in JNARDDC Premise,
Nagpur**

TENDER NOTICE 1.

1	NAME OF WORK	:	Construction of PEB Shed
2.	DATE OF ISSUE OF TENDER	:	26/04/2024
3.	PLACE OF ISSUE OF TENDER	:	R.Srinivasan, Secretary cum Admin Office, Jawaharlal Nehru Aluminium Research Development and Design centre, Autonomous body under Ministry of Mines Amrawati Road, Wadi Nagpur - 440023
4.	EARNEST MONEY DEPOSIT	:	Rs. 1,00,000.00(Rupees One Lakh Only)
5.	LAST DATE FOR RECEIPT OF TENDER	:	Date 19.05.2024 (23:58 Hrs)
6.	PLACE OF SUBMISSION OF TENDER	:	Online portal
7.	VALIDITY OF TENDER	:	90 Days from the last date of receipt of tender which may be extended by mutual agreement.
8.	PERIOD OF COMPLETION	:	60 (Sixty) days from the 7 th Day after the date of issue of work.

9.	Pre-qualification criteria /Eligibility . (NO exemption for MSME firm for experience and turnover)	:	(1) The bidder should have completed requisite number of civil nature works in last five financial years in any Govt organization. • Single work costing at least 25 Lakhs • Two works each costing at least 15 Lakhs • Three works each costing at least 10 Lakhs (2) Annual Turnover : The annual turnover of the Bidder on which service tax applicable/paid for the previous three years should be at least Rs.30 Lakhs (Thirty Lakhs) and copies of audited accounts or by a certificate from the Chartered Accountant, for the previous financial years 2020-21 and 2021-22, 2022-23 shall be submitted.
10.	PERIOD OF MAINTENANCE	:	1 (One) Year post Completion

JAWAHARLAL NEHRU ALUMINIUM RESEARCH DEVELOPMENT & DESIGN CENTRE

Construction of PEB Shed in JNARDDC Premise at Nagpur - 440023

TENDER FOR CIVIL WORKS

I. NOTICE INVITING TENDER

1. The forms of Main Tender documents, are made available on this portal on the e-Tendering website of e-Tendering portal (<https://mines.euniwizarde.com/>) OR www.jnarddc.gov.in.
2. The aspiring Bidders will have to download Main Tender form, from the website mentioned above. The bidder has to fill in online format and upload information regarding Main tender online. While submitting the duly filled-in Tender Documents the Bidder are required to Deposit Tender fees and E.M.D. as per memorandum through e-payment gateway from his own bank account. The contractor has to prepare & submit bid Online on or before as per schedule.(Key-Dates)
3. The contractor should upload the documents in readable form, He should take trial of uploads by taking printout. The unreadable documents will be treated as null & void. The remaining documents will be evaluated. The decision of opening Authority regarding this will be binding to all contractors.
4. All rights are reserved to reject any or all Main Tender documents without assigning any reason by the competent authority.
5. ~~No Pre bid conference will be held.~~ Prospective Bidders can ask for clarification on line through online portal up to 7 days before last date of submission (Not including extension, if any). In reply to these queries, common set of deviation (CSD) will be issued on web portal and will be treated as part of tender.. If no response is received in respect of any clarification from department/ Corporation till the last date of bid submission, it is to be presumed that no changes have been made to any tender condition. No further queries will be entertained after this cutoff date.
6. Time schedule for various bidding process is as per e-tender schedule.
7. It shall be binding for all bidders to inspect the site location, location of quarry area and other important site locations relating to the work before filling for the tender.

08. If the tender is made by or on behalf of a company incorporated under the Companies Act (1 of 1959) it shall be signed by the Managing Director or by one of the Executive partner duly authorised in this respect of Board Resolution. If it is made by a Partnership firm it shall be signed with the name of the firm by a member of the firm who shall sign his own name and give the name/s and address/es of each partner of the firm and attach a copy of Power of Attorney with the tender authorising him to sign on behalf of the other partners. A certified copy of the registered partnership deed shall also be submitted along with the tender.

If the tenderer is a limited company, the authority of the signatory would be verified by **Employer**. Such authority should be vested either in the Memorandum of Articles of Association of the company or by a Power of Attorney and Board Resolution.

Employer reserves the right to inspect the Memorandum of Articles of Association of the company and/or the Power of Attorney as the case may be.

09. The owner shall provide one point availability for water. If additional quantity is required the **CONTRACTOR** has to make his own arrangements at his own cost for water supply for construction and other purposes. The water used will have to be tested at **CONTRACTOR'S** expense whenever instructed by **Employer**.

For this purpose the **CONTRACTOR** shall arrange for adequate storage arrangements so that sufficient quantity of water is available at all times to meet the **CONTRACTOR's** construction, curing and all other requirements.

Every interim stage payment(RA bill) shall be released by **Employer** against GST bills duly certified by the Architects/consultant within 15 days of certification.

The final bill will be paid within **30 days** of date of completion of all works and certified by consultant /engineer.

10. All quoted rates will be firm till the satisfactory completion of the contract. No claim shall be entertained for any revision of rates.
11. The tender is for item rate contract shall be quoted for the complete scope of work described in the bill of quantities, specifications etc. and the **CONTRACTOR** to finish the work consistent with true intent and meaning of the specifications.
12. The tenderer shall submit, without exception, the offer, which complies fully with the requirements of all the tender documents. The tenderer may, in addition to his offer, submit alternatives for any of the items subject to the same meeting the functional requirements and complying with the applicable specifications.
13. Tender documents are not transferable.
14. The tender shall remain valid for acceptance for a period of **90 days** from the last date of receipt of the tender, which may be extended by mutual agreement.
15. **Relevant information/certificates/schedules called for should be annexed to the tender.Failure to comply even in part may entail rejection of the tender.**

16. The Employer reserves right of allotting the contract to any tenderers/Bidder. No claim in this regard will be tenable.

II. Manner of Online Submission of E-Tender and its Accompaniments

Main Tender Documents are to be prepared & submitted online as per instructions of E-tendering and upload on web site by digitally signed wherever necessary.

The detailed step by step procedure for uploading the Main Tender Documents, required Tender papers, Payment of tender fee, and E.M.D through E payment Gateway is available on the e-Tendering website of **Web Site:** www.jnarddc.gov.in and <https://mines.euniwizarde.com>. Bidders have to follow the instructions given above .

- The contractor shall submit documents listed below through online . (Technical bid documents)
- Note :- Contractor has to ensure that the attached documents are arrange serially as enlisted in check list before submitting the documents. Contractor will be solely responsible for any of his documents remaining unevaluated on the grounds of not submitting documents in proper sequences. All attachments should be serially numbered.
 - i) Scanned copy of payment of EMD .
 - ii) Scanned copy of PAN card .
 - iii) Copy of acknowledgement of Income Tax return filed for last Three Financial year.
 - iv) Scanned copy of turnover certificate of last Three Financial years issued by Chartered Accountant in form 6.
 - v) **Format A, B, as per tender documents.**
 - vi) Scanned copy of GST Registration certificate provided as per GOI GST Act 2017.
 - vii) Scanned copy of Details of the works completed by the contractor in Govt Organization, certificate from the head of the Office under whom the works are completed should be enclosed in Form B.

2.23.1 False information and documentation given by contractor shall be liable for action under Indian Penal Code (IPC) & Information Technology Act 2000.

II. CONTRACT CONDITIONS

A. GENERAL CONDITIONS

1. DEFINITIONS AND INTERPRETATIONS

In the CONTRACT (as hereinafter defined) the following words and expressions shall have the meaning hereby assigned to them except where the context otherwise requires.

- 1.1 The "OWNER" means **Jawaharlal Nehru Aluminium Research Development and Design Centre** and the legal successors, representatives, assigns of the Employer.
- 1.2 "ARCHITECT/ Engineer / Consultant " means **M/s B M Ghawade & Associates, Nagpur** duly appointed by the **OWNER** for the design, drawings and execution of the works.
- 1.3 The successful tenderer will hereinafter be called as "CONTRACTOR".
- 1.4 The 'Tender' shall mean the tender submitted by the CONTRACTOR for acceptance by the "OWNER".
- 1.5 The "Engineer" shall mean the duly authorised representative of the OWNER / ARCHITECT / CONSULTANT who will act for and on his behalf for operation of this contract.
- 1.6 "Engineer's Representative" shall mean any Resident Engineer or Assistant to the Engineer appointed from time to time by the OWNER / ARCHITECT to perform the duties set forth in the Tender Document whose authority shall be notified in writing to the CONTRACTOR by the Engineer.
- 1.7 The SUB-CONTRACTOR" shall mean any person or firm or company (other than the CONTRACTOR) to whom any part of work has been entrusted by the CONTRACTOR, and the Legal Representatives, Successors and permitted Assigns of such person firm or Company.
- 1.8 The "WORK" shall mean and include all works to be executed in accordance with the CONTRACT or part thereof as the case may be and shall include all extras, additional, altered, or substituted works as required for the purpose of the CONTRACT.
- 1.9 The "CONTRACT" shall mean the agreement between the OWNER and the CONTRACTOR for the execution of the WORK including therein all documents such as the Invitation to Tender, Instructions to Tenderers, General Conditions of Contract, Special Conditions of Contract, Specifications, General Requirements, Time Schedule, Prices,

Letter of Acceptance of Tender, Agreed Variations, if any, etc.

- 1.10** "Contract Price" means the sum named in the letter of acceptance subject to such additions thereto, or deductions therefrom as may be made under the provisions hereinafter contained.
- 1.11** The 'Contract Document' shall mean collectively the Tender Documents, Designs, Specifications, Schedule of Rates/Prices, letter of Acceptance of Tender, Agreed variation, if any and other documents constituting the Tender and acceptance thereof.
- 1.12** "CONSTRUCTIONAL PLANT/EQUIPMENT" shall mean all Appliances/ Equipment or things of whatsoever nature required in or about the execution and completion or maintenance of the works or temporary works (as hereinafter defined) but does not include materials or other things intended to form or forming part of the permanent works.
- 1.13** "TEMPORARY WORK" shall mean all temporary works of every kind required in or about the execution, completion or maintenance of the WORK.
- 1.14** "SPECIFICATIONS" shall mean all directions, technical specifications, provisions and requirements attached to the CONTRACT, which pertain to the method and manner of performing the WORK to the quantities and qualities of the WORK and the materials to be furnished under the CONTRACT for the WORK as may be amplified or modified by Drawings for the performance of the CONTRACT in order to provide for the unforeseen conditions or in the best interests of the WORK. It shall also include the latest edition including all addenda/corrigenda of relevant Indian Standard Specifications and other relevant Codes.
- 1.15** "DRAWINGS" shall include maps, plans, sketches and tracings or prints thereof with any modifications approved in writing by the Engineer and such other Drawings as may from time to time be furnished or approved in writing by the Engineer. Drawings shall indicate dimensions, details, positions and type of construction.
- 1.16** "SITE" shall mean the land and waters and other places on, under, in or through which the WORK is to be carried out and any other lands, water or places provided by the OWNER for the purpose of the CONTRACT together with any place designated in the CONTRACT as forming part of the SITE.
- 1.17** "Notice in Writing or Written Notice" shall mean a notice written, typed or printed form sent (unless delivered personally) or otherwise proved to have been received by the CONTRACTOR.
- 1.18** The "COMPLETION CERTIFICATE" shall mean certificate to be issued by the Engineer/consultant when the WORK has been substantially completed to his satisfaction.

- 1.19** The "FINAL CERTIFICATE" in relation to the WORK shall mean the certificate regarding the satisfactory compliance of the various provisions of the CONTRACT by the CONTRACTOR issued by the Engineer after the period of liability is over.
- 1.20** "Approved" shall mean approved in writing including subsequent written confirmation of previous verbal approval and "Approval" means approval in writing including as aforesaid.
- 1.21** The "Period of Defects Liability / Maintenance" in relation to a WORK means the specified period from the date of completion of WORK as indicated in completion certificate up to the date of issue of final certificate during which the CONTRACTOR stands responsible for rectifying all defects that may appear in the WORK.
- 1.22** The "Alteration / Variation Order" means an order given in writing by the Engineer to effect additions to or deletions from and alterations in the WORK.
- 1.23** "Letter of Acceptance" shall mean intimation by a Letter to the successful Tenderer that the Tender has been accepted in accordance with the provisions contained therein.

2. GENERAL INFORMATION

2.1 LOCATION OF SITE AND ACCESSIBILITY

The SITE for the works is Nagpur, Maharashtra and is well connected by roads. The intending tenderer can inspect the site and make himself familiar with the site conditions, existing buildings, available space for working / storage and available communication facilities at his own cost.

Non availability of access roads or railway siding or permits for entry of vehicles to any specific area shall in no case be the cause to condone any delay in the execution or be the cause for any claims or extra payments.

2.2 BASIS OF TENDER

- 2.2.1 The tenderer will quote his rates for the indicative quantities, based on the tender drawings and scope of work. The sequence of tenders will be arrived at based on the quoted price.

If during execution, different material is decided to be adopted, the difference between the basic price and the price of the newly selected material will be to Employer's account.

If any items mentioned in the tender drawings or in BOQ are deleted altogether, then, the quantities worked out on the basis of tender drawings (not what is mentioned in the BOQ) will be deleted.

The CONTRACTOR shall provide all necessary materials, Equipment and labour etc. for the execution and maintenance of the WORK till completion unless otherwise specifically agreed to in writing. All materials that go with the WORK shall be approved by the Engineer.

2.3 WATER FOR CONSTRUCTION AND OTHER USE

The owner shall **shall provide one point availability for water** on chargeable basis. Water charges from final bill be deducted @ 0.25% of the basic value of invoice . **If additional quantity is required the CONTRACTOR has to make his own arrangements at his own cost for water supply for construction, curing and other purposes.**

Quality of water to be tested.

For this purpose the CONTRACTOR shall arrange for adequate storage arrangements so that sufficient quantity of water is available at all times to meet the CONTRACTOR's construction, curing and all other requirements. The CONTRACTOR should submit his plans on this facility for the approval of the

Engineer. The water used by the CONTRACTOR shall be fit for construction purposes to the satisfaction of Engineer. The water proposed to be used should be tested by the CONTRACTOR at his cost. Adequate storage of water shall be made available at all times by the CONTRACTOR to ensure continuous work without stoppage for want of water.

2.4 POWER (ELECTRICITY) SUPPLY

The owner shall supply one point electricity connection on chargeable basis. Electricity charges from **final bill be deducted @ 0.25% of the basic value** of invoice . The **CONTRACTOR** has to make his own arrangements at his own cost for temporary construction electric power supply at site. The **CONTRACTOR** should submit his plans with details on temporary electrical facilities. The temporary lines / structures shall be removed by the CONTRACTOR at his own cost after completion of the work. If there is any hindrance to the other works due to these lines / structures, during the progress of work the same shall be realigned at the CONTRACTORS cost.

The CONTRACTOR is responsible to make adequate infrastructure and standby facilities for the continuous supply of electric power required for the satisfactory execution of the work without stoppage.

2.5 LAND FOR CONTRACTOR'S FIELD OFFICE, GODOWN AND WORKSHOP

The OWNER will at his own discretion and convenience and for the duration of the execution of the WORK make available in the SITE, land for construction of CONTRACTOR'S field office, godowns, workshops and assembly yard required for the execution of the CONTRACT. The CONTRACTOR shall submit plan showing size and location of all temporary facilities. The CONTRACTOR shall at his own cost construct all temporary buildings and provide suitable water supply and sanitary arrangement as approved by the Engineer. The area of the land for the purpose will be decided by the OWNER and no claim will be entertained for insufficiency etc.

On completion of the WORK undertaken by the CONTRACTOR, he shall remove all Temporary Works erected by him and have the SITE cleared and restored to original condition as directed by Engineer. If the CONTRACTOR shall fail to comply with these requirements the Engineer may at the expense of the CONTRACTOR remove such surplus and rubbish materials and dispose of the same as he deems fit and get the SITE cleared as aforesaid and the CONTRACTOR shall forthwith pay the amount of all expenses so incurred and shall have no claims in respect of any such surplus material disposed of as aforesaid. But the OWNER reserves the right to ask the CONTRACTOR any time during the pendency of the CONTRACT to vacate the land by giving seven (7) days notice. In such case the CONTRACTOR will be given alternate site.

2.6 SAFETY STANDARDS FOR TEMPORARY BUILDINGS

All temporary buildings, sheds, workshops, field station, etc. shall be constructed in conformity with the safety and security regulations of the OWNER, as regards location

and type of structures. Roofing and cladding with grass or paddy straw or coconut leaf will not be permitted within the site.

- 2.7 In this document certain clauses may be repeated in several sections. In case of any discrepancy the same may be brought to the notice of OWNER whose decision regarding interpretation shall be final and binding.

3. GENERAL INSTRUCTIONS TO TENDERERS

3.1 INTRODUCTION

1. AUTHORITIES

Jawaharlal Nehru Aluminium Research Development and Design Centre (hereinafter called the OWNER / Employer), having its Office at Amrawati Road, Wadi Nagpur – 440023 is desirous of Proposed Construction of **Cement Concrete Road in JNARDDC Premise at Nagpur**, Maharashtra will receive tenders in respect of works as set forth in the accompanying tender documents. Tenders shall be prepared and submitted in accordance with the tender documents and instructions given herein.

2. ELIGIBILITY

The contractors / firms should meet the following **minimum qualifying criteria**

(1) The bidder should have completed requisite number of works (see criteria below), as the case may be, of prescribed nature and magnitude executed on independent contract basis during the last three years.

Figures Rupees in Lakhs

Cost of work	Average Annual Turnover during last 3 financial year	Past experience in completed similar works during last five financial years (to fulfill either of the three options)		
		Single work costing at least	Two works each costing at least	Three works each costing at least
	30.00 Lakhs	25.00	15.00	10.0

- **Similar works means, “All works of civil related to civil works (roads, building etc for Govt works”.**
- No Joint venture or Consortium of firms shall be allowed and the contractors should meet the above criteria by themselves.
- The net worth of the firm should be positive , the bidder should not have any losses in

last 3 years

- The past experience in similar nature of work should be supported by certificates issued by an Officer not below the rank of Executive Engineer or equivalent/project manager.
- The gross annual turnover should be certified by the Chartered Accountant..
- The applicant should own sufficient construction equipment for proper and timely execution of the works in the respective category & group. The applicant should submit a summary of construction plants & equipment in order to deliver timely and effectively the given project in the respective category & group and the same may be provided with the bid.
- The applicant should have sufficient number of Technical/ Administrative and Quality Assurance employees for the timely and execution with quality of the given project in the respective category & group. The applicant should submit a strategy statement detailing the Project Management and Quality Assurance team with the bid
- All the applications received, will be evaluated on the basis of information and documents provided by the applicant.

(2) **Annual Turnover** : The annual turnover of the Bidder on which service tax applicable/paid for the previous three years should be at least **Rs.30Lakhs (Thirty Lakhs)** and copies of audited accounts or by a certificate from the Chartered Accountant, for the previous financial years 2020-21 and 2021-22 and 2022-23 shall be submitted.

3. SCHEDULES

- 3.1 Tenderers shall submit a schedule giving details of qualification and experience of key personnel who will be available for administration and execution of the work.
- 3.2 Tenderers shall submit a schedule of major items of constructional plant and equipment, erection equipment etc. proposed for use in carrying out the works. The periods of availability of all items shall be clearly indicated with reference to the date of award of the work.
- 3.4 Tenderers shall submit all other information that has been asked for in the tender documents as required to be submitted along with the tender.

4. COST OF TENDERING

- 4.1 The tenderer shall bear all costs associated with the **preparation and submission of his tender and the OWNER** will in no case be responsible or liable for these costs regardless of the conduct or outcome of the tendering process.

5. SITE VISIT

- 5.1 The tenderer shall be deemed to have visited the site and examined the site of works and its surroundings and obtained for himself on his own responsibility all information as to the nature of the ground and sub soil, means of communication and access and any other information that may be necessary for preparing the tender. All associated costs shall be at tenderers own expense.
- 5.2 It is expressly understood that the tenderer will indemnify the OWNER against all liability that may arise in respect of his visit to site.

3.2 TENDER DOCUMENTS

1. CONTENT OF TENDER DOCUMENTS

The tender document comprises of Techno-commercial conditions and Bill of quantities. The documents comprising the tender shall include the following together with any amendments issued prior to date of submission of tenders:

1.1 PART A – Tender Document/ Conditions of Contract

1.2 PART B – Technical Bid

1.3 PART C – Bill of Quantity(BoQ)

2. DISCREPANCIES AND DIFFERENCES

- 2.1 The tenderer shall carefully examine all tender documents and shall report in writing to the OWNER, any discrepancy or difference found therein. The OWNER, on receipt

of such information shall take necessary action, as he deems fit. In case any discrepancies or deviations are discovered after award of works, the decision of the OWNER shall be final and binding.

3. SUBMISSION OF TENDER

3.1 Full set of complete tender documents shall be returned duly completed and signed.

4. CLARIFICATION OF TENDER DOCUMENTS

4.1 The tenderers are invited to send their queries writing before the **pre-bid meeting on 08 Oct 2021 11:30 A.M.**, Answers to these queries, and any further query that may come up in pre-bid meeting will be circulated to all tenderers and these will form a part of bid document.

5. AMENDMENT OF TENDER DOCUMENTS

5.1 The OWNER may issue amendment/s to modify the tender documents. These will be sent to prospective tenderers prior to date of submission of tenders and will be binding on them. Amendments to the tender documents, if issued, must be signed and submitted along with the tender documents.

5.2 Such amendments shall form part of tender documents.

5.3 If necessary the date of submission of tenders may be extended so as to give reasonable time to prospective tenderers to act on the amendments. All conditions applicable to original date will also be applicable to the extended date of submission.

3.3 PREPARATION OF TENDERS

1 LANGUAGE OF TENDER AND LAW

1.1 The Tender and all contract documents and all correspondence, drawings, documents and any written matter relating to this contract shall be in English. In case any supporting document furnished by tenderer is in any other language, the same shall be accompanied by an English translation. Information in any other language shall be accompanied by an appropriate translation in English. For the purpose of interpretation of contract the English translation shall prevail.

1.2 The law to which the Contract is to be subjected and according to which the Contract is to be construed shall be the law for the time being in force in the Republic of India.

1.3 This contract shall be construed as having been executed in Maharashtra and it is specifically agreed the rights and liabilities of the parties hereto their heirs, executors, administrators, successors and assignors in case a dispute arises shall be referred to Arbitration as per Clause „Settlement of Disputes“ under Sl.No. 10. Jurisdiction of all such cases shall be tribunal of Nagpur.

2. DOCUMENTS COMPRISING THE TENDER

2.1 All documents issued and as described in clause 3.2 (1) shall be deemed incorporated in

the tender.

- 2.2 The work schedule to be submitted shall be detailed programme with dates and methodology showing the approach to the execution of works. The detailed programme in the form of bar chart or CPM network shall include all activities from design to hand over. The periods of various activities and phases will be with respect to the date of commencement of works. The programme will be based on priority requirements of the project and will take into account the periods of completion for the priority works and phase wise completion of works and will complement the OWNER's basic requirements and the programmed completion of other works at site. The tenderer's programme shall take into consideration the completion period indicated in the special conditions of contract and in the time schedule attached.

2.3 ~~Transfer of Tender Document~~

~~Transfer of tender document purchased by one tenderer to another is not permissible.~~

3. TENDER PRICES

- 3.1 No alterations shall be made by the tenderer to any of the tender documents. Such alterations, if made, will be disregarded and the original texts will be strictly adhered to.
- 3.2 Each item is to be priced individually. In case any item is not priced, its value will be deemed to be included in the rates contained elsewhere in the Bills of quantities.
- 3.3 Descriptions in Bill of Quantities are to be read in conjunction with all other tender documents.
- 3.4 Any arithmetical error resulting in increase/decrease of final tendered amount shall be rectified by a percentage adjustment in the final amount so as to maintain the final quoted tender amount intact. Such adjustment will be applicable to assessment of variation orders that are based on tendered rates.
- 3.5 Any sums or unit rates, which are obviously erroneous, shall be adjusted so as to form a fair and reasonable rate. However, the final tendered amount will not be affected. Any change due to such adjustment will be dealt with as per clause 3.4 above.

4. CURRENCY OF THE TENDER

- 4.1 All tender prices shall be quoted only in Indian Rupees.

5. TENDER VALIDITY

- 5.1 The tender shall remain valid and open for acceptance for a period of **90 days** from the specified date of receipt of tender. This can be extended, if necessary, only with the written consent of the tenderer.

6. EARNEST MONEY

- 6.1 The tenderer shall furnish as part of his tender, as tender security, earnest money as given in the notice inviting tender failing which the tender will be rejected.

- 6.2 The tender security of successful tenderer will be returned upon the tenderer executing the contract and furnishing the required performance guarantee.
- 6.3 The tender security shall be forfeited if a tenderer withdraws his tender during the period of validity or the successful tenderer, if he fails to enter into the contract or furnish performance guarantee or fails to accept corrections of errors in his tender. No interest will be payable on the tender security amount.

7. ALTERNATIVE OFFERS

- 7.1 The tenderer shall submit, without exception the offer which complies fully with the requirements of all the tender documents. The tenderer may, in addition to his offer, submit alternatives for items subject to the same meeting the functional requirements and complying with the specifications, wherever applicable.
- 7.2 Technical alternatives accompanied by all necessary information may also be submitted in addition. However, these should be compatible with the overall layout plan of the facilities.
- 7.3 In any case such alternatives will only be considered as solicited alternatives which, if accepted, will be binding on the tenderer.
- 7.4 The OWNER reserves the right to reject or not consider such alternatives without assigning any reason.

8. SIGNING OF TENDERS

This shall be done as stipulated in Notice inviting Tender.

3.5 TENDER EVALUATION

- 3.5.1 The OWNER is not bound to accept lowest or any tender or assign any reason for his action. He reserves the right to divide the work between two or more tenderers.

Subsequent to the receipt of tenders all information relating to processing the tenders, their evaluation, comparison and observations concerning award of works shall not be disclosed to tenderers. Any effort by any of the tenderers to use influence in the process leading to award of works may result in the rejection of his tender.

The OWNER may ask the tenderers, individually, for clarifications of any aspect of the submitted tenders and such clarification shall be forthwith supplied.

3.5.2 CORRECTION OF ERRORS

Tenders determined to be responsive will be checked by the OWNER for any arithmetical errors in computation and summation. Errors will be corrected as follows:

- (a) Where there is a discrepancy between unit prices in figures and in words, the unit prices in words will govern; and

- (b) Where there is a discrepancy between the unit price and the total amount derived from the multiplication of the unit price and the quantity, the unit price as quoted will normally govern unless in the opinion of the OWNER there is an obviously gross misplacement of the decimal point in the unit price, in which event, the total amount as quoted will govern.

If a tenderer does not accept the correction of errors as outlined above, his tender will be rejected and his tender security forfeited.

3.6 NOTIFICATION OF AWARD

Prior to expiry of the period of validity of tender or any extension thereto, the successful tenderer will be notified by a letter of acceptance that his tender has been accepted. From this stage onwards no correspondence will be entertained from the unsuccessful tenderers.

3.7 SIGNING OF AGREEMENT

Upon receipt of the Letter of Acceptance of the contract by the successful tenderer, the successful tenderer shall prepare a draft of the Form of Agreement in accordance with the Form of Agreement included in the tender documents and submit the same of the date of receipt of the Letter of Acceptance. The OWNER shall return the draft duly approved within 7 days from the receipt of the draft and the successful tenderer shall get the same engrossed, have the correct amount of stamp duty adjudicated by the Superintendent of Stamps, Maharashtra and thereafter return the same duly signed and executed on behalf of the successful tenderer within 7 days from the receipt of the approved draft.

3.8 INCOME TAX PERMANENT ACCOUNT NUMBER:

The CONTRACTOR shall indicate his income tax permanent account number (GIR No. in case permanent account number is not allotted) to enable the OWNER to issue tax deduction certificate. Income Tax deduction at source will be made as per statutory requirement.

3.10 PERIOD OF COMPLETION

Time allowed for carrying out the work as mentioned in the Notice Inviting Tender shall be strictly observed by the CONTRACTOR and it shall be reckoned from the 7th day after the date of written order to commence the work is issued. The work shall throughout the stipulated period of the Contract be preceded with all due diligence and if the CONTRACTOR fails to complete the work within the specified period he shall be liable to pay compensation as defined in **clause "Liquidated Damages"** of the General Obligations. The successful tenderer shall before commencing work prepare a detailed work programme, which shall be approved by the OWNER.

3.11 UNIT PRICE VARIATION

The successful tenderer shall make his own arrangement to obtain all materials required for the work. The tenderers are to quote their rates such that the likely variations in base prices due to any reason, shall be absorbed by them within their quoted rates during the currency of the contract. No escalation in accepted rates due to increase in prices of materials, labour, transport, fuel, taxes, duties or levies or any other cause - direct or indirect, is acceptable and rates accepted shall remain firm till the completion of the contract.

The unit rates quoted for exactly similar items appearing in different parts of Bill of Quantities shall be the same. If different rates are quoted the lowest rate shall be applicable.

4. GENERAL OBLIGATIONS

4.1 INTERPRETATION OF CONTRACT DOCUMENTS

- 4.1.1 Several documents forming the CONTRACT are to be taken as mutually explanatory. Should there be any discrepancy, inconsistency, error or omission in the CONTRACT or any of the CONTRACT documents, the matter may be referred to Owner who shall give his decision and issue to the CONTRACTOR instructions directing in what manner the work is to be carried out. The decision of the Owner shall be final and conclusive and the CONTRACTOR shall carry out the WORK in accordance with his decision without any increase in cost.
- 4.1.2 Works shown upon the Drawing but not mentioned in the Specifications or described in the Specifications without being shown on the Drawings shall nevertheless be held to be included in the same manner as if they had been specifically shown upon the Drawings and described in the Specification. The rates for such works shall be deemed to be included in the relevant items of the bill of quantities.
- 4.1.3 All headings to the clauses are solely for the purpose of giving concise indication and not a summary of the contents thereof, and they shall never be deemed to be part thereof or be used in the interpretation or construction thereof of the CONTRACT.
- 4.1.4 In this Contract Document unless otherwise stated specifically, the singular shall include the plural and vice versa wherever the context so requires. Words importing persons shall include relevant incorporated companies/registered associations / body of individuals/ firm or partnership.

4.2 CONTRACT CONDITIONS

- 4.2.1 Contract Conditions shall be read in conjunction with the Specifications of Work, Drawings and any other documents forming part of this CONTRACT wherever the context so requires.
- 4.2.2 Notwithstanding the sub-division of the documents into separate sections and volumes every part of each shall be deemed to be supplementary to and complementary of every other part and shall be read with and into the CONTRACT so far as it may be practicable to do so.

- 4.2.3 Wherever it is mentioned in the Specifications and / or indicated in the drawings, that the CONTRACTOR shall perform certain Work or provide certain Facilities, it is understood that the CONTRACTOR shall do so at his own cost.
- 4.2.4 The Materials, Design and Workmanship shall satisfy the relevant Indian Standards, Specifications contained herein and Codes referred to. Where the Specifications stipulate requirements in addition to those contained in the standard Codes and Specifications, these additional requirements shall be satisfied.

4.3 4.3 CONTRACTOR TO OBTAIN HIS OWN INFORMATION

The CONTRACTOR in fixing his rates shall for purposes whatsoever be deemed to have himself independently obtained all necessary information for the purpose of preparing the Tender. The correctness of the details, given in the Tender Document to help the CONTRACTOR to make up the Tender is not guaranteed.

The CONTRACTOR shall be deemed to have examined the Contract Document, to have generally obtained his own information in all matters whatsoever that might affect the carrying out the WORK at the Scheduled Rates and to have satisfied himself to the sufficiency of his Tender. Any error in description of quantity or omission therefrom shall not vitiate the CONTRACT or release the CONTRACTOR from executing the WORK comprised in the CONTRACT according to Drawings and Specifications at the Scheduled Rates. He is deemed to have known the scope, nature and magnitude of the work and the requirements of Materials and Labour involved etc. and as to what all WORK he has to complete in accordance with the CONTRACT whatever be the defects, omissions or errors that may be found in the Contract Document. The CONTRACTOR shall be deemed to have visited surroundings, to have satisfied himself to the nature of all existing structures, if any and also as to the nature and the conditions of the roads, culverts, means of transport and communications, and as to possible interruptions thereto and the access and egress from the SITE, to have made enquires, examined and satisfied himself as to the Sites for obtaining sand, stones, bricks and other materials, the sites for disposal of surplus materials, the available accommodation as to whatever required, Depots and such other Buildings as may be necessary for executing and completing the WORK to have local independent enquires as to the sub-soil, subsoil water and variations thereof, storms, prevailing winds, climate conditions and all other similar matters affecting the WORK. He is deemed to have acquainted himself as to his liability for payment of Government taxes, customs duty and other charges.

Any neglect or failure on the part of the CONTRACTOR in obtaining necessary and reliable information upon the foregoing or any other matters affecting the CONTRACT shall not relieve him from any risk or liabilities for the entire responsibility from completion of the WORK at the scheduled rates and time in strict accordance with the Contract Document.

No verbal agreement or inference from conversation with any officer or employee of the OWNER / ARCHITECT either before or after the execution of the Contract Agreements shall in any way affect or modify any of the terms or obligations herein contained.

- 4.4.2 If the CONTRACTOR/SUB-CONTRACTOR or their employees shall break, deface or

destroy any Property belonging to the OWNER or others during the execution of the CONTRACT, the same shall be made good by the CONTRACTOR at his own expense and in default thereof, the Engineer may cause the same to be made good by other Agencies and recover expenses from the CONTRACTOR (for which the certificate of the Engineer shall be final). In such a case, OWNER is at liberty to enforce the Bank Guarantee to recover the cost incurred irrespective of any dispute between the OWNER and the CONTRACTOR in this regard.

- 4.4.3 All Compensation or other sums of money payable by the CONTRACTOR to the OWNER under terms of this CONTRACT may be deducted from or paid by the sale of a sufficient part of his Security Deposit or from any sums which may be due or may become due to the CONTRACTOR from the OWNER on any account whatsoever and in the event of his Security Deposit being reduced by reasons of any such deductions or sale of aforesaid, the CONTRACTOR shall within Ten (10) days thereafter make good in the form of Bank Guarantee in prescribed proforma any sum or sums which may have been deducted from or realised by sale of his Security Deposit, or any part thereof. No interest shall be payable by the OWNER for sum deposited as Security Deposit.

4.5 TIME OF PERFORMANCE

- 4.5.1 The work covered by this contract shall be commenced from the 7th day after the date of the Letter of Acceptance of the tender and should be completed as mentioned in the Time Schedule of completion of work.

4.5.2 TIME SCHEDULE

The general Time Schedule of construction indicating the milestone completion dates is given in the Tender Document. CONTRACTOR should prepare a detailed weekly construction programme jointly with the Engineer within 7 (seven) days of date of Letter of Acceptance of Tender. The WORK shall be executed strictly as per the construction programme and completed within the stipulated period given in this Document. The period of construction given includes the time required for mobilisation, testing, rectifications, if any, retesting and completion in all respects to the entire satisfaction of the Engineer.

4.6 FORCE MAJEURE

Any delays in or failure of the performance of either party hereto shall not constitute default hereunder or give rise to any claims for damages, if any, to the extent such delays or failure of performance is caused by occurrences such as Acts of God or the public enemy; expropriation or confiscation of facilities by Government authorities, compliances with any order or request of any Government authorities, acts of war, rebellion or sabotage or fires, floods, explosions, riots or illegal strikes.

4.7 EXTENSION OF TIME

The CONTRACTOR shall immediately notify the Engineer in writing of any occurrence which has caused or which may cause a delay which will affect the performance of the work or the completion date of the work. If the delay is caused by an act of God or Force majeure, then and only then CONTRACTOR may submit a claim to the Engineer for an extension of the time of the work. The mere shortage of labour, materials or utilities shall not constitute force majeure, unless any such shortage is caused by circumstances which are themselves force majeure.

4.8 LIQUIDATED DAMAGES FOR DELAY

Time is the essence of the CONTRACT. In case the CONTRACTOR fails to complete the whole work within the stipulated period, he shall be liable to pay liquidated damages of **0.5 % per week of the delay** subject to a maximum of 10% (ten percent) of the value of the CONTRACT. The parties agree that this is a genuine pre-estimate of the loss / damage which will be suffered on account of delay on the part of the CONTRACTOR and the said amount will be payable on demand without there being any proof of the actual loss or damages caused by such delay.

4.9 LIQUIDATED DAMAGES - REASONABLE COMPENSATION

All sums payable by way of liquidated damages under any of the conditions shall be considered as reasonable compensation without reference to the actual loss or damages which shall have been sustained.

4.10 FORFEITURE OF SECURITY DEPOSIT

Whenever any claim against the CONTRACTOR for the payment of a sum of money arises out of or under the CONTRACT, the OWNER shall be entitled to recover such sum by appropriating in part or in whole the Security Deposit of the CONTRACTOR encashing part or whole of the Performance Bank Guarantee. In the event of the Security being insufficient then the balance of the total sum recoverable, as the case may be, shall be deducted from any sum then due or which at any time thereafter may become due to the CONTRACTOR. The CONTRACTOR shall pay to the OWNER on demand any balance remaining due.

4.11 ACTION WHEN WHOLE OF SECURITY DEPOSIT IS FORFEITED

In any case in which, under any clause or clauses of this CONTRACT the CONTRACTOR shall have forfeited the whole of his Security Deposit (whether paid in one sum or deducted by installments) or have committed a breach of any of the terms contained in this CONTRACT the OWNER shall have power to adopt any of the following courses as he may deem best suited to his interest.

- a) To rescind the CONTRACT (of which recession notice in writing to the CONTRACTOR under the hand of the OWNER shall be conclusive evidence) in which case the Security Deposit of the CONTRACTOR shall stand forfeited and be absolutely at the disposal of the OWNER.
- b) To employ labour paid by the OWNER and to supply materials to carry out the WORK or any part of the WORK, debiting CONTRACTOR with the cost of labour, cost of tools and plants and Equipment charges, the cost of materials for which a certificate of the Engineer shall be final and conclusive against the CONTRACTOR and Fifteen

percent (15%) of costs as above to cover all departmental charges and crediting him with the value of the Work done, in all respects in the same manner and at same rates as if it had been carried out by the CONTRACTOR under the terms of CONTRACT. The certificate of Engineer as to the value of the Work done shall be final and conclusive against the CONTRACTOR.

- c) To measure up the Work of the CONTRACTOR and to take such part thereof as shall be unexecuted out of his hand to give it to another CONTRACTOR to complete in which case any expenses which may be incurred in excess of the sum which would have been paid to CONTRACTOR, if the WORK had been executed by him (the certificate in writing of the Engineer of the excess amount shall be final and conclusive) shall be borne and paid by the CONTRACTOR and may be deducted from any money due to him by the OWNER under the CONTRACT or otherwise or from his Security Deposit or from the proceeds of sale thereof, of a sufficient part thereof.

In the event of any of the above course being adopted by the OWNER, the CONTRACTOR shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any materials or entered into any agreements or made any advances on account of or with a view to the execution of the WORK of the performance of the CONTRACT. In case the CONTRACT is rescinded under the provision aforesaid the CONTRACTOR shall not be entitled to recover or be paid any sum for any WORK actually performed under this CONTRACT unless the Engineer certifies in writing the performance of such work, and the value payable in respect thereof and he shall only be entitled to be paid the value so certified, after recoveries and deductions if any made by the OWNER as per contract.

4.12 LIABILITY TO PAY COMPENSATION IF ACTION NOT TAKEN UNDER CLAUSE 4.11

In any case in which any of the powers conferred upon the OWNER by clause 4.11 thereof shall have become exercisable and the same had not been exercised, the non-exercise thereof shall not constitute a waiver of any of the conditions hereof and such powers shall notwithstanding be exercisable in the event of any further case of default by the CONTRACTOR for which by any clause or clauses hereof he is declared liable to pay compensation and the liability of the CONTRACTOR for past and future compensation shall remain unaffected. In the event of the OWNER putting in force the power under sub-clause (a), (b) or (c) vested in him under the preceding clause he may, if he so desires, take possession of all or any tools and plants, materials and stores in or upon the WORK or the SITE thereof belonging to the CONTRACTOR or procured by him and intended to be used for the execution of the work or any part thereof paying or allowing for the same in account at the contract rates or in the case of these not being applicable at current market rates to be certified by the Engineer whose certificate thereof shall be final. Otherwise, the Engineer may give notice in writing to the CONTRACTOR or his foreman or other authorised agent, requiring him to remove such tools, plant, materials or stores from the premises (within a time to be specified in such notice), and in the event of the CONTRACTOR failing to comply with any such requisition, the Engineer may remove them at the CONTRACTOR's expense or sell them by auction or private sale on account of the CONTRACTOR and at his risk in all

respects without any further notice as to the date, time or place of sale and the certificate of the Engineer as to the expense of any such removal and the amount of the proceeds and expense of any such sale shall be final and conclusive against the CONTRACTOR.

4.13 NO COMPENSATION FOR ALTERATION IN OR RESTRICTION OF WORK

If at any time from the commencement of the WORK the OWNER for any reason whatsoever not require the whole or part thereof as specified in the Tender to be carried out the Engineer shall give notice in writing of the fact to the CONTRACTOR, who shall have no claim to any payment or compensation whatsoever on account of any profit or advantage which he might have derived from the execution of the WORK in full, but which he did not derive in consequence of the full amount of the work not having been carried out, neither shall he have claim for compensation by reason of any alterations in the original Specifications, Drawings, Designs and Instructions which shall involve any curtailment of the WORK as originally contemplated.

4.14 CHANGE IN CONSTITUTION

Where the CONTRACTOR is a partnership firm the prior approval, in writing, of the OWNER shall be obtained before any change is made in the constitution of the firm. Where the CONTRACTOR is an individual or a Hindu undivided family business concern, such approval as aforesaid shall, likewise be obtained before such CONTRACTOR enters into any agreement with other parties, where under the reconstituted firm would have the right to carry out the WORK hereby undertaken by the CONTRACTOR. In either case if prior approval as aforesaid is not obtained, the CONTRACT shall be deemed to have been allotted in contravention of clause 4.21 hereof and the same action may be taken and the same consequence shall ensue as provided in the said clause.

4.15 IF THE CONTRACTOR DIES

Where the CONTRACTOR is an individual, without prejudice to any of the rights or remedies under this CONTRACT, if the CONTRACTOR dies, the OWNER shall have the option of terminating the CONTRACT without compensation to the CONTRACTOR.

4.16 EMPLOYEES OF THE OWNER NOT INDIVIDUALLY LIABLE

No Director, or Official or employee of the OWNER shall be in any way personally bound or liable for the acts or obligations of the OWNER under the CONTRACT or answerable for any default or omission in the observance or performance of any of the acts, matters or things which are herein contained.

4.17 OWNER NOT BOUND BY PERSONAL REPRESENTATION

The CONTRACTOR shall not be entitled to any increase on the Schedule Rates or any other right or claim whatsoever by reason of any representation, explanation or

statement or alleged representation, promise or guarantees given or alleged to have been given to him by any person.

4.18 CONTRACTOR'S OFFICE AT SITE

The CONTRACTOR shall provide and maintain an office at the SITE for accommodation of his agent and staff and such office shall be open at all reasonable hours to receive instructions, notices or other communications.

4.19 CONTRACTOR'S SUBORDINATE STAFF AND THEIR CONDUCT

- 4.19.1. The CONTRACTOR, on or after award of the WORK shall name and depute a qualified engineer having sufficient experience in carrying out WORK of similar nature to whom the equipment, materials, if any, shall be issued and instructions of the work given. The CONTRACTOR shall also provide to the satisfaction of the Engineer sufficient and qualified staff to supervise the execution of the WORK, competent sub-agents, foremen and leading hands including those specially qualified by previous experience to supervise the type of works comprised in the CONTRACT in such manner as will ensure work of the best quality and expeditious working. Whenever in the opinion of the Engineer additional properly qualified supervisory staff is considered necessary, they shall be employed by the CONTRACTOR without additional charge on account thereof. The CONTRACTOR shall ensure to the satisfaction of the Engineer that Sub-Contractors if any, shall provide competent and efficient supervision, over the Work entrusted to them.
- 4.19.2. If and whenever any of the CONTRACTOR or SUB-CONTRACTOR's agents, sub-agents, assistants, foremen or other employees shall in the opinion of Engineer be guilty of any misconduct or be incompetent or insufficiently qualified or negligent in the performance of their duties or that in the opinion of the Engineer, it is undesirable for administrative or any other reason for such person or persons to be employed in the WORK, the CONTRACTOR, if so directed by the Engineer, shall at once remove such person or persons from employment thereon. Any person or persons so removed from the WORK shall not again be employed in connection with the WORK without the written permission of the Engineer. Any person so removed from the WORK shall be immediately replaced at the expense of the CONTRACTOR by a qualified and competent substitute acceptable to the OWNER. The CONTRACTOR shall bear all costs in connection herewith.
- 4.19.3. The CONTRACTOR shall be responsible for the proper behaviour of all the staff, foremen, workmen and others and shall exercise a proper degree of control over them and in particular and without prejudice to the said generality, the CONTRACTOR shall be bound to prohibit and prevent any employee from trespassing or acting in any way detrimental or prejudicial to the interest of the community or of the properties or occupiers of land and properties in the neighbourhood and in the event of such employees so trespassing, the CONTRACTOR shall be responsible therefor and relieve the OWNER of all consequent claims or actions for damages or injury or any

other grounds whatsoever. The decision of the Engineer upon any matter arising under this clause shall be final.

- 4.19.4. If and when required by the OWNER all CONTRACTOR's personnel entering upon the OWNER's premises shall be properly identified by badges of a type acceptable to the OWNER which must be worn at all times on OWNER's premises.

4.20 SUB-LETTING OF WORK

- i) No part of the CONTRACT nor any share or interest therein shall in any manner or degree be transferred, assigned or sublet by the CONTRACTOR directly or indirectly to any person, firm or corporation whatsoever except as provided for in the succeeding sub-clause, without the consent in writing, of the OWNER.
- ii) The OWNER may give written consent to sub- contract for the execution of any part of the WORK at the SITE, being entered into by the CONTRACTOR provided each individual subcontract is submitted to the Engineer before being entered into and is approved by him. Such written consent may be withheld without assigning any reason.
- iii) At the commencement of every month the CONTRACTOR shall furnish to the Engineer list of all Sub-Contractors or other persons or firms engaged by the CONTRACTOR or working at the SITE during the previous month with particulars of the general nature of the subcontract of WORK and references of the Engineers approval obtained for the same.
- iv) Notwithstanding any sub-letting with such approval as aforesaid and notwithstanding that the Engineer shall have received copies of any sub-contracts, the CONTRACTOR shall be and shall remain solely responsible for the quality and proper and expeditious execution of the WORK and the performance of all the conditions of the CONTRACT in all respects as if such sub-letting or sub-contracting had not taken place, and as if such WORK had been done directly by the CONTRACTOR.
- v) If any Sub-Contractor engaged upon the WORK at the SITE executes any WORK which in the opinion of Engineer is not in accordance with the Contract Document, the OWNER may by written notice to the CONTRACTOR request him to terminate such contract and the CONTRACTOR upon the receipt of such notice shall terminate such sub-contract and the Sub-Contractors and the latter shall forthwith leave the WORK failing which the OWNER shall have the right to remove such Sub-Contractors from the SITE.
- vi) No action taken by the OWNER under the clause shall relieve the CONTRACTOR of any of his liabilities under the CONTRACT or give rise to any right to compensation, extension of time or otherwise, the OWNER shall have the right to remove such Sub-Contractors from the Site.

4.21 POWER OF ENTRY

If the CONTRACTOR shall not commence the WORK in the manner previously described in the Contract Document or if he shall at any time in the opinion of the Engineer :-

- i) fail to carry out the WORK in conformity with the Contract Document, or
- ii) fail to carry out the WORK in accordance with the Time Schedule, or
- iii) substantially suspend WORK for a period of seven (7) days or more without authority from the Engineer, or
- iv) fail to carry out and execute the WORK to the satisfaction of the Engineer, or
- v) fail to supply sufficient or suitable constructional plant and equipment, temporary works, labour, materials or things, or
- vi) commit or suffer, or permit any other breach of any of the provisions of the CONTRACT to be performed on his part or observed to persist in any of the above mentioned breaches of the CONTRACT for seven (7) days, after notice in writing shall have been given to the CONTRACTOR by the Engineer requesting such breach to be remedied, or
- vii) if the CONTRACTOR shall abandon the work, or
- viii) if the CONTRACTOR during the continuance of the contract shall become bankrupt, make any arrangement or composition with his creditors, or permit any execution to be levied or go into liquidation whether compulsory or voluntary not being merely a voluntary liquidation for the purpose of amalgamation or reconstruction.

Then in any such case the OWNER shall have the power to enter upon the WORK and take possession thereof and of the materials, temporary works, constructional plant and equipment and stock thereon, and to revoke the CONTRACTOR's licence to use the same, and to complete the WORK by his Agents, other CONTRACTORS or Workmen, or to re-let the same upon any terms and to such other person, firm or corporation as the OWNER in his absolute discretion may think proper to employ and for the purpose aforesaid to use or authorise the use of any materials, temporary works, constructional plant and equipment and stock as aforesaid, without making payment or allowance to the CONTRACTOR for the said materials other than such as may be certified in writing by the Engineer to be reasonable, and without making any payment or allowance to the CONTRACTOR for the use of the temporary said works, constructional plant and equipment and stock or being liable for any loss or damage thereto, and if the OWNER shall incur additional expenditure by reason of his taking possession of the Works which are being completed by other CONTRACTOR (due account being taken of any extra work or works which may be omitted) then the amount of such additional expenditure as certified by the Engineer shall be deducted from any money which may be due for work done by the CONTRACTOR under the CONTRACT and not paid for. Any deficiency shall forthwith be made good and paid to the OWNER by the CONTRACTOR and the OWNER shall have power to sell in such manner and for such price as he may think fit all or any of the constructional plant and equipment materials etc. constructed by or belonging to CONTRACTOR and to recoup and retain the said deficiency or any part thereof out of the proceeds of the sale.

4.22 CONTRACTOR'S RESPONSIBILITY WITH OTHER AGENCIES

Without repugnance to any other condition, it shall be the responsibility of the CONTRACTOR executing the work to work in close co-operation and co-ordinate the works with the Mechanical, Electrical, Airconditioning and Intercommunication CONTRACTORS and other Agencies or their authorised representatives in providing the necessary grooves, recesses, cuts and openings etc., in walls, slabs, beams and columns etc., and making good the same to the desired finish as per Specifications for the placement of electrical, Intercommunication cables, Conduits, Airconditioning inlet and outlet grills and other Equipment etc. where required. For the above said

requirements in the false ceiling and other partitions, the CONTRACTOR before starting up the work shall in consultation with the Electrical, Mechanical, Intercommunication, Airconditioning CONTRACTORS, and other Agencies prepare and put up a joint scheme, showing the necessary openings, grooves, recesses, cuts, the methods of fixing required for the work of the aforesaid, and the finishes therein, to the Engineer and get the approval. The Engineer before communicating his approval to the scheme, with any required modifications, shall get the final agreement of all the Agencies, which shall be binding. No claim shall be entertained on account of the above.

The CONTRACTOR shall conform in all respects with the provisions of statutory regulation ordinances or byelaws of any local or duly constituted authorities or public bodies which may be applicable from time to time to the WORK or any temporary works. The CONTRACTOR shall keep the OWNER indemnified against all penalties and liabilities of every kind, arising out of non-adherence to such statutes, ordinances, laws, rules, regulations etc.

4.23 OTHER AGENCIES AT SITE

The CONTRACTOR shall have to execute the WORK in such place and condition where other Agencies will be engaged for other WORKS such as Site Grading, Filling and Levelling, Electrical and Mechanical Engineering work, other civil works etc. No claim shall be entertained due to WORK being executed in the above circumstances.

4.24 NOTICES

Any notice hereunder may be served on the CONTRACTOR or his duly authorized representative at the SITE or may be served direct to the address furnished by the CONTRACTOR. Proof of issue of any such notice will be conclusive of the CONTRACTOR having been duly informed of all contents therein.

4.25 RIGHTS OF VARIOUS INTERESTS

- i) The OWNER reserves the right to distribute the WORK between more than one CONTRACTOR. The CONTRACTOR shall co-operate and afford other CONTRACTORS reasonable opportunity for access to the WORK for the carriage and storage of materials and execution of their WORK.
- ii) Wherever the work being done by any department of the OWNER or by other CONTRACTORS employed by the OWNER is contingent upon WORK covered by this CONTRACT, the respective rights of the various interests involved shall be determined by the Engineer to secure the completion of the various portions of the WORK in general harmony.

4.26 RIGHT OF OWNER TO DETERMINE / TERMINATE CONTRACT

- i) OWNER shall, at any time, be entitled to determine and terminate the CONTRACT, if in the opinion of the OWNER the cessation of the WORK becomes necessary owing to any cause whatsoever, in which case the cost of approved materials at the SITE at current market rates as verified and approved by Engineer and of the WORK done to date by the CONTRACTOR shall be paid for in full at the rate specified in the CONTRACT. A notice in writing from the OWNER to the CONTRACTOR of such

determination and termination shall be the conclusive proof of the fact that the CONTRACT has been so determined and terminated by the OWNER.

- ii) Should the CONTRACT be determined under sub-clause (i) of this clause and the CONTRACTOR claim payment to compensate expenditure incurred by him in the expectation of completing the WORK, the OWNER shall consider and admit such claim as is deemed fair and reasonable and supported by the vouchers to the satisfaction of the Engineer. The OWNER's decision on the necessity and Propriety of such expenditure shall be final and conclusive and binding on the CONTRACTOR.

4.27 PATENTS AND ROYALTIES

CONTRACTOR, if licensed under any patent covering Equipment, Machinery, Materials or compositions of matter to be used or supplied or methods and process to be practiced or employed in the performance of this CONTRACT, agrees to pay all royalties and licence fees which may be due with respect thereto. If any Equipment, Machinery, Materials, composition matters, to be used or supplied or methods and processes to be practiced or employed in the performance of this CONTRACT, is covered by a patent under which the CONTRACTOR is not licensed then the CONTRACTOR before supplying or using the Equipment, Machinery, Materials, compositions method or processes shall obtain such licences, and pay such royalties and license fees as may be necessary for performance of the CONTRACT. In the event the CONTRACTOR fails to pay any such royalty or obtain any such licence any suit for infringement of such patents which is brought against the CONTRACTOR or the OWNER as a result of such failure will be defended by the CONTRACTOR at his own expense and the CONTRACTOR will pay any damages and costs awarded in such suit. The CONTRACTOR shall promptly notify the OWNER if the CONTRACTOR has acquired knowledge of any patent under which a suit for Infringement could be reasonably brought because of the use by the OWNER of any Equipment, Machinery, Materials, Process methods to be supplied hereunder. CONTRACTOR agrees to and does hereby grant to OWNER together with the right to extend the same to any of the subsidiaries of the OWNER as irrevocable, royalty-free licence to use in any country, any invention made by the CONTRACTOR or his employees in or as a result of the performance of the WORK under the CONTRACT.

The OWNER shall indemnify and save harmless the CONTRACTOR from any loss on account of claims against CONTRACTOR for the contributory infringement of patent rights arising out of and based upon the claim that the use by the OWNER of the process included in the design prepared by the OWNER and used in the operation of the plant infringes on any patent right. With respect to any sub-contract entered into by CONTRACTOR pursuant to the provisions of the relevant clause thereof, the CONTRACTOR shall obtain from the Sub-Contractor an undertaking to provide the OWNER with the same patent protection that CONTRACTOR is required to provide under the provisions of this clause.

4.28 LIENS

- 4.28.1. If, any time, there should be evidence of any lien or claim for which the OWNER might have become liable and which is chargeable to the CONTRACTOR, the OWNER shall have the right to retain out of any payment then due or thereafter to become due an amount sufficient to completely indemnify the OWNER against lien or claim and if such lien or claim be valid the OWNER may pay and discharge the same and deduct the

amount so paid from any money which may be or may become due and payable to the CONTRACTOR. If any lien or claim remain unsettled after all payments are made, the CONTRACTOR shall refund or pay to the OWNER all moneys that the latter may be compelled to pay discharging such lien or claim including all costs and reasonable expenses.

- 4.28.2. The OWNER shall have general lien over all tools, equipment, machinery and materials etc. belonging to the CONTRACTOR for any amount due from the CONTRACTOR to the OWNER on any account.

4.29 PLANT AND MATERIALS

The CONTRACTOR shall include a detailed chart showing the plant and equipment to be deployed on the works and the periods during which the same will be available. In the event additional plant and equipment are considered necessary in the opinion of the OWNER, the same shall be provided forthwith at no extra cost.

The OWNER may require removal from the works of any plant and material brought for the Contract works, which he considers as unsuitable. No reason is required to be furnished for this.

4.30 REPEAT ORDER

If during the next 06 months from the date of awarding the work order , any same nature of work required by OWNER then CONTRACTOR has to carry out this work if OWNER place work order to CONTRACTOR. The rates will be applied which are finalized in this tender . It is the purely the discretion of OWNER that he want to place the work order the repeat order basis.

5. PERFORMANCE OF WORK

5.1 EXECUTION OF WORK

All the WORK shall be executed in strict conformity with the provisions of the Contract Documents and with such explanatory detailed Drawings, Specifications and Instructions as may be furnished from time to time to the CONTRACTOR by the Engineer, whether mentioned in the CONTRACT or not.

The CONTRACTOR shall be responsible for ensuring that WORK throughout are executed in the most substantial, proper and workmanlike manner with the quality of material and workmanship in strict accordance with the Specifications and to the entire satisfaction of the Engineer.

5.2 WORK IN MONSOON AND DEWATERING

- 5.2.1. The completion of the WORK may entail working in the monsoon also. The CONTRACTOR must maintain necessary labour force as may be required for the WORK and plan and execute the construction and erection according to the prescribed schedule. No extra rate will be considered for such WORK in monsoon.
- 5.2.2. During monsoon and other period, it shall be the responsibility of the CONTRACTOR to keep the construction work Site free from water logging at his own cost.

5.3 WORK ON SUNDAYS AND HOLIDAYS

For carrying out WORK on Sundays and Holidays, the CONTRACTOR will approach the Engineer or his representative at least two (2) days in advance and obtain permission.

5.4 GENERAL CONDITIONS FOR CONSTRUCTION AND ERECTION WORK

- 5.5.1. The working time is forty-eight (48) hours per week. Overtime work is permitted in cases of need and the OWNER will not compensate for the same. Shift working at two (2) or three (3) shifts per day may become necessary and the CONTRACTOR should take this aspect into consideration for formulating his rates for quotation. No extra claims will be entertained by the OWNER on this account.
- 5.5.2. The CONTRACTOR must arrange for the placement of workers in such a way that the delayed completion of the WORK or any part thereof for any reason whatsoever will not affect their proper employment. The OWNER will not entertain any claim for idle payment whatsoever.
- 5.5.3. The CONTRACTOR shall submit to the OWNER reports at regular intervals regarding the state and progress of WORK. The details and proforma of the report will mutually be agreed.
- 5.5.4 Any setback to progress of works will be made good by increase of resources at no additional cost.

5.5 DRAWINGS

- 5.5.1. A set of drawings are attached with Tender. These shall be for the general guidance of the CONTRACTOR to enable him to visualise the type of WORK contemplated and Scope of Work involved. The CONTRACTOR will be deemed to have studied the Drawings along with the schedule of items and formed an idea about the WORK involved.
- 5.5.2. Detailed working Drawings on the basis of which actual execution of WORK is to proceed, will be furnished by the CONTRACTOR from time to time during the progress of WORK. CONTRACTOR shall be deemed to have gone through the Tender Drawings and instructions thoroughly and carefully and in conjunction with all other connected Drawings and include the information in preparation of working drawings.
- 5.5.3. Copies of all detailed working Drawings relating to WORK shall be kept at the CONTRACTOR's office at the SITE and shall be made available to the Engineer at any time during the CONTRACT. The drawings and other documents issued by the OWNER shall be returned to the OWNER on completion of the work.
- 5.5.4. Where approval of Drawings for Manufacture/Construction/Fabrication has been specified, it shall be CONTRACTOR's responsibility to have these Drawings prepared as per the directions of Engineer and got approved before proceeding with Manufacture / Construction / Fabrication as the case may be. Any changes that may have become necessary in these Drawings during the execution of WORK shall have to be carried out by the CONTRACTOR to the satisfaction of Engineer at no extra cost.
- 5.5.5. A period of one (1) week from the date of receipt shall be required for approval of Drawings by the Engineer as the case may be.

5.6 SETTING OUT WORK

- 5.6.1. The Engineer shall furnish the CONTRACTOR with only the corners of the SITE and a level Benchmark and the CONTRACTOR shall set out the WORK and shall provide an efficient staff for the purpose and shall be responsible for the accuracy of such setting out.
- 5.6.2. The CONTRACTOR shall provide, fix and be responsible for the maintenance of all Stakes, Template, Level Marks, Profiles and other similar things and shall take all necessary precautions to prevent their removal or disturbance and shall be responsible for the consequence of such removal or disturbance should the same take place and for their efficient and timely reinstatement. The CONTRACTOR shall also be responsible for the maintenance of all existing Survey Marks, Boundary Marks, Distance Marks and Centre Line Marks, either existing or supplied and fixed by the CONTRACTOR. The WORK shall be set out to the satisfaction of the Engineer. The approval thereof or joining with the CONTRACTOR by the Engineer in setting out the WORK shall not relieve the CONTRACTOR of any of his responsibilities.
- 5.6.3. Pillars bearing geodetic marks located at the SITE of work under construction should be protected and fenced by the CONTRACTOR.
- 5.6.4. On completion of WORK, the CONTRACTOR must submit the geodetic documents according to which the WORK was carried out.

5.7 RESPONSIBILITY FOR LEVEL AND ALIGNMENT

The CONTRACTOR shall be entirely and exclusively responsible for the horizontal and vertical alignment, the levels and correctness of every part of WORK and shall rectify effectually any errors or imperfections therein. Such rectification shall be carried out by CONTRACTOR at his own cost, when instructions are issued by the Engineer.

5.8 MATERIAL TO BE SUPPLIED BY CONTRACTOR

CONTRACTOR shall procure and provide the whole materials (as per BoQ given in tender) **including building materials, tools, tackles, construction plant and equipment for the completion and maintenance of WORK and shall make his own arrangement for procuring such materials and for the transport thereof.** The OWNER may give necessary recommendation to the respective authority if so desired by CONTRACTOR but assumes no further responsibility of any nature. The OWNER will insist on the procurement of materials as specified.

5.9 CONDITIONS FOR ISSUE OF MATERIALS :

- i) CONTRACTOR shall bear all incidental charges for the storage and safe custody of materials at site after these have been issued to him.
- ii) CONTRACTOR shall provide suitable arrangements at site for storing the materials, safeguarding against damage by rain, dampness, fire, theft etc. He shall also employ necessary watch and ward establishment for the purpose.
- iii) It shall be the duty of CONTRACTOR to inspect the materials supplied to him

at the time of taking delivery and satisfy himself that they are in good condition. After the materials have been delivered by OWNER, it shall be the responsibility of CONTRACTOR to keep them in good condition and if the materials are damaged or lost, at any time, they shall be repaired and / or replaced by him at his own cost according to the directions of the Engineer.

- iv) OWNER shall not be liable for delay in supply or non-supply of any materials which OWNER has undertaken to supply where such failure or delay is due to natural calamities, act of enemies, transport and procurement difficulties and any circumstance beyond the control of OWNER. In no case, CONTRACTOR shall be entitled to claim any compensation or loss suffered by him on this account.
- v) It shall be the responsibility of CONTRACTOR to arrange in time all materials required for WORK. If, however, in the opinion of the Engineer the execution of WORK is likely to be delayed due to CONTRACTOR'S inability to make arrangements for supply of materials which normally he has to arrange for this shall not constitute a reason for the delay in the execution of WORK.
- vi) CONTRACTOR shall furnish to the Engineer wherever instructed, a statement showing his requirement of the quantities of the proposed materials to be supplied by OWNER and the time when the same will be required by him for work, so as to enable the Engineer to make necessary arrangements for procurement and supply of the material.

5.10 MATERIALS OBTAINED FROM DISMANTLING

If CONTRACTOR in the course of execution of WORK is called upon to dismantle any part for reasons other than those stipulated in clause 5.20 hereunder, the materials obtained in the work of dismantling etc., will be considered as the OWNER's property and will be disposed of to the best advantage of OWNER.

5.11 ARTICLES OF VALUE FOUND

All gold, silver and other minerals of any description and all precious stones, coin, treasure, relics, antiquities and other similar things which shall be found in, under or upon SITE, shall be the property of OWNER and CONTRACTOR shall duly preserve the same to the satisfaction of the Engineer and shall from time to time deliver the same to such person or persons indicated by the OWNER.

5.12 DISCREPANCIES BETWEEN INSTRUCTIONS

Should any discrepancy occur between the various instructions furnished to CONTRACTOR, his agents or staff or any doubt arise as to the meaning of any such instructions or should there be any misunderstanding between CONTRACTOR's staff and the Engineer's staff, CONTRACTOR shall refer the matter immediately in writing to the Engineer whose decision thereon shall be final and conclusive and no claim for losses alleged to have been caused by such discrepancies between instructions, doubts or misunderstanding shall in any event be admissible.

5.13 ALTERATIONS IN SPECIFICATIONS AND DESIGNS AND EXTRA WORK

The Engineer shall have power to make any alterations in, omissions from, additions to or substitutions for, the schedule of rates, the original Specifications, Drawings, Designs, and Instructions that may appear to him to be necessary or advisable during the progress of WORK and CONTRACTOR shall be bound to carry out such altered extra/new items of Work in accordance with any instructions which may be given to him in writing signed by the Engineer, and such alterations, omissions, additions or substitutions shall not invalidate CONTRACT and any altered, additional or substituted Work which CONTRACTOR may be directed to do in manner above specified as part of the Work shall be carried out by CONTRACTOR on the same conditions in all respects on which he agreed to do the WORK. The time for completion of WORK may be extended for the part of the particular job at the discretion of the Engineer, for only such alterations, additions or substitutions of Work, as he may consider as just and reasonable. The rates for such additional, altered or substituted Work under this clause shall be worked out in accordance with the following provisions:

- a) **If the rates for additional altered or substituted Work are specified in CONTRACT, the CONTRACTOR is bound to carry out the additional, altered or substituted Work at the same rates as are specified in CONTRACT unless the Engineer considers otherwise. In this case the rates will be determined by the Engineer as provided in sub-section (c) here below.**
- b) **If the rates for the additional, altered or substituted Work are not specifically provided in CONTRACT, the rates, will be derived from the rates for similar class of Work as are specified in CONTRACT. The opinion of the Engineer, as to whether or not the rates can be reasonably so derived from the items in the CONTRACT will be final and binding on CONTRACTOR.**
- c) If the rates for the altered, additional or substituted Work cannot be determined in the manner specified in the sub-clause (a) & (b) above, then CONTRACTOR shall, within seven (7) days of the date of receipt of order to carry out WORK, inform the Engineer of the rate which it is his intention to charge for such class of Work, supported by analysis of the rate or rates claimed, and the Engineer shall determine the rate or rates on the basis of the prevailing market rates of materials labour cost at schedule of labour plus twenty percent (20%) towards overhead and profit inclusive of ESI, PF, Sales Tax on Works Contract will be allowed. The opinion of the Engineer as to the current market rates of materials and the quantum of labour involved per unit of measurement will be final and binding on CONTRACTOR.
- d) Notwithstanding anything mentioned in sub-sections (a), (b) and (c) above, the Engineer has the right to determine rates for additional / extra works and these shall be binding on the CONTRACTOR who shall forthwith execute such works. The Engineer shall also have the option to employ another agency to execute such works and the CONTRACTOR shall provide full co-ordination.

5.14 ACTION WHERE NO SPECIFICATION IS ISSUED

In case of any class of Work for which there is no such Specification as is mentioned in the Tender Document such Work shall be carried out in accordance with Indian Standard Specifications and if the Indian Standard Specifications do not cover the same the work should be carried out as per Standard Engineering Practice, subject to the approval of the Engineer.

5.15 ABNORMAL RATES

CONTRACTOR is expected to quote rate for each item after careful analysis of cost involved for the performance of the completed item considering all Specifications and conditions of CONTRACT. This will avoid loss of profit or gain in case of curtailment or change of Specification for any item. In case it is noticed that the rates quoted by the Tenderer for any item are unusually high or unusually low it will be sufficient cause for the rejection of the Tender unless the OWNER is convinced about the reasonableness of the rates on scrutiny of the analysis for such rate to be furnished by the Tenderer on demand. In the alternatively the rates for such items may be revised at the discretion of the Engineer and the revised rates will become applicable.

5.16 INSPECTION OF WORK

- 5.16.1 The Engineer will have full power and authority to inspect the WORK at any time wherever in progress either on the SITE or at the CONTRACTOR's Premises/Workshops wherever situated. Premises / Workshops of any person, firm or corporation where work in connection with the CONTRACT may be in hand or where materials are being or are to be supplied, and CONTRACTOR shall afford or procure for the Engineer, every facility and assistance to carry out such inspection. CONTRACTOR shall, at all time during the usual working hours and all other times at which reasonable notice of the intention of the Engineer or his representative to visit the WORK shall have been given to CONTRACTOR, either himself be present to receive orders and instructions, or have a responsible agent duly accredited in writing present for the purpose. Orders given to the CONTRACTOR's agent shall be considered to have the same force as if they had been given to CONTRACTOR himself. CONTRACTOR shall give not less than seven (7) day's notice in writing to the Engineer before covering up or otherwise placing beyond reach of inspection and measurement any Work in order that the same may be inspected and measured. In the event of breach of above the same shall be uncovered at CONTRACTOR's expense for carrying out such measurement or inspection.
- 5.16.2 The written instructions regarding any particular work will normally be passed by the Engineer or his Authorized Representative. A work order book will be maintained by the CONTRACTOR for each sector in which the aforesaid written instructions will be entered. These will be signed by the CONTRACTOR or his authorized representative by way of acknowledgement within Twelve (12) hours.
- 5.16.3 No material shall be dispatched from CONTRACTOR's stores before obtaining the approval in writing of the Engineer / his representative.
- 5.16.4 CONTRACTOR is to provide at all times during the progress of WORK and

maintenance period proper means of access with ladders, gangways, etc. and the necessary attendants to move and adopt as directed for inspection or measurement of WORK by the Engineer.

5.17 ASSISTANCE TO ENGINEER

CONTRACTOR shall make available to the Engineer free of cost all necessary instruments and assistance in checking of setting out of WORK and in the checking of any WORK made by CONTRACTOR and taking measurement of WORK.

5.18 TESTS FOR QUALITY OF WORK

- 5.18.1 All workmanship shall be of the respective kinds described in the Contract Document and in accordance with the instructions of the Engineer and shall be subjected from time to time to such test at CONTRACTOR's cost as the Engineer may direct at the place of manufacture or fabrication or on the SITE or at an independent laboratory or at all or any such places. CONTRACTOR shall provide assistance / instrument, labour and materials as are normally required for examining, measuring and testing any workmanship as may be selected and required by the Engineer. The results of the tests in original will be forwarded directly to the Engineer by the testing authority with copies sent to CONTRACTOR.
- 5.18.2 All the tests that will be necessary in connection with the execution of WORK as decided by the Engineer shall be **carried out at the testing laboratory by CONTRACTOR at his costs**. The CONTRACTOR shall carry out tests at an independent laboratory CONTRACTOR shall arrange to do so at his cost as directed by the Engineer.

5.19 SAMPLES

CONTRACTOR shall furnish to the Engineer for approval when requested or if required by the Specifications, adequate samples of all materials and finishes to be used in WORK at contractors cost. Such samples shall be submitted before WORK is commenced and in ample time to permit tests and examination thereof. All materials furnished and finishes applied in WORK shall be fully matching with the approved samples.

5.20 ACTION AND COMPENSATION IN CASE OF BAD WORK

If it shall appear to the Engineer that any Work has been executed with unsound, imperfect or unskilled workmanship, or with materials of any inferior description, or that any materials or articles provided by CONTRACTOR for the execution of WORK are unsound, or of a quality inferior to that contracted for, or otherwise not in accordance with CONTRACT, CONTRACTOR shall on demand in writing from the Engineer or his authorized representative specifying the WORK, materials or articles complained of, notwithstanding that the same may have been inadvertently passed, certified and paid for, forthwith rectify or remove and reconstruct the Work, so specified and provide other proper and suitable materials or articles at his own charge and cost, and in the event of failure to do so within the period to be specified by the

Engineer in his demand aforesaid, the Engineer may on expiry of notice period rectify or remove and re-execute the Work or remove and replace with others, the materials or articles complained of as the case may be at the risk and expense in all respects of CONTRACTOR. The decision of the Engineer as to any question arising under this clause shall be final and conclusive.

5.21 SUSPENSION OF WORK

- i) Subject to the provisions of the sub-para (ii) of this clause, CONTRACTOR shall if ordered in writing by the Engineer, or his representative, temporarily suspend the WORK or any part thereof for such period and such time as so ordered and shall not, after receiving such written order proceed with WORK therein ordered to be suspended until he shall have received a written order to proceed therewith. The CONTRACTOR shall not be entitled to claim compensation for any loss or damage sustained by him by reason of temporary suspension of WORK aforesaid. An extension of time for completion, corresponding with the delay caused by any such suspension of WORK as aforesaid will be granted to CONTRACTOR should he apply for the same provided that the suspension was not consequent to any default or failure on the part of CONTRACTOR.
- ii) In case of suspension of WORK ordered in writing by Engineer, for a period of more than one (1) month, CONTRACTOR shall have the option to terminate CONTRACT, provided that the CONTRACTOR shall exercise such option forthwith. The CONTRACTOR shall not be entitled to claim any damages or compensation on this account.

5.22 OWNER MAY DO PART OF WORK

Upon failure of CONTRACTOR to comply with any instructions given in accordance with the provisions of this CONTRACT, the OWNER has the alternative right, instead of assuming charge of WORK to place additional labour force, tools, Equipment and materials on such parts of WORK, as the OWNER may designate or also engage another CONTRACTOR to carry out WORK in such cases, the OWNER shall deduct from the amount which otherwise might become due to CONTRACTOR, the cost of such WORK and materials with fifteen percent (15%) added to cover all departmental charges and should the total amount thereof exceed the amount due to CONTRACTOR, CONTRACTOR shall pay the difference to the OWNER. Alternatively the OWNER shall recover such costs from Performance Bank Guarantee.

5.23 POSSESSION PRIOR TO COMPLETION

The Engineer shall have the right to take possession of or use any completed or partially completed WORK or part of WORK. Such possession or use shall not be deemed to be an acceptance of any WORK completed in accordance with CONTRACT. If such prior possession or use by the Engineer delays the progress of WORK, equitable adjustment in the time of completion will be made and the CONTRACTOR shall be notified accordingly.

5.24 PERIOD OF DEFECTS LIABILITY / PERFORMANCE

5.24.1. CONTRACTOR shall guarantee the installation WORK for a period of **Twelve (12) months from the date of completion of work**. Any damage or defect that may arise or lie undiscovered at the completion of work, connected in any way with the Equipment or materials supplied by him or in the workmanship shall be rectified or replaced by CONTRACTOR at his own expense as deemed necessary by the Engineer or in default, the Engineer may cause the same to be made good by other workmen and deduct expenses (of which the certificate of Engineer shall be final) from any sums that may be then or at any time thereafter, become due to CONTRACTOR or from his Security Deposit, or the proceeds of sale thereof, or of a sufficient portion thereof.

Guarantee covers liabilities of material supplier, sub-contractor.

5.24.2. If CONTRACTOR feels that any variation in work or in quality of materials or proportions would be beneficial or necessary to fulfil guarantee called for, he shall bring this to the notice of the Engineer in writing.

5.24.3. From the commencement upto completion of WORK, CONTRACTOR shall take full responsibility for the care for WORK including all temporary works and in case any damages, loss or injury shall happen to WORK or to any part thereof or to any temporary works from any cause whatsoever, shall at his own cost repair and make good the same so that at completion WORK shall be in good order and in conformity, in every respects, with the requirements of CONTRACT and the Engineer's instructions.

5.24.4. If at any time, before WORK is taken over, the Engineer shall :-

- a) Decide that any work done or materials used by CONTRACTOR or any SUB-CONTRACTOR is defective or not in accordance with CONTRACT, or that WORK or any portion thereof are defective, or do not fulfil the requirements of CONTRACT (all such materials being hereinafter, called 'Defects' in this clause), and (b) as soon as reasonably practicable gives to CONTRACTOR notice in writing of the said decision, specifying particulars of the defects alleged to exist or to have occurred, then CONTRACTOR shall at his own expense and with all speed make good the defects so specified.
- b) In case the CONTRACTOR fails to do so, the OWNER may take, at the cost of CONTRACTOR, such steps as may in all circumstances, be reasonable to make good such defects. The expenditure so incurred by OWNER will be recovered from the amount due to CONTRACTOR. The decision of the Engineer with regard to the amount to be recovered from CONTRACTOR will be final and binding on CONTRACTOR. As soon as WORK have been completed in accordance with CONTRACT (except in minor respects that do not affect their use for the purpose for which they are intended and except for maintenance thereof provided in clause 5.24.1 and have passed the tests on completion, the Engineer shall issue a certificate (hereinafter called Completion Certificate) in which he shall certify the date on which WORK have been so completed and have passed the said tests and the OWNER shall be deemed to have taken over

WORK on the date so certified. If WORK have been divided into various groups in CONTRACT, the OWNER shall be entitled to take over any group or groups before the other or others and thereupon the Engineer shall issue a Completion Certificate which will, however, be for such group or groups so taken over only.

- 5.24.5. In order that CONTRACTOR could obtain a Completion Certificate he shall make good, with all possible speed any defect arising from the defective materials supplied by CONTRACTOR or workmanship or any act or omission of CONTRACT that may have been noticed or developed, after the WORK or group of WORKS has been taken over, the period allowed for carrying out such WORK will be normally one (1) month. If any defect be not remedied within a reasonable time, the OWNER may proceed to do WORK at CONTRACTOR's risk and expense and deduct from the Final Bill such amounts as may be decided by the Engineer.

If by reason of any default on the part of any CONTRACTOR a Completion Certificate has not been issued in respect of every portion of WORK within one (1) month after the date fixed by CONTRACTOR for the completion of WORK, the OWNER shall be at liberty to use WORK or any portion thereof which has been completed. The CONTRACTOR shall be afforded reasonable opportunity for completing the WORK for the issue of Completion Certificate.

6. CERTIFICATE AND PAYMENTS

6.1 SCHEDULE OF RATES AND PAYMENTS

- 6.1.1. The price to be paid by the OWNER to CONTRACTOR for the WORK to be done and for the performance of all the obligations undertaken by CONTRACTOR under CONTRACT shall be ascertained by the application of the respective rates (the inclusive nature of which is more particularly defined by way of application but not of limitation, with the succeeding sub clause of this clause) and payment to be made accordingly for the **WORK as per theoretical drawing dimensions to be executed on site** and approved by the Engineer. The sum so ascertained shall (excepting only as and to the extent expressly provided herein) constitute the sole and inclusive remuneration of CONTRACTOR under CONTRACT and no further or other payment whatsoever shall be or become due or payable to CONTRACTOR under CONTRACT.
- 6.1.2. The prices / rates quoted by CONTRACTOR shall remain firm till the issue of final certificate and shall not be subject to escalation. Rates shall be deemed to include and cover all costs, expenses and liabilities of every description and all risks of every kind to be taken in executing, completing and handing over WORK to the OWNER by CONTRACTOR. CONTRACTOR shall be deemed to have known the nature, scope magnitude and the extent of WORK and materials required though Contract Document may not fully and precisely furnish them. He shall make such provision in the rates as he may consider necessary to cover the cost of such items of Work and materials as may be reasonable and necessary to complete WORK. The opinion of the Engineer as

to the items of work which are necessary and reasonable for completion of WORK shall be final and binding on CONTRACTOR, although the same may not be shown in or described specifically in Contract Document.

Generality of this present provision shall not be deemed to cut down or limit in any way CONTRACTOR's obligation under the Contract, because in certain cases it may and in other cases it may not be expressly stated that CONTRACTOR shall do or perform a work or supply articles or perform services at his own cost or without additional payment or without extra charge or words to the same effect or that it may be stated or not stated that the same are included in and covered by the Rates.

- 6.1.3. Without in any way limiting the provisions of the preceding sub-clause the Rates shall be deemed to include and cover the cost of all Constructional Plant and Equipment, Temporary Work, Pumps, Materials, Labour, Insurance, Fuel, Stores and Appliances to be supplied by CONTRACTOR and all other matters in connection with each item in the Rates and the execution of Work or any portion thereof finished, complete in every respect and maintained as shown described in the Contract Document or as may be ordered in writing during the continuance of CONTRACT.
- 6.1.4. The Rates shall be deemed to include and cover the cost of all royalties and fees for the articles, and processes, protected by letters, patent or otherwise incorporated in or used in connection with WORK, also all royalties, rents and other payments in connection with obtaining materials of whatsoever kind for WORK and shall include an indemnity to the OWNER which CONTRACTOR hereby gives against all actions, proceedings, claims, damages, costs and expenses arising from the incorporation in or use on WORK of any such articles, processes or materials, octroi, works contract tax or other Municipal or Local Board charges if levied on materials, Equipment or machineries to be brought to SITE for use on WORK shall be borne by CONTRACTOR.
- 6.1.5. No exemption or reduction of customs duties, works contract tax, quarry or any port dues, transport charges, stamp duties or Central or States Government or Local Body or Municipal taxes or duties, taxes or charges (from or of any other body), whatsoever, will be granted or obtained, all of which expenses shall be deemed to be included in and covered by the Rates. CONTRACTOR shall also obtain and pay for all permits, or other privileges necessary to complete WORK.
- 6.1.6. The Rates shall be deemed to include and cover risk of all possibilities of delay and interference with CONTRACTOR's conduct of WORK which occur from any cause including orders of the OWNER in the exercise of his powers and on account of extension of time granted due to various reasons and for all other possible or probable causes of delay.
- 6.1.7. The Rates are fully inclusive rates which have been quoted by CONTRACTOR and agreed to by the OWNER and cannot be altered.

6.2 PROCEDURE FOR MEASUREMENT / BILLING OF WORK IN PROGRESS

- 6.2.1. All measurement shall be in metric system. All the WORK in progress will be jointly measured by the representative of the Engineer, and CONTRACTOR's authorized agent progressively. Measurements will be recorded by the Engineer or his authorized representative and signed by CONTRACTOR or his authorized representative in the measurement book to be provided by the CONTRACTOR.

Measurements will be jointly recorded by the Contractor, Employer Representative and the Consultant's Representative. Copies of the measurement sheets bearing the signature of the above three will be submitted along with abstract of the bill. Measurements will be verified and the bills admitted for payment.

Along with the final bill, measurement books containing all the measurements along with signed copies of the measurement sheets submitted progressively with the Running Account Bills will be attached and will remain the property of the Employer.

- 6.2.2. CONTRACTOR will submit a Bill in approved proforma in duplicate to the Engineer giving abstract and detailed measurements for the various items executed during a month. The Engineer shall take or cause to be taken the requisite measurements for the purpose of having the same verified and the claim, as far as admissible, adjusted, if possible, before the presentation of the bill.
- 6.2.3 For interim certificates on running account bill, the accepted value of the certificates after recoveries will be paid by OWNER within 15 days of date of certification.

6.3 RUNNING ACCOUNT PAYMENTS TO BE REGARDED AS ADVANCES

All running account payments shall be regarded as payments by way of advance against the final payment only and not as payment for Work actually done and completed and shall not preclude the requiring of bad, unsound and imperfect or unskilled Work to be removed and taken away and reconstructed or reerected or be considered as an admission of the due performance of CONTRACT, or any part thereof, in the respect, or of the accruing of any claim by CONTRACTOR, nor shall it conclude, determine or affect in any way the powers of the OWNER under these conditions or any of them as to the final settlement and adjustments of the accounts or otherwise, or in any other way vary or affect CONTRACT. The Final Bill shall be submitted by CONTRACTOR within one (1) month of the date of physical completion of WORK, otherwise, the Engineer's certificate of the measurement and of total amount payable for WORK accordingly shall be final and binding on all parties.

6.4 PAYMENT OF CONTRACTOR'S BILL

The CONTRACTOR shall prepare the detailed measurements with bill and submit to the Engineer. After a scrutiny of Running Account bills and upon certification by the

Engineer, the accepted value of the certificates after recoveries will be paid by OWNER **within 15 days from** the date of certification and receipt of same at Owner's end.

The Final Bill shall be presented by the CONTRACTOR along with a 'NO CLAIM CERTIFICATE' in a format acceptable to the OWNER along with such other documents as directed by the OWNER within 1 (one) month from the date of completion. All payments shall be made in Indian Currency.

6.5 RECEIPT FOR PAYMENT

Receipt for payment made on account of WORK when executed by a firm must be signed by a person holding due power of attorney in this respect on behalf of CONTRACTOR, except when described in Tender as a Limited Company in which case the receipt must be signed in the name of the Company by one of its principal officers or by some other person having authority to give effectual receipt for the Company.

6.6 COMPLETION CERTIFICATE

6.6.1 The Engineer shall normally issue to CONTRACTOR the Completion Certificate within one (1) month after receiving an application therefor from CONTRACTOR after verifying from the completion Documents and satisfying himself that WORK has been completed in accordance with and as set out in the construction and erection Drawings, and the Contract Document.

CONTRACTOR, after obtaining the Completion Certificate, is eligible to present the Final Bill for WORK executed by him under the terms of CONTRACT for the portion of work included in the Completion Certificate

6.6.2. Upon completion of WORK in all respects, CONTRACTOR shall be furnished with a certificate by the Engineer, of such completion, but no certificate shall be given nor WORK be deemed to have been executed until all scaffolding, surplus materials and rubbish is cleaned off SITE completely nor until WORK shall have been measured by the Engineer whose measurement shall be binding and conclusive. WORK will not be considered as complete and taken over by the OWNER, until all the temporary works, labour and staff colonies etc. constructed, are removed and the worksite cleaned to the satisfaction of the Engineer.

If CONTRACTOR fails to comply with the requirement of this clause on or before the date fixed for the completion of WORK, Engineer may at the expense of CONTRACTOR remove such scaffolding, surplus materials and rubbish and dispose off the same as he thinks fit and clean off such dirt as aforesaid, and CONTRACTOR shall forthwith pay the amount of all expenses so incurred and shall have no claim in respect of any such scaffolding or surplus materials as aforesaid except for any sum actually realised by the sale thereof.

6.6.3. For the purpose of clause 6.6.1 the following Documents will be deemed to form the completion Document.

- i) The technical documents according to which WORK was carried out.
- ii) Substantial Completion Certificate for all WORKS.
- iii) All supporting documents and measurement sheets duly signed

6.7 FINAL DECISION AND FINAL CERTIFICATE

Upon expiry of the period of liability and subject to the Engineer being satisfied the WORK has been duly maintained by CONTRACTOR, during such period as hereinbefore provided and the CONTRACTOR has in all respect duly made up any subsidence and performed on his obligations under CONTRACT, the Engineer shall give a certificate herein referred to as the final certificate to that effect and CONTRACTOR shall not be considered to have fulfilled the whole of his obligations until Final Certificate shall have been given by the Engineer notwithstanding any previous entry upon WORK and taking possession, working or using of the same or any part thereof by the OWNER.

6.8 CERTIFICATE AND PAYMENTS ON EVIDENCE OF COMPLETION

Except the final certificate no other certificate or payment against a certificate or on general account shall be taken to be an admission by the OWNER of the due performance of CONTRACT or any part thereof or occupancy or validity of any claim by CONTRACTOR.

6.9 Material advance

CONTRACTOR shall be allowed Material Advance for the materials brought to SITE for the execution of the Contracted item of work to the extent of Seventy five percent (75%) of the value of materials as assessed by the Engineer. Material advances paid should be recovered full in the next running account bill itself.

7. TAXES AND INSURANCE

7.1 TAXES, DUTIES, OCTROI ETC.

CONTRACTOR agrees to and does hereby accept full & exclusive liability for the payment of any and all taxes, duties, works contract tax etc. now or hereafter imposed, increased, or modified, and all the sales taxes, works contract tax, duties, octrois etc/GST. now in force and hereafter increased imposed or modified from time to time in respect of WORK and materials and all contributions and taxes for unemployment compensation insurance and old age pensions or annuities now or hereafter imposed by any Central or State Government authorities which are imposed with respect to or covered by the wages, salaries, or other compensations paid to the persons employed by CONTRACTOR and CONTRACTOR shall be responsible for compliance with all obligations and restrictions imposed by the Labour Law or any other law affecting employer-employee relationship and CONTRACTOR further agrees to comply, and to

secure the compliance of all Sub-Contractors, with applicable Central, State, Municipal and Local laws and regulations and requirements of any Central, State or Local Government agency or authority. CONTRACTOR further agrees to defend, indemnify and hold harmless from any liability or penalty which may be imposed by the Central, State or Local authorities by reason of any violation by CONTRACTOR or Sub- CONTRACTOR of such laws, regulations or requirements and also from all claims, suits or proceedings that may be brought against the OWNER arising under, growing out of, or by reason of WORK provided for by this CONTRACT, by third parties, or by Central or State Government authority or any administrative Sub-division thereof.

All taxes, duties, levies, entry tax, octrois, sales tax, Works Contract tax etc./GST as applicable from time to time shall be borne by the CONTRACTOR and are deemed to be included in the rates.

Sales Tax on Works contract, Tax deducted at source for Income tax and any other levies shall be deducted as per rules and regulations in force in accordance with acts prevailing from time to time at the prevailing rates by the OWNER from the bills of the CONTRACTOR.

7.2 INSURANCE:

CONTRACTOR shall at his own expense carry and maintain insurance with reputable Insurance Companies to the satisfaction of the OWNER as follows :-

7.2.1. Employees' State Insurance Act

CONTRACTOR agrees to and does hereby accept full and exclusive liability for compliance with all obligations imposed by the Employees' State Insurance Act, 1948, with subsequent amendments, and CONTRACTOR further agrees to defend, indemnify and hold the OWNER harmless from any liability or penalty which may be imposed by the Central, State or Local authority by reason of any asserted violation by CONTRACTOR or Sub-Contractor of the Employees' State Insurance Act and also from all claims, suits or proceedings that may be brought against the OWNER arising under, growing out of or by reasons of the WORK provided for by this CONTRACT whether brought by employees of CONTRACTOR, by third parties or by Central or State Government authority or any political sub-division thereof.

CONTRACTOR agrees to fill in with the Employees' State Insurance Corporation, in Declaration Form, and all forms which may be required in respect of CONTRACTOR's or SUB-CONTRACTOR's employees, required to be covered under the employees state insurance act. CONTRACTOR shall deduct and secure the agreement of the Sub-Contractor to deduct the employees' contribution as per the rates applicable under the ESI act from time to time and arrange to remit the same to the OWNER or such other agency as may be directed by the OWNER at regular monthly intervals along with the employees contribution stipulated in the act as applicable. CONTRACTOR agrees to maintain all records as required under the ACT in respect of employees and payments and CONTRACTOR shall secure the agreement of the Sub- CONTRACTOR to maintain such records. Any expenses incurred for the contributions, making

contributions or maintaining records shall be to CONTRACTOR's or Sub-Contractor's account.

The OWNER shall retain such sums as may be necessary from the Contract Value until CONTRACTOR shall furnish satisfactory proof that all contribution as required by the Employee's State Insurance Act have been paid.

7.2.2 Workmen's Compensation and Employer's Liability Insurance.

Insurance shall be effected for all CONTRACTOR's employees engaged in the performance of this CONTRACT if they are not covered under the employees state insurance act. If any part of WORK is sublet, CONTRACTOR shall require the SUB-CONTRACTOR to provide Workman's Compensation and employer's liability insurance for the latter's employees.

7.2.3 Any other Insurance required Under Law or Regulations or by the OWNER.

CONTRACTOR shall also carry and maintain any and all other insurance, which he may be required under any law or regulation from time to time.

7.3 DAMAGE TO PROPERTY :

7.3.1 CONTRACTOR shall be responsible for making good to the satisfaction of the OWNER any loss of article any damage to all structures and properties belonging to the OWNER or being executed or procured or being procured by the OWNER of other Agencies within the premises of all WORK of the OWNER if such loss or damage is due to fault and / or the negligence or willful acts of omission of CONTRACTOR, his employee's agents, representatives or SUB-CONTRACTORS.

7.3.2 CONTRACTOR shall indemnify and keep the OWNER harmless of all claims for damage to property arising under or by reason of this agreement if such claims result from the fault and / or negligence or willful acts or omissions of CONTRACTOR, his employees, agents, representatives or Sub-Contractors.

7.4 EMPLOYEES PROVIDENT FUND ACT, 1952 AND SCHEME

7.4.1 CONTRACTOR agrees to cover all the employees engaged by him or through Sub-Contractors under the employees provident fund scheme and shall submit necessary records to the OWNER in proof of compliance.

7.4.2 CONTRACTOR further agrees to defend, indemnify and hold the OWNER harmless from any liability of penalty which may be imposed, by the central, state or local authority by reason of any asserted violation by CONTRACTOR or his Sub-Contractor of the provisions of the Employees Provident Fund Act, and the schemes thereunder.

7.5 INSURANCE

7.5.1 The CONTRACTOR shall be responsible for all injury or damage to persons, animals or things, and for all damage to property which may arise from any factor on the part of the CONTRACTOR or any Sub-Contractor or any nominated Sub- Contractor or any of their employees.

7.5.2 The liability under this clause shall cover also, inter alia, any damage to structures, whether immediately adjacent to the works or otherwise, any damage to roads, streets, footpaths, bridges as well as damage caused to the buildings and other structures and works forming the subject matter of this contract. The CONTRACTOR shall also be responsible for any damage caused to the buildings and other structures and works forming the subject matter of this contract due to rain, wind, frost or other inclement weather.

The CONTRACTOR shall indemnify and keep indemnified the OWNER and hold him harmless in respect of all and any loss and expenses arising from any such injury or damage to persons or property as aforesaid and also against any claim made in respect of injury or damage, whether under any statutes or otherwise and also in respect of any award or compensation or damage consequent upon such claim.

7.5.3 The CONTRACTOR shall, at his own expense, effect and maintain till the issue of the completion certificate under this contract, with an insurance company approved by the OWNER, an All Risks Policy of Insurance including earthquake risk in the joint names of the OWNER and the CONTRACTOR (the name of the former being placed first in the policy) against all risk as per the standard All Risk Policy for CONTRACTORS for an amount equal to 125% of the contract value and deposit such policy or policies with the OWNER before commencing the works.

7.5.4 The CONTRACTOR shall reinstate all damage of every sort mentioned in this clause so as to deliver up the whole of the works complete and perfect in every respect and so as to make good or otherwise satisfy all claims for damage to property of third parties.

7.5.5 The CONTRACTOR shall also indemnify and keep indemnified the OWNER against all claims which may be made against the OWNER, by any person in respect of anything which may arise in respect of the works or in consequence thereof and shall, at his own expense, effect and maintain, until the completion of the contract, with an Insurance Company approved by the OWNER a policy of Insurance in the joint names of the OWNER and the CONTRACTOR (name of the former being placed first in the policy) against such risks and deposit such policy or policies before commencement of the works. The minimum limit of the coverage under the Policy shall be Rs. 2.00 lakhs per person for any one accident or occurrence and Rs. 5 lakhs in respect of damage to property for any one accident or occurrence.

7.5.6 The CONTRACTOR shall also indemnify the OWNER against all claims which may be upon the OWNER, whether under the Workmen's Compensation Act or any other

statute in force, during the currency of this contract or at common Law in respect of any employee of the CONTRACTOR or of any Sub-Contractor and shall at his own expense effect and maintain until the completion of the contract, with an insurance Company, approved by the OWNER, a Policy of Insurance against such risks and deposit such policy or policies with the OWNER from time to time during the currency of this contract.

- 7.5.7 In default of the CONTRACTOR insuring as provided above, the OWNER may so insure and may deduct the premiums paid from any moneys due or which may become due to the CONTRACTOR.
- 7.5.8 The CONTRACTOR shall be responsible for any liability which may not be covered by the Insurance Policies referred to above and also for all other damages to any person, animal or defective carrying out of this contract, whatever, may be the reasons due to which the damage shall have been caused.
- 7.5.9 The CONTRACTOR shall also indemnify and keep indemnified the OWNER against all and any cost, charges or expenses arising out of any claim or proceedings relating to the works and also in respect of any award of damages or compensation arising therefrom.
- 7.5.10 Without prejudice to the other rights of the OWNER against CONTRACTOR in respect of such default, the OWNER shall be entitled to deduct from any sums payable to the CONTRACTOR the amount of any damages, compensation costs, charges and other expenses paid by the OWNER and which are payable by the CONTRACTOR under this clause.
- 7.5.11 The CONTRACTOR shall, upon settlement by the Insurer of any claim made against the Insurer pursuant to a policy taken under this clause, proceed with due diligence to rebuild or repair the works destroyed or damaged. In this event all the monies received from the Insurer in respect of such damage shall be paid to the CONTRACTOR and the CONTRACTOR shall not be entitled to any further payment in respect of the expenditure incurred for rebuilding or repairing of the materials or goods destroyed or damaged.
- 7.5.12 The CONTRACTOR, in case of re-building or reinstatement after fire, shall be entitled to such extension of time for completion as the OWNER may deem fit, but shall, however, not be entitled to reimbursement by the OWNER of any shortfall or deficiency in the amount finally paid by the insurer in settlement of any claim arising as set out herein. Any extension of time so granted shall be subject to no additional costs for the extended period.
- 7.5.13 Without prejudice to his liability under this clause, the CONTRACTOR shall also cause all nominated Sub-contractors to effect, for their respective portions of the works,

similar policies of insurance in accordance with the provisions of this clause and shall produce or cause to produce to the OWNER such policies. The CONTRACTOR shall not permit a nominated Sub-contractors to commence work at the site unless the said insurance policies are submitted. In the event of failure of the Sub-contractors to take out such a policy of insurance before commencing the works at the site, the CONTRACTOR shall be responsible for any claim or damage attributable to the said Sub-contractors.

8. LABOUR LAWS

8.1 LABOUR LAWS

- 8.1.1. No labour below the age of eighteen (18) years shall be employed on WORK.
- 8.1.2. CONTRACTOR shall not pay less than what is provided under law to labourers engaged by him on WORK.
- 8.1.3. CONTRACTOR shall at his expense comply with all labour laws and keep the OWNER indemnified in respect thereof.
- 8.1.4. In addition to above, rules and regulations as contained in Contract Labour (Regulation and Abolition) Act, 1970 will also be applicable for this CONTRACT. The CONTRACTOR shall be liable for ensuring compliance of the provisions of the acts, registration obtaining licence etc. of his workmen as well as those of Sub- CONTRACTORS.
- 8.1.5. CONTRACTOR shall secure full safety of the workers / employees engaged by him and shall take at his own cost, insurances and such other safety regulations for the said purpose.

8.2 IMPLEMENTATION OF APPRENTICES ACT 1964

CONTRACTOR shall comply with the provisions of the Apprentices ACT, 1964 and the Rules and orders issued thereunder from time to time. If he fails to do so, his failure will be a breach of CONTRACT. CONTRACTOR shall also be liable for any pecuniary liability arising on account of any violation by him of the provision of Act.

8.3 CONTRACTOR TO INDEMNIFY THE OWNER

- 8.3.1. CONTRACTOR shall indemnify every member, officer and employee of the OWNER, against all actions, proceedings, claims, demands, costs and expenses whatsoever arising out of or in connection with the works and all actions, proceedings, claims, demands, costs and expenses which may be made against the OWNER for or in respect of or arising out of any failure by CONTRACTOR in the performance of his obligations under the Contract Document. The OWNER shall not be liable for or in respect of any demand or compensation payable by law in respect of or in consequence of any accident, death or injury to any workman or other person in the employment of CONTRACTOR or his Sub-contractors and CONTRACTOR shall indemnify and keep indemnified the OWNER against all such damages and compensations and against all claims, damages, proceedings, costs, charges and expenses whatsoever in respect thereof or in relation thereto.

8.3.2. PAYMENT OF CLAIMS AND DAMAGES

Should the OWNER have to pay any money in respect of such claims or demands as aforesaid the amount so paid and the costs incurred by the OWNER shall be charged to and paid by CONTRACTOR and CONTRACTOR shall not be at liberty to dispute or question the right of the OWNER to make such payments notwithstanding the same may have been made without his consent or authority or in law or otherwise to the contrary.

- 8.3.3. In every case in which by virtue of the provisions of Workmen's Compensation Act, or any other Act, the OWNER is obliged to pay compensation to workmen employed by CONTRACTOR in execution of WORK, the OWNER will recover from CONTRACTOR the amount of compensation so paid and without prejudice to the rights of the OWNER under the said Act the OWNER shall be at liberty to recover such amount or any part thereof by deducting it from the Security Deposit or from any sum due to CONTRACTOR whether under this CONTRACT or otherwise. The OWNER shall not be bound to contest any claim made under the said Act, except on written request of CONTRACTOR and upon his giving to the OWNER full security for all costs for which the OWNER might become liable in consequence of contesting such claim.

8.4 HEALTH AND SANITARY ARRANGEMENTS FOR WORKERS

In respect of all labour directly or indirectly employed in WORK for the performance of CONTRACTOR's part of this CONTRACT, CONTRACTOR shall comply with or cause to be complied with all the rules and regulations of the local Sanitary and other Authorities and as framed by the OWNER from time to time for the protection of health and sanitary arrangements for all workers and as required under various welfare statutes.

The CONTRACTOR shall provide rubbish chutes and bins at required places and arrange for periodical cleaning at his own cost.

The CONTRACTOR shall provide washing bay with water jet pumps at the locations shown by the Engineer for washing cars, tyres, vehicles and for other purposes, and maintain the same till the completion of work at his own cost.

No extra claims on these accounts are admissible.

9. SAFETY REGULATIONS & SAFETY CODE

- 9.1. In respect of all Labour, directly or indirectly employed in WORK for the performance of CONTRACTOR's part of this Agreement, CONTRACTOR shall at his own expense arrange for all the safety provisions as per safety codes of C.P.W.D, Indian Standards Institution, The Electricity Act, The Mine Act and such other Acts as applicable. The CONTRACTOR shall employ a Safety Officer at the site of works who shall be responsible for all matters relating to safety and provisions contained herein.

9.2. CONTRACTOR shall also observe and abide by all safety regulations of the OWNER as given below :

- 9.2.1. i) Temporary fixtures like sheds, tents etc. shall be erected in conformity with normal safety standards. Thatched roof to such fixtures will not be permitted.
ii) Temporary piping, hose connections and electrical wiring must be laid in a manner that they may not cause tripping or pose hazard to other activities.
iii) All precautions should be taken to ensure that any temporary electrical wiring used within the site will not cause sparks.

9.2.2. Compressed gas cylinders shall be used in upright position. They must be firmly located on the ground on a sturdy stand and the cylinder should be chained to prevent accidental fall.

9.2.3. Good housekeeping must be practiced by the CONTRACTOR's personnel at all times while within the site during and after completion of the work, they are to ensure that their work area is kept clean and tidy. Materials and equipments should be stored in a safe and orderly manner so that they will not block exit to roads, buildings, aisles, passages and approach to fire fighting equipment such as fire hydrants, fire hoses and fire extinguishers or areas where emergency safety showers, electrical switch panels and switch rooms are located.

9.2.4. PERSONAL CONDUCT

- i) Entering the site premises while under the influence of alcohol / narcotics is strictly forbidden.
ii) Horseplay will not be allowed.
a) Fooling on the work, mock fighting or fighting within the site premises will not be tolerated.
b) Gambling within the site premises is strictly forbidden.
c) Entering site premises while in possession of weapons such as knives etc. is prohibited.
d) CONTRACTOR's personnel shall not pick up quarrel or get into arguments with the OWNER's personnel or act in any manner subversive of plant discipline. In case of any misunderstanding such problems should be referred to the Engineer.

9.2.5. The CONTRACTOR shall ensure that all state traffic rules and regulations are complied with while motor vehicles are driven inside site premises. In addition, the following points are also outlined for compliance :

- i) PARKING : As a general rule, vehicles should not be parked at road bends, in front of fire equipment sheds and fire fighting equipment thereby blocking access to them.
ii) Vehicles driven in the premises should have effective brakes, horns, lights, mufflers etc.
iii) Vehicles shall carry only the number of passengers or weight of load they are authorised to carry as per law. Loads carried in trucks shall be properly secured so that they will not accidentally fall off while vehicle is in motion.
iv) Vehicle drivers shall always check over-head and side clearances while driving

vehicles.

9.2.6. FIRE PROTECTION EQUIPMENTS

- CONTRACTOR shall provide fire protection equipment wherever it is required. The CONTRACTOR's personnel who are working on such jobs will be instructed the operation of such fire protection equipment. In the event of an accidental fire it is expected of such personnel to make efforts to extinguish the fire with the equipment made available. If the fire situation cannot be controlled, then the CONTRACTOR's personnel should immediately get in touch with any of the OWNER's personnel available. In all cases, accidental fire shall be reported to the OWNER.
- All efforts should be made by the CONTRACTOR's personnel to prevent occurrence of any unwanted fire. Gasoline driven engines, trucks, tractors etc. shall not be filled with fuel while the motor is still running.
- Gasoline or naphtha must not be used as a cleaning agent or solvent.

9.2.7. REPORT ON ACCIDENTS

- i) All personal injuries sustained by the CONTRACTOR's personnel and damages to vehicle and property, no matter how slight they are, shall be promptly reported to the Engineer during normal working hours.
- ii) Medical treatment for injured CONTRACTOR's personnel will be entirely the responsibility of the CONTRACTOR.

9.2.8 Safety Code :

- There shall be maintained in a readily accessible place first aid appliances including adequate supply of sterilised dressings and cotton wool.
- An injured person shall be taken to a public hospital without loss of time, in cases where the injury necessitates hospitalization.
- The support for the scaffolding, staging, guard lines and temporary stairs required during construction shall be strong, adequate for the particular situation. The temporary access to the various parts of the Building under construction shall be rigid and strong enough to avoid any chance of mishaps. The arrangement proposed shall be subject to the approval of the OWNER.
- Suitable and strong scaffolds should be provided for workmen for all works that cannot safely be done from ground.
- No portable single ladder shall be over 8 (eight) meters in length. The width between the side rails shall not be less than 30 cm. (clear) and the distance between two adjacent rungs shall not be more than 30cm. When a ladder is used an extra labourer shall be engaged for holding the ladder.
- The excavation material shall not be placed within 1.5 metres of the edge of the trench or half of the depth of trench whichever is more. All trenches and excavations shall be provided with necessary fencing and lighting.

- Every opening in the floor of a building or in a working platform shall be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing or railing whose minimum height shall be one metre.
- No floor, roof or other part of the structure shall be so overloaded with debris or materials as to render it unsafe.
- Workers employed on mixing and handling material such as asphalt, cement mortar or concrete and lime mortar shall be provided with protective footwear and rubber hand-gloves.
- Those engaged in welding works shall be provided with welder's protective eye-shields and gloves.
- No paint containing lead or lead products shall be used except in the form of paste or readymade paint.
- Suitable facemasks should be supplied for use by the workers when the paint is applied in the form of spray or surface having lead paint dry rubbed and scrapped.
- Overalls shall be supplied by the CONTRACTOR to the painters and adequate facilities shall be provided to enable the working painters to wash during the period of work.
- Hoisting machines and tackle used in the works, including their attachments, anchorage and supports shall be in perfect condition.
- The ropes used in hoisting or lowering material or as a means of suspension shall be of durable quality and adequate strength and free from defects.
- Safety features like nets, canvas sheets etc. shall be provided while men are working at heights.

9.2.9 SAFETY RULES TO BE FOLLOWED BY THE CONTRACTOR DURING EXECUTION OF WORK :

- All the staff working at site will wear helmets.
- All electrical equipment used by the CONTRACTOR will have double earthing and will be connected through an ELCB.
- No temporary electrical connections with loose wire will be permitted. For all electrical connections, proper sockets and plugs will be used and wiring / cabling clamped.
- Electrical hand tools like drilling machine will be of 220 volts type provided with an adequate step down transformer.
- ELCB's will be used wherever power & electrical connections are taken by the CONTRACTOR.
- Fire fighting portable extinguishers will be used and located at appropriate locations.
- All staff working at heights will use safety belts and standard platforms with 42" height railing.
- All the staff working will as far as possible wear shoes.

- All electricians will have wiremen's licence.
 - Standard ladders will be used, non standard ladders will not be permitted.
 - Inflammable materials like Petrol, Kerosene, Wax etc., will not be allowed to be stored at site stores. Special storage space with fire protection arrangements will be provided.
 - Each CONTRACTOR will keep a stocked FIRST AID box with easy accessibility. Respiratory protective equipment should be available with the CONTRACTOR.
 - Welding mechanics and electricians will wear rubber gloves.
 - Personal protecting equipment like Ear Muffler, Goggles, Gloves, Safety Belt, Safety Helmet, Rubber Shoes, etc., should be used and be available in CONTRACTOR's stores.
 - Use of asbestos to be prevented.
 - If correct manual handling is not used, it can result in back injuries. Therefore all workers should be trained in safe manual handling. Special objects require special handling.
 - All scaffolding will be of steel and double stage unless otherwise permitted.
 - CONTRACTORS to ensure that all equipment tools, brought on to the premises will be in a safe condition, have recently been checked and that all personnel using the equipment and tools have been trained in their safe use.
 - CONTRACTOR to ensure that whilst on site premises, he will comply with all health and safety legislation as required by the OWNER.
 - All the platforms, scaffolding and catwalks should have railings of 1 Mt. height and 100 mm toe board. All the catwalks should be minimum 450 mm wide and of grill type. All ladders should have hand rails.
 - HAND BOOK ON HEALTH AND SAFETY AT WORK :
- The CONTRACTORS to do work in the Projects shall follow the guide lines given in the hand book on health and safety at work appended, during execution.

10. SETTLEMENT OF DISPUTES

10.1 MATTER TO BE SETTLED BY OWNER :

All disputes and differences of any kind whatsoever arising out of or in connection with the contract, whether during the progress of the works or after their completion shall be referred by the CONTRACTOR to the OWNER and the OWNER shall within a reasonable time after their presentation make and notify decisions thereon in writing.

The decisions, directions, clarifications, measurements, drawings and certificates with respect to any matter the decision for which is specifically provided for by these or other special conditions to be given and made by the OWNER are matters which are referred to hereinafter as excepted matters and shall be final and binding upon the CONTRACTOR and shall not be set aside on account of non-observance of any formality, any omission, delay or error in proceeding in or about the same or on any other ground or for any reason and shall be without Appeal.

- 10.2** If any difference or dispute shall arise between the parties, hereto as to the construction or the true intent and meaning of any of the terms and conditions herein contained or as to any payment to be made in pursuance hereof or as to any other matter arising out of or connected with or incidental to these presents or as to the rights, duties and obligations of either party, such difference or disputes whenever and so often as the same shall arise, shall be referred to a Sole Arbitrator to be appointed by the OWNER and the decision of the Sole Arbitrator so appointed shall be final and binding on the parties. The Arbitration proceedings shall be conducted in accordance with the rules under The Indian Arbitration Act for the time being in force or of any other Act of Legislature passed in substitution thereof or modifications thereof and for the time being in force shall apply to such arbitration. The venue of such arbitration will be Maharashtra.

11. GENERAL

11.1 CONDITIONS STIPULATED BY THE CONTRACTOR

Terms and conditions, if any, stipulated by the CONTRACTOR while submitting his tender, or otherwise, shall be applicable only to the extent such terms and conditions are specifically accepted by the OWNER in writing.

11.2 WRONGFUL APPROPRIATION OF MATERIALS

Wrongful appropriation, or proven attempt of wrongful appropriation, of materials belonging to the OWNER or any other CONTRACTOR working within the OWNER premises or commission of any other criminal act by the CONTRACTOR, or his agents, or employees or workers shall be deemed to be a breach of contract on the part of the CONTRACTOR, and OWNER shall, in addition to the remedies available under this contract, be entitled to terminate the contract forthwith at the risk and cost of the CONTRACTOR. The decision of the OWNER in any of the above aspects shall be final and conclusive.

11.3 CONTRACTOR TO PAY WAGES DIRECT TO HIS LABOURERS

The CONTRACTOR shall effect the payment of wages to his labourers directly without the intervention of any intermediary and no amount by way of commission or otherwise shall be deducted or recovered from the wages of the workmen.

12. CONTRACTOR'S SECURITY REGULATIONS

- 12.1.** The CONTRACTOR shall record in a register the name and permanent address of the personnel / labourers detailed by him for the work, and the said register shall be kept at the CONTRACTORS Office and available for inspection by OWNER as and when required.
- 12.2.** The CONTRACTOR shall ensure that his personnel / labourers display the badges / passes on their person while entering / leaving the premises as well as at the work spot concerned.

- 12.3. The CONTRACTOR shall collect the said security badge / passes daily and reissue them next day morning to his personnel / labourers, so that any unauthorised person may not impersonate and force illegal entry at any later stage for which act the responsibility will be entirely that of the CONTRACTOR.
- 12.4. The CONTRACTOR shall return all the said badges / passes to the OWNER immediately on termination of the contract work.
- 12.5. If the contract period / time is extended, the CONTRACTOR shall get the badges / passes revalidated.
- 12.6. The passes are valid at the specified work sites only and the CONTRACTOR shall ensure that his personnel / labourers will not loiter at other areas.
- 12.7. The CONTRACTOR shall ensure that his personnel / labourers shall enter / leave the premises only through the authorised main or Project gate as indicated.
- 12.8. The CONTRACTOR shall ensure that his personnel / labourers are checked in / out by his authorised representative for which he shall keep proper records at the project's gate.
- 12.9. The CONTRACTOR shall be liable to pay to the OWNER the cost of the badges / passes at the rate fixed in case of failure to return the badges / passes. The CONTRACTOR shall also render satisfactory explanation if any passes are found missing / lost.
- 12.10 The CONTRACTOR shall, before commencement of the work every day, report to the Operating Shift Supervisor-in- charge of the concerned unit / area the number of personnel / labourers to be employed by him for the unit / area, and specify the job for which they have been brought into the unit / area.

B. SPECIAL CONDITION OF CONTRACT

1. General :

The following clauses shall be considered as an extension and not in limitation of obligation of the CONTRACTOR.

All expenses incurred by the tenderer in connection with obtaining information for submitting this tender including his visits to the site or efforts in compiling the tender shall be borne by the tenderer and no claims for reimbursement thereof shall be entertained.

2. Access :

The CONTRACTOR should verify the site details including access, availability of water, power, dumping ground etc. All contingencies connected with site and access are deemed to be catered for in the rates. The CONTRACTOR shall submit along with his tender the details of his requirements of water, power etc. and how he proposes to obtain the same.

3. Contract :

This is an item rate contract should be quoted for the complete scope of work described in the bill of quantities, drawings, specifications etc. and the CONTRACTOR to finish

the work consistent with true intent and meaning of the drawings, and specifications.
The quantities mentioned in the bill of quantities are indicative only.

4. Construction Programme :

Time is deemed to be the essence of this contract. The period of completion of whole work shall be 60 (Sixty) days from the 7th day after the date of issue of work. The tenderer shall furnish full details about his/their construction management programme, co-ordination with different specialised agencies, programme schedule of various stages of construction with their bar chart/ pert chart/CPM chart to achieve the target date of completion.

The CONTRACTOR must follow his planning schedule and must adhere to the targets / programmes by deploying adequate resources.

The CONTRACTOR shall mobilise all plant, machineries, equipments etc. required to adhere to the time schedule of various activities and events as per Bar Chart/ Pert Chart /CPM Chart and well in advance.

The work shall proceed with as per programme schedule of various stages of construction shown in the bar Chart/Pert Chart/CPM Chart.

The CONTRACTOR shall submit progress report every week which shall indicate but not be limited to the following :

- a) Milestone of project accomplishment during the period under consideration.
- b) Bottleneck if any and action proposed
- c) Actual v/s planned progress in percent
- d) Activities completed in the reporting period
- e) On-going current activities
- f) Critical activities to be undertaken and completed in current month
- g) 4 weeks look ahead

Slippages and action proposed

Project photographs

Project Report in graphical / pictorial form

Weekly report by contractor

Monthly report by contractor

In the event of overall slippage exceeding permissible limit as decided by the Engineer, the CONTRACTOR shall submit a report for the slippages and shall revise their planning schedule. The CONTRACTOR shall submit a report explaining course of action to be taken to overcome such slippages in future and steps taken to meet revised target dates.

6. Maintenance liability

The duration of the maintenance period will be **one year from the date of completion**. The CONTRACTOR shall be responsible for maintenance and rectification of defects during this period. Any defects, deficiencies or failures noted during this period shall be rectified within 7 days of intimation in writing failing which the same will be done at CONTRACTORS risk and cost.

7. Materials and Samples

All the materials required as per BoQ for the work are to be provided by the CONTRACTOR. The work shall be carried out using high quality materials and products from good source and reputed manufacturer respectively. The tenderers shall furnish the details of sources and manufacturers of materials and products, which they intend to use in the work if their tender is acceptable. Quality assurance should be strictly adhered to. All materials are subject to inspection and approval of the Engineer before use in the work. All works carried out and materials supplied shall conform to relevant latest Indian Standard Specification. The CONTRACTOR shall furnish the OWNER for approval adequate samples of all materials to be used in work and to permit tests and examinations thereof. All materials used in the work shall be strictly as per approved samples and approved make. All materials, which are rejected, shall be forthwith removed from the site.

8. Testing of materials

The testing of materials shall be carried out by approved laboratories at CONTRACTORS cost and the results will be binding. The test results in original will be sent to the OWNER by the laboratory and a copy of the same sent to the CONTRACTOR.

9. Testing of work and Material :

The CONTRACTOR shall arrange to test materials and / or portions of the works in other approved laboratories at his own cost in order to prove their soundness and efficiency. If after any such test the work or portion of works is found in the opinion of the Engineer to be defective or unsound, the CONTRACTOR shall pull down and redo the same at his own cost. Defective materials shall immediately be removed from the site.

10. Errors in the submission

In case of any errors, which increase or decrease the amount of any item, the same shall be corrected. However the contract price shall remain unchanged. Necessary percentage correction will be applied to the corrected amount so as to reach the contract price.

Any error in the submission shall not vitiate or release the CONTRACTOR from his obligations.

In the event of discrepancy between description in words and figures, the description in words shall prevail.

11. Alignment and Bench Marks

The alignment of the work to be carried out under the contract shall be marked on the ground as per the drawing and as per the instructions of the OWNER. For the purpose of facilitating the work, a series of temporary benchmarks will have to be established. These pillars will be constructed along the alignment and such other locations as may be instructed by the OWNER. The CONTRACTOR shall provide necessary survey instruments and equipment and staff for use of OWNER for checking and other purposes. All expenses involved in the process of marking alignment on ground, checking the alignment, constructing masonry pillars and establishing benchmarks thereon shall be borne by the CONTRACTOR.

It will be the responsibility of CONTRACTOR to ensure that the masonry pillars so constructed are not damaged during the period of work in progress.

12. Labour rates and labour payments

All the acts and rules regarding payment and other conditions of employing labours on the work shall be binding on the CONTRACTOR. The provisions of workmen's compensation Act are also binding on the CONTRACTOR, who shall be responsible for making all payment due under the Act.

13. Supervisory Staff

The CONTRACTOR shall engage on the work a team of qualified and experienced Engineer, capable of managing and executing the work properly. One Engineer shall be authorised by the CONTRACTOR in writing to receive the orders issued by the OWNER from time to time. The CONTRACTOR shall be responsible for carrying out these orders promptly.

14. Accidents

Should any accident, fatal or otherwise occur during the execution of works, the CONTRACTOR shall keep the OWNER fully indemnified against all risks, claims, litigation's and financial burdens arising out of the same. The OWNER shall be kept fully informed.

15. Price

Item rate contract no variation price should be quoted for the complete scope of work described in Bill of quantities, drawings, specifications etc. and the CONTRACTOR to finish the work consistent with true intent and meaning of the drawings and specifications.

This is an item rate contract should be quoted for the complete scope of work described in the bill of quantities, drawings, specifications etc. and the CONTRACTOR to finish the work consistent with true intent and meaning of the drawings, and specifications.

A Bill of Quantities is furnished and the quantities mentioned are indicative only.

- No escalation in accepted rates due to increase in prices of materials, labour, transport, hire charges of plant and machineries, fuels, taxes and duties or levies any future new taxes, duties, levies etc. or any other causes or reasons direct or indirect is acceptable and rates accepted shall remain firm till the completion of the contract.

16. Drawings :

- Two copies of all drawings, the Schedule of Quantities and Specification shall be furnished by the OWNER to the CONTRACTOR for his own use until the completion of the Contract.
- All important drawings are to be mounted on boards and placed in racks and indexed.
- The CONTRACTOR shall prepare shop drawings in detail for all important and specialised works and send them for approval by the Engineer. The CONTRACTOR shall not start the work prior to the approval of shop drawings by the Engineer.
- The checking and approval of drawings shall not relieve the CONTRACTOR from the responsibility for correctness of the engineering design, workmanship, material errors or omissions if any. No detailed shop drawing shall be accepted by the Engineer unless it is complete and has been checked and approved by a qualified engineer of the CONTRACTOR and is accompanied by a detailed plan showing location and all relevant details.
- “As-Built” drawings for the completed contract works including all services, facilities provided comprising plans, sections, elevations, alignment, levels etc. all as required will be submitted within 30 days of completion of works.

17. Dimensions :

Figured dimensions are in all cases to be accepted in preference to scaled sizes. large scale details take precedence over small scale drawings. In case of discrepancy the CONTRACTOR is to ask for clarification before proceeding with the work.

18. Environment :

The CONTRACTOR shall take all precautions for safeguarding the environment during the course of the construction of the works. He shall abide by all laws, rules and regulations in force governing pollution and environmental protection that are applicable in the area where the works are situated.

19. DELETION FROM SCOPE OF CONTRACT :

The tender is for construction of JNARDDC - Proposed Construction of Cement Concrete Road in JNARDDC Premise at Nagpur. The OWNER will have the right to award the whole work to one tenderer or to split the work and award to more than one tenderer without assigning any reasons for doing

so. The OWNER will also have the right to delete items of work from the scope of tender before award of work. This will in no way affect other terms and conditions of contract. The CONTRACTOR will have no claim for revision of rates, other conditions, any compensation or loss suffered by him on this account. In such above cases, the CONTRACTOR should co-ordinate, co-operate and liaise with other agencies who will execute that deleted works and adjust his construction programme for the completion of work accordingly.

20. Time

Time is the essence of contract. To complete the works within the time schedule, shift working and night working may become necessary. In case night work is to be done due to the exigencies of the work, it is the CONTRACTOR's responsibility -

- i) to obtain advance permission from the Engineer and also the security staff specifying the number of persons who will be employed and duration.
- ii) to provide adequate area lighting for efficient execution of the work without accident risks and quality deterioration. The arrangements are to be the full satisfaction of the Engineer. The CONTRACTOR is wholly responsible for any accidents or bad quality of work due to inadequate arrangements made by him and he will fully indemnify the OWNER for any lapse.
- iii) No extra claim will be entertained for the overtime and night work and any expenditure incurred by him on this account.

21. DIRECT SUB CONTRACTOR

- (a) Specialist works such as anti-termite, waterproofing, structural steel work, metal sheet roofing and cladding, aluminium doors, windows and partitions, suspended false ceiling, granite and stone cladding, special floor finishes, special wall finishes, sanitary and plumbing works, fire fighting etc., covered in the Contract work shall be got executed by specialist agencies engaged by the CONTRACTOR as Direct Sub-Contractors on approval of the OWNER after adopting the procedures given below.
- (b) Names of three specialised sub-agencies for each work shall be proposed at the time of submission of tender itself along with the details of scope, experience, financial standing etc. Such sub-agencies shall be called Direct Sub Contractors. The OWNER / ARCHITECT will have the right to call for additional information as may be required to assess the capability of Direct Sub Contractors or even to inspect their previous works for fully satisfying themselves on the performance of the Direct Sub Contractors. The OWNER, thereafter will convey their approval to the CONTRACTOR for selection of Direct Sub Contractor, minimum being one number per trade or in the event of a special need for engaging more than one such specialist, upto a maximum of three in each trade. The Bidder shall engage only such approved Direct Sub Contractor. If OWNER / ARCHITECT is not satisfied with the capacity and experience of the Direct Sub Contractor proposed by the CONTRACTOR, the OWNER/ARCHITECT shall have the right to nominate an agency / agencies of their choice whom the CONTRACTOR shall be bound to engage forthwith. The decision of

the OWNER / ARCHITECT in identifying and selection of Direct Sub Contractor shall be final and binding on the CONTRACTOR. If during execution, the performance of any such Direct Sub Contractor is found to be unsatisfactory, the OWNER shall reserve the right to order termination of such Direct Sub Contractor and nominate alternative agency to continue the works. The CONTRACTOR shall comply with such instructions promptly and effectively.

All the terms and conditions under this Contract shall be equally enforceable on the Direct Sub Contractor for each trade and accordingly the CONTRACTOR shall have a tie up with each of the Direct Sub-Contractors.

For all items of works coming under Nominated Sub Contractor and Direct Sub Contractor as well as any other specialist agencies directly engaged by the CONTRACTOR, the CONTRACTOR shall arrange to obtain from the respective sub-contractors/specialist agencies fully detailed shop drawings / fabrication drawings and material specifications for specialist works and submit the same in triplicate for OWNER'S / ARCHITECT'S prior approval. All shop drawings shall reflect the design intent as provided in the construction drawings and shall not be deviated without prior permission. The shop drawings shall be based on the actual site conditions and shall take into account all coordination as may be required in order to avoid any clash or interference with other service lines or any other building features. The shop drawings shall be fully supported by necessary design calculations wherever applicable or as directed by the ARCHITECT through the CONTRACTORS. Such design calculations shall be carried out by a competent agency and shall also comply with relevant Indian / International standards as applicable. Wherever so required, the OWNER reserves the right to demand a certificate as to the correctness of the design to be issued after verification by an independent proof checking agency whom the OWNER may either approve or nominate.

All charges for preparing the shop drawings, coordination drawings, preparation of design, getting the same proof checked including carrying out any other modifications as necessary shall be fully covered in the quoted rates and no extra shall be payable for adherence of the above requirement.

- (c) That the ARCHITECT and his representative shall have right of access to the workshops and other places of the nominated Direct Sub-Contractor.
- (d) The CONTRACTOR shall for general attendance upon Sub-Contractors including free use of plant scaffolding and is to allow them the use of sanitary conveniences, storage facilities for storing materials, other amenities and affording them all reasonable facilities for carrying out their Contracts.

22. PAYMENT

- Every interim stage payment shall be on against Contractor's measurement RUNNING Bills(RAs) s duly certified by the Engineer and the payment shall be released within 15 days of certification. The contractor shall be reimbursed against GST invoice raised plus GST. GST shall be paid to Govt in advance by the contractor .Same shall be paid in Bill Amount

- Deductions on account of Tax Deducted at Source (TDS) for Income Tax and Works Contract Tax at the prevailing rates, and any other applicable amount shall be made from the due amount before effecting payment.
- The final bill will be paid within 30 days of certification.
- The CONTRACTOR shall take photos and video from the locations approved by the ARCHITECT to show the progress of work at monthly intervals throughout the construction period and furnish photographs and video cassettes of required duration duly indicating therein the specified number of negative / prints affixed in albums.

FORM – “A”
FINANCIAL INFORMATION/Turnover certificate

- I. Financial Analysis-Details to be furnished duly supported by figures in balance sheet account for the last 03 financial years duly certified by the Chartered Accountant. (Copies to be attached).

Years

Sl. No.	Year	2020-21	2021-22	2022-23
1	Gross Annual Turn Over			

Signature of Chartered Accountant with Seal

Signature of Applicant(s)

FORM – “B”

DETAILS OF WORKS OF SIMILAR CLASS COMPLETED DURING THE LAST FIVE YEARS

Sl. No.	Name of work/ project and location	Name of organization where the work was done	Cost of work in rupees	Actual date of completion	Name and address / telephone no. of officer to whom reference may be made	Remarks
1	2	3	4	5	6	7

SUBMIT WORK ORDER AND WORK COMPLETION OF ALL PROJECTS MENTIONED

- i)* Scanned copy of details of the works completed by the contractor, certificate from the head of the Office under whom the works are completed should be enclosed alongwith Form B.

Signature of Applicant(s)

Details of works with BoQ

Sr. No	DESCRIPTION	QTY	UNIT
1	Excavation for foundation in earth, soil of all types, sand, gravel and soft murum, including removing the excavated material up to a distance of 50 m. beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete. (Lift upto 1.5 m.) By Mechanical Means	79.24	Cum
2	Excavation for foundation in earth, soils of all types, sand, gravel and soft murum, including removing the excavated material upto a distance of 50 metres beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete. (Lift from 1.5m to 3.0m) By Mechanical Means	26.01	Cum
3	Excavation for foundation in hard murum including removing the excavated material upto a distance of 50 metres beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete. (Lift from 1.5 to 3.0m) By Manual Means	26.01	Cum
4	Providing soling using 80 mm size trap metal in 15 cm. layer including filling voids with Crushed sand/grit, ramming, watering etc. complete.	7.80	Cum
5	Providing and laying Cast in situ/Ready Mix cement concrete in M-10 of trap/granite/ quartzite/ gneiss metal for foundation and bedding including bailing out water, Steel centering, formwork, laying/pumping, compacting, roughening them if special finish is to be provided, finishing if required and curing complete, with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)	5.89	Cum
6	Providing and laying in situ /Ready Mix cement concrete M-20 of trap / granite /quartzite/ gneiss metal for R.C.C. work in foundations like raft, strip foundations, grillage and footings of R.C.C. columns and steel stanchions etc. including bailing out water, Steel centering formwork, laying/pumping cover blocks, compaction and curing roughening the surface if special finish is to be provided (Excluding reinforcement and structural steel) etc. complete, with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)	12.72	Cum
7	Providing and laying Cast in situ/Ready Mix cement concrete M-20 of trap /granite /quartzite/ gneiss metal for R.C.C. columns as per detailed designs and drawing or as directed including steel centering, formwork, cover blocks, laying/pumping, compaction finishing the formed surfaces with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening if special finish is to be provided and curing etc. complete.(Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)	4.65	Cum
8	Providing and laying Cast in situ/Ready Mix cement concrete M-20 of trap / granite/quartzite/ gneiss metal for R.C.C. beams and lintels as per detailed designs and drawings or as directed including steel centering, formwork, cover blocks, laying/pumping, compaction and roughening the surface if special finish is to be provided and curing etc. complete. (Excluding reinforcement and structural steel). with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)	8.34	Cum

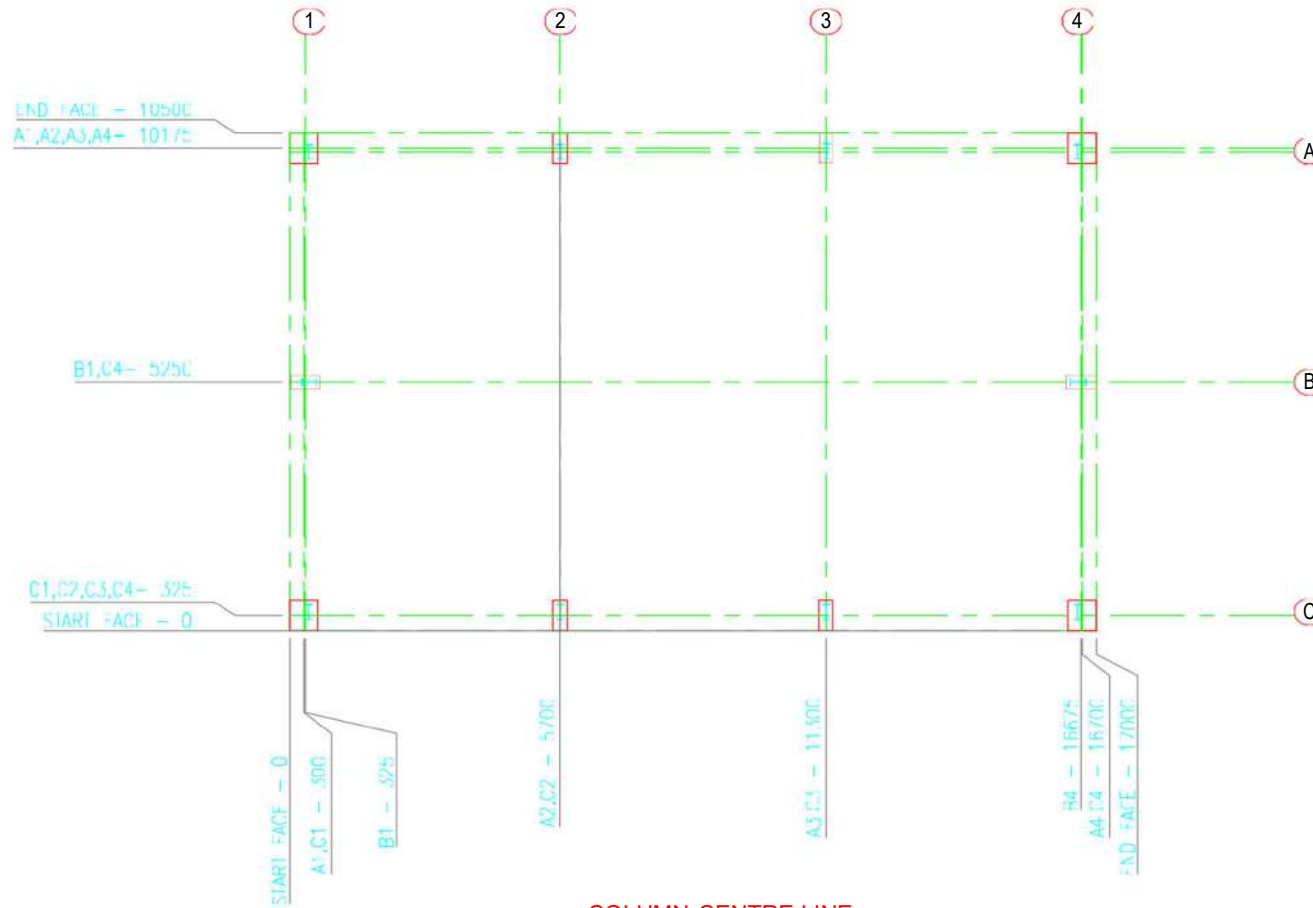
9	Providing second class Burnt Brick masonry with conventional/ I.S. type bricks in cement mortar 1:6 in foundations and plinth of inner walls/ in plinth external walls including bailing out water manually , striking joints on unexposed faces, raking out joints on exposed faces and watering etc. Complete.	0.28	Cum
10	Providing and laying Cast in situ/Ready Mix cement concrete in M15 of trap/ granite/quartzite/gneiss metal for bed blocks, foundation blocks and such other items including bailing out water, Steel centering, formwork, laying/pumping, compacting, roughening them if special finish is to be provided, finishing uneven and honeycombed surface and curing etc. complete. The Cement Mortar 1:3 plaster is considered for rendering uneven and honeycombed surface only. Newly laid concrete shall be covered by gunny bag, plastic, tarpaulin etc. (Wooden centering will not be allowed.), with fully automatic micro processor based PLC with SCADA	17.94	Cum
11	Filling in plinth and floors with contractors material/brought from outside and approved by Engineer incharge in layers of 15 cm to 20 cm including watering and compaction etc. complete.	147.94	Cum
12	Providing and laying Cast in situ/Ready Mix cement concrete M-20 of trap/ granite/ quartzite/ gneiss metal for R.C.C. chajja as per detailed design and drawings including steel centering, formwork, cover blocks, laying/pumping, compacting and roughening the surface if special finish is to be provided and curing complete. (Excluding reinforcement and structural steel). with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)	0.89	Cum
13	Providing second class Burnt Brick masonry with conventional/ I.S. type bricks in cement mortar 1:6 in superstructure including striking joints, raking out joints, watering and scaffolding etc. Complete	33.19	Cum
14	Providing and fixing in position TMT - FE - 500 bar reinforcement of various diameters for R.C.C. pile caps, footings, foundations, slabs, beams columns, canopies, staircase, newels, chajjas, lintels, piers, copings, fins, arches etc. as per detailed designs, drawings and schedules. including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required complete.	3.80	MT
15	Providing and fabricating structural steel work in rolled sections like joists, channels, angles, tees etc. as per detailed design and drawings or as directed including cutting, fabricating, hoisting, erecting, fixing in position making riveted / bolted /welded connections without connecting plates, braces etc. and including one coat of anticorrosive paint and over it two coats of oil painting of approved quality and shade	11.56	Cum
16	Providing structural steel work in trusses, other similar trussed purlins and members with all bracing, gusset plates etc. as per detailed designs and drawings or as directed including cutting, fabricating, hoisting, erecting fixing in position, Making riveted/bolted/ welded connection and one coat of anticorrosive paint and over it 2 coats of oil painting approved quality and shade etc. complete.	0.76	MT
17	Providing structural steel work in single stanchions composed of R.S.J. Channel etc. with caps, bases, mild steel plated, angle brackets, cleats, gusset plates, anchor bolts etc. as per detailed designs and drawings or as directed including cutting, fabrication, hoisting, erecting fixing in position, making riveted/ bolted/ welded connection and one coat of anticorrosive paint and over it two. coats of oil painting approved quality and shade etc. complete.	2.16	MT

18	Providing and fixing colour coated Zinalume (R) AZ150 (min 150 gms/sq.mt. total on each side) profiled sheets for roofing. The feed material is manufactured out of nominal 0.45 mm Base Metal Thickness (BMT) (0.5 mm TCT), Hi-strength steel with min.550 MPa yield strength, metallic hot dip coated with Aluminium-Zinc alloy (55% aluminium 43.4% zinc 1.6% silicon) with COLORBOND (R) steel quality super durable polyester paint coat (with inorganic pigment). The paint shall have a total coating thickness of nominal 35 um, comprising of nominal 25 um exterior coat on top surface and nominal 10 um reverse coat on back surface. Profile sheet shall have nom. 950-1050 mm effective cover width and nominal 25-30 mm deep ribs with subtle square fluting in the five pan at nominal 180-250 mm center- to-center. The end rib shall be designed for anti-capillary groove. and return leg. The feed material should have coil manufacturers product details marked a regular interval. Including fasteners with min. fastened with min. 25 um Zinc-Tin alloy coated, Hex head, self-drilling screw etc. complete. (weight of profile 4.52 Kilogram/ One Square Metre)	289.98	Sq.M
19	Providing and fixing of colour coated Zinaluminium(R) AZ150 (min 150 gms/sq.mt. total on each side) profiled sheets for roofing. The feed material is manufactured out of nominal 0.45 mm Base Metal Thickness (BMT) (0.5 mm TCT), Hi-strength steel with min.550 MPa yield strength, metallic hot dip coated with Aluminium-Zinc alloy (55% aluminium 43.4% zinc 1.6% silicon) with COLORBOND (R) steel quality super durable polyester paint coat (with inorganic pigment). The paint shall have a total coating thickness of nominal 35 mm, comprising of nominal 25mm exterior coat on top surface and nominal 10 um reverse coat on back surface. Profile sheet shall have nom. 950- 1050 mm effective cover width and nominal 25-30 mm deep ribs with subtle square fluting in the five pan at nominal 180-250 mm center- to-center. The end rib shall be designed for anti-capacity groove. and return leg. The feed material should have coil manufacturers product details marked a regular interval. including fasteners with min. fastened with min. 25 um Zinc-Tin alloy coated, Hex head, self-drilling screw etc. complete. (weight of profile 4.52 Kilogram/ One Square Metre) 600 mm girth (Surface Width).	17.30	Rmt
20	Providing internal cement plaster 12mm thick in single coat in cement mortar 1:5 without neeru finish to concrete or brick surfaces, in all positions including scaffolding and curing etc. complete.	163.48	Sq.M
21	Providing internal cement plaster 20mm thick in Single coats in cement mortar 1:5 without neeru finish, to concrete, brick surface, in all positions including scaffolding and curing etc. complete	189.05	Sq.M
22	Providing patti/ band 100mm wide on plastered surface 12 mm to 15 mm thick in C.M. 1:3 line and level including neat finishing scaffolding curing etc. complete.	50.00	Rmt
23	Providing and fixing mild steel grill work for windows, ventilators etc. 20 Kilogram/ One Square Metre as per drawing including fixtures, necessary welding and painting with one coats of anticorrosive paint and two coats of oil painting complete.	12.96	Sq.M
24	Providing and fixing in position. (as per I.S.1868 / 1982) Aluminium sliding window of two tracks with rectangular pipe having overall dimension 63.50 x 38.10 x 1.02 mm at weight 0.547 Kilogram/One Running Metre. and window frame bottom track section 61.85 x 31.75 x 1.20 mm at weight 0.695 Kilogram/One Running Metre. Top and side track section 61.85 x 31.75 x 1.30 mm at weight 0.659 Kilogram/One Running Metre. The shutter should be of bearing bottom 40 x 18 x 1.25 mm at weight 0.417 Kilogram/One Running Metre. Inter locking section 40 x 18 x 1.10 mm at weight 0.469 Kilogram/One Running Metre. And handle section 40 x 18 x 1.25 mm at weight 0.417 Kilogram/One Running Metre. and top section 40 x 18 x 1.25 mm at weight 0.417 Kilogram/Running metre. As per detailed drawings and as directed by Engineer in charge with all necessary Aluminium sections fixtures and fastenings such as roller bearing in nylon casting and self locking catch fitted in vertical section of shutter including 5 mm thick plain glass with all required screws and nuts etc, complete. With powder coating with box	2.16	Sq.M

25	Providing and fixing frame with / without ventilator of size as specified with Country cut teak wood for doors and windows including chamfering, rounding, rebating, iron holdfast of size 300mm x 40mm x 5mm with oil painting, etc. complete	0.16	Cum
26	Providing and fixing Country cut teak wood double or single leaf second class fully panelled door shutter with 35mm thick style and rail with 25 mm thick panels with openable fan light as per detailed drawings. Excluding the door frame 60mm x 100mm stainless steel fixtures and fastening and finishing the wood work with oil painting 3 coats. (Excluding the door frame)	4.32	Sq.M
27	Providing and fixing P.V.C. Rain water pipes of 110mm outer diameter and having wall thickness of 2.2 to 2.7 mm confirming to I.S. 13592-1992 including proper rainwater receiving recess with P.V.C. plug, bend, necessary fittings, such as, offsets, shoes, including fixing the pipe on wall using approved wooden cleats projecting 25mm to 40mm from face of wall a fixing with clips of approved quality and One Number ,filing the joint using rubber gasket with solvent cement and properly resting the shoe of pipes on C.C. or masonry blocks, including necessary scaffolding and maintenance for 3 yrs for any leakages or dislocations of pipes. All the P.V.C. fittings and additional 2 piece socket clips shall be got approved from engineer in charge etc. complete.	30.00	Rmt
28	Providing and applying priming coat on concrete/ masonry/ Asbestos Cement plastered surfaces including scaffolding if necessary, preparing the surface by thoroughly cleaning oil, grease, dirt and other foreign matter and sand papering as required etc. complete.	163.48	Sq.M
29	Providing and applying plastic emulsion paint of approved quality, colour and shade to new surface in three coats including scaffolding, preparing the surface. (excluding primer coat) etc. complete.	163.48	Sq.M
30	Providing and applying two coats of exterior acraylic emulsion paint confirming to corresponding I.S. of approved manufacture and of approved colour to the plastered surfaces including cleaning ,preparing the plaster surface, applying primer coat ,scaffolding if necessary , and watering the surface for two days etc complete.	189.05	Sq.M
31	Conveying material obtained from debris of various sorts including necessary loading unloading and conveying and disposing as directed .	89.46	Cum
	Quality Control Test		
32	Concrete Mix Design with all tests on basic material	01	No
33	Compressive strength of CC Cube (Set of 3 cubes)	10	No



(ललित मोहन)
सचिव, (खरीद समिति)



COLUMN CENTRE LINE

GENERAL NOTES

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS, FOR CIVIL CONSTRUCTION.
2. ALL DIMENSIONS ARE IN MILLIMETER UNO.
3. GRADE OF STRUCTURAL CONCRETE M20 FOR BUILDING INCLUDING FOUNDATIONS, COLUMNS, BEAMS CONFORMING TO IS:456:2000
4. REINFORCEMENT TMT CONFORMING TO GRADE FE 500 AS PER IS:1786.
5. DO NOT SCALE THE DRAWINGS.
6. CLEAR COVER TO REINFORCEMENT
A) COLUMN / FEDESTAL = 50MM
C) SLAB = 20MM
D) BEAM = 25MM
7. DEVELOPMENT LENGTH SHALL NOT BE LESS THAN 46Ø BAR.
8. CONSIDER SBC 300 KN/M2 AS PER SOIL CONDITION

ISSUED FOR APPROVAL	
DATE	BY
IN ORDER TO SCHEDULE THIS PROJECT IN THE MOST EFFICIENT MANNER, RETURN THIS DOCUMENT, MARKED WITH YOUR COMMENTS, WITHIN 30 DAYS FROM THE ABOVE MENTIONED DATE.	
ANY CHANGES MADE AFTER APPROVAL OF THESE DRAWINGS MAY DELAY THE EXECUTION AND DELIVERY PROCESS. THEREFORE, CHANGES ARE NOT FOR CONSTRUCTION.	
1. ☐ APPROVED NO CHANGES, PROCEED WITH EXECUTION.	
2. ☐ APPROVED AS NOTED CORRECTIONS MAY PROCEED ON THE BASIS OF CORRECTIONS REQUIRED.	
REVIEWED BY	NAME
SIGNATURE	DATE

LEGEND:

FSW = FRONT SIDE WALL
BSW = BACK SIDE WALL
LW = LEFT END WALL
RW = RIGHT END WALL

NO.	DATE	REVISION	BY	DATE
1	08.03.24	ISSUED FOR APPROVAL	BY	DATE
2	08.03.24	ISSUED FOR APPROVAL	BY	DATE
3	08.03.24	ISSUED FOR APPROVAL	BY	DATE

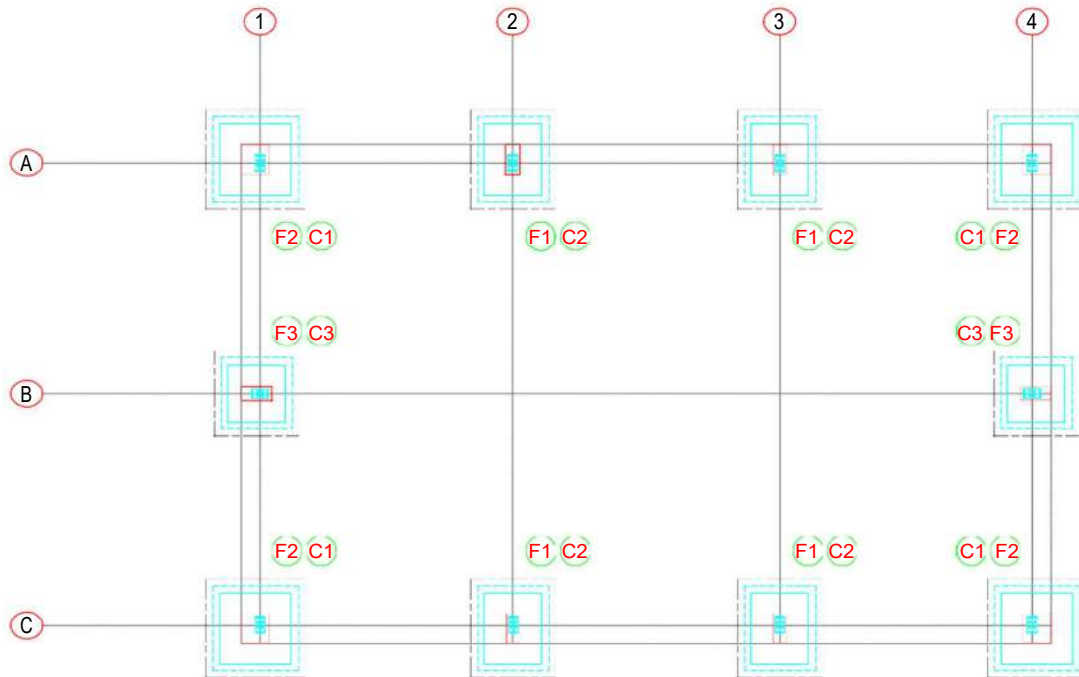
STRUCTURAL CONSULTANT

B. M. GHAWADE & ASSOCIATE
CONSULTING ENGINEERS & STRUCTURAL DESIGNERS
105 MAJESTIC COURT, BESA SQUARE NAGPUR-34
PH: 09890799975
e-mail : bhaughawade@gmail.com

DRAWING NUMBER	1	FEED-2-101/GA-01
PROJECT NAME	1	CONSTRUCTION OF FEED SHED FOR LABORATORY
CLIENT	1	JNANDIC
JOB SITE LOCATION	1	NAGPUR, MAHARASHTRA
DRAWING TITLE	DWG. No.	C-01

Digitally signed by GOVINDA
BHAGWAN BHASKAR
Date: 2024.04.26 17:57:21 IST

Digitally signed by
RAGHUPATHY SRINIVASAN
Date: 2024.04.04 16:06:38 IST



EXCAVATION LAYOUT

SCHEDULE OF COLUMNS AND FOOTINGS

COLUMN NOS	PCC-(M15-CONCRETE)			FOOTINGS		REINFORCEMENT BOTH WAYS BOTTOM	REINFORCEMENT BOTH WAYS TOP	FOOTINGS TO B.O.P		REMARK	
	EXCAVATION	PCC SIZE		THICKNESS	FOOTING SIZE			SIZE	REINF.		
		L	B		T						L
C1	2400 X 2400	2100 X 2100	150	1800 X 1800	450	10mm@150(6")mmc/c		600 X 650	20 – 12#	BOX TYPE	
C2	2400 X 2100	2100 X 1800	150	1800 X 1500	450	10mm@150(6")mmc/c		300 X 650	10 – 12#	BOX TYPE	
C3	2400 X 2100	1800 X 1800	150	1500 X 1500	450	10mm@125(5")mmc/c		300 X 650	10 – 12#	BOX TYPE	

GENERAL NOTES

- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS, FOR CIVIL CONSTRUCTION.
- ALL DIMENSIONS ARE IN MILLUMETER UNO.
- GRADE OF STRUCTURAL CONCRETE M20 FOR BUILDING INCLUDING FOUNDATIONS,COLUMNS,BEAMS CONFORMING TO IS:456:2000
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C) SLAB = 20MM
D) BEAM = 25MM
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- CONSIDER SBC 300 KN/M2 AS PER SOIL CONDITION

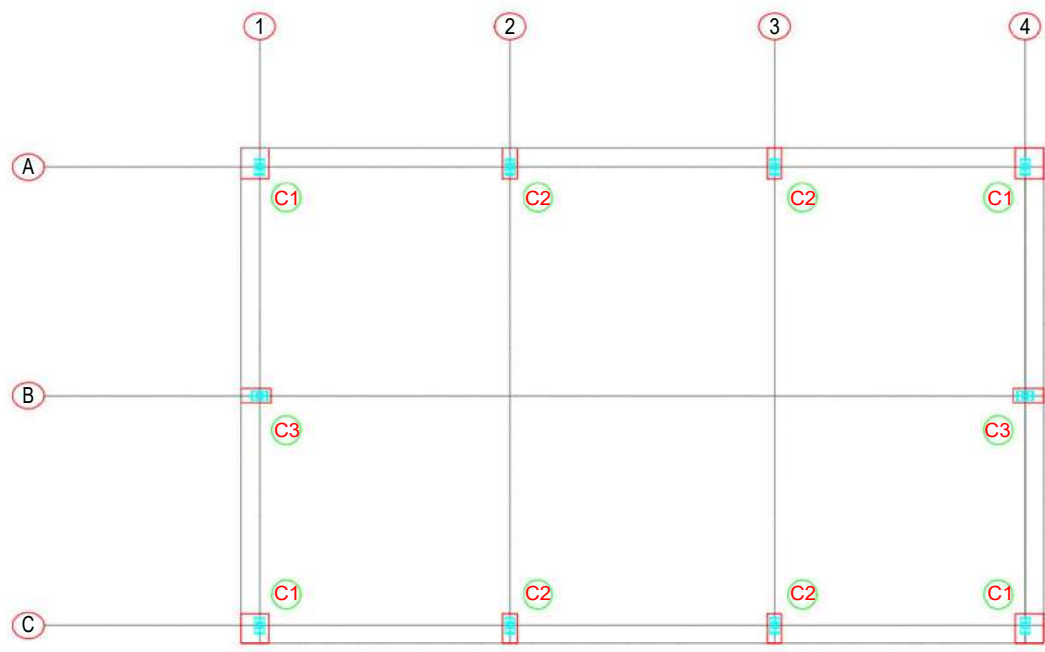
ISSUED FOR APPROVAL

SENT ON _____
IN ORDER TO SCHEDULE THIS PROJECT IN THE MOST EFFICIENT MANNER, RETURN THESE DOCUMENTS, MARKED WITH YOUR COMMENTS, BEFORE DELIVERY FROM THE ABOVE MENTIONED DATE.
ANY CHANGES MADE AFTER APPROVAL OF THESE DOCUMENTS WILL DELAY THE EXECUTION AND SCHEDULE PROGRESS. THESE CHANGES ARE NOT FOR CONSTRUCTION.
1. ☐ APPROVED
NO CHANGES PROPOSED WITH EXCEPTION.
2. ☐ APPROVED AS NOTED
EXCEPTION WAS PROPOSED IN THE NAME OF CORRECTIONS INDICATED.
REVIEWED BY: _____
SIGNATURE: _____ DATE: _____

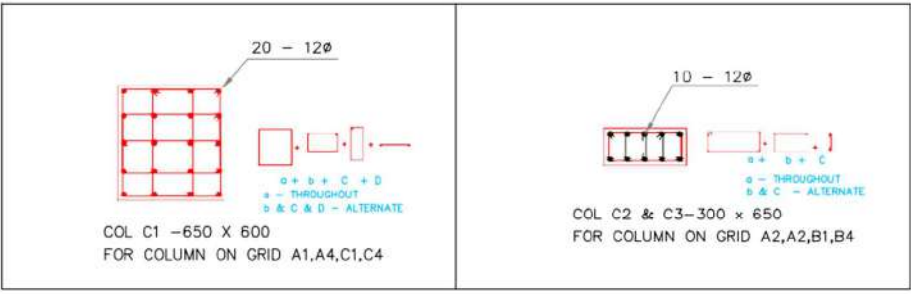
LEGEND:

FSW = FRONT SIDE WALL
BSW = BACK SIDE WALL
LEW = LEFT END WALL
REW = RIGHT END WALL

06.03.24	ISS - ISSUED FOR APPROVAL				
06.03.24	ISSUED FOR APPROVAL	BY	PN	PN	
REV	DATE	DESCRIPTION	BY	PN	PN
STRUCTURAL CONSULTANT					
B. M. GHAWADE & ASSOCIATE					
CONSULTING ENGINEERS & STRUCTURAL DESIGNERS					
105/MAJESTIC COURT, BESA SQUARE NAGPUR-34					
PH: 0980799975					
e-mail: bhaughawade@gmail.com					
DRAWING NUMBER : PEB-2-101/GA-01					
PROJECT NAME : CONSTRUCTION OF PEB SHEET FOR LABORATORY					
CLIENT : JNARDON					
CUSTOMER NAME :					
JOB SITE LOCATION : NAGPUR, MAHARASHTRA					
DRAWING TITLE: EXCAVATION LAYOUT					
				DWG. No.	C-02



COLUMN LAYOUT



C/S OF COLUMN AND LINK ARRANGEMENT

*REF COL & FOOTING SCHEDULE FOR DETAILS

- GENERAL NOTES
1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS, FOR CIVIL CONSTRUCTION.
 2. ALL DIMENSIONS ARE IN MILLIMETER UNO.
 3. GRADE OF STRUCTURAL CONCRETE M20 FOR BUILDING INCLUDING FOUNDATIONS,COLUMNS,BEAMS CONFORMING TO IS:456:2000
 4. REINFORCEMENT TMT CONFORMING TO GRADE FE 500 AS PER IS:1786.
 5. DO NOT SCALE THE DRAWINGS.
 6. CLEAR COVER TO REINFORCEMENT
A) COLUMN / PEDESTAL = 50MM
C) SLAB = 20MM
D) BEAM = 25MM
 7. DEVELOPMENT LENGTH SHALL NOT BE LESS THAN 46Ø BAR.
 8. CONSIDER SBC 300 KN/M2 AS PER SOIL CONDITION

ISSUED FOR APPROVAL

REVISED BY: _____

IN ORDER TO SUBMIT THIS PROJECT IN THE BEST INTERESTS OF THE CLIENT, THE DESIGNER HAS REVIEWED THE DRAWINGS AND HAS FOUND THEM TO BE CORRECT AND COMPLETE. THE DESIGNER HAS REVIEWED THE DRAWINGS AND HAS FOUND THEM TO BE CORRECT AND COMPLETE. THE DESIGNER HAS REVIEWED THE DRAWINGS AND HAS FOUND THEM TO BE CORRECT AND COMPLETE.

APPROVED BY: _____

DATE: _____

LEGEND:

FSW = FRONT SIDE WALL
BSW = BACK SIDE WALL
LEW = LEFT END WALL
REW = RIGHT END WALL

1	DESIGN	ISSUED FOR APPROVAL	BY	PM	PM
2	DESIGN	ISSUED FOR APPROVAL	BY	PM	PM
REV	DATE	DESCRIPTION	BY	PM	PM

STRUCTURAL CONSULTANT

B. M. GHAWADE & ASSOCIATE
CONSULTING ENGINEERS & STRUCTURAL DESIGNERS
105 MAJESTIC COURT, BESA SQUARE NAGPUR-34
PH: 09890799975
e-mail : bhaughawade@gmail.com

DRAWING NUMBER : PEB-2-101/GA-01

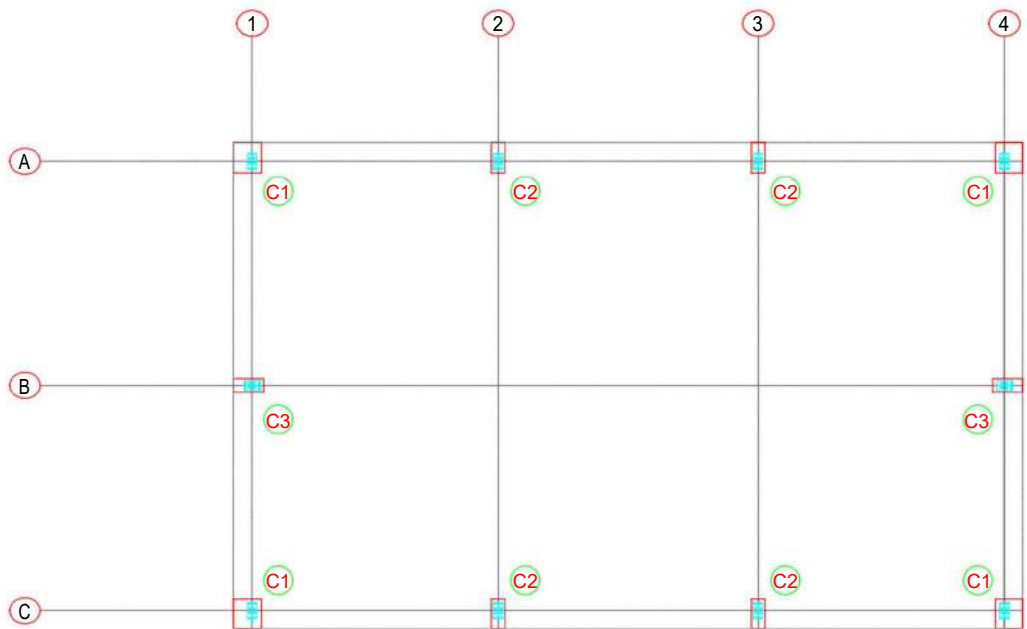
PROJECT NAME : CONSTRUCTION OF PEB SHED FOR LABORATORY

CLIENT : INRADD

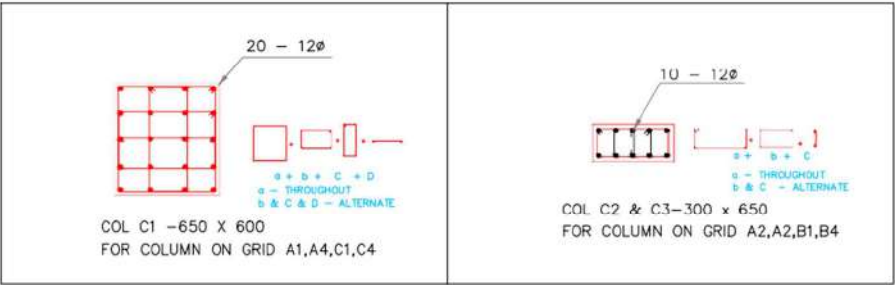
JOB SITE LOCATION : NAGPUR, MAHARASHTRA

DRAWING TITLE : COLUMN LAYOUT

DWG. No. : C-04



COLUMN LAYOUT



C/S OF COLUMN AND LINK ARRANGEMENT

*REF COL & FOOTING SCHEDULE FOR DETAILS

GENERAL NOTES

- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS, FOR CIVIL CONSTRUCTION.
- ALL DIMENSIONS ARE IN MILLIMETER UNO.
- GRADE OF STRUCTURAL CONCRETE M25 FOR BUILDING INCLUDING FOUNDATIONS,COLUMNS,BEAMS CONFORMING TO IS:456:2000
- REINFORCEMENT TMT CONFORMING TO GRADE FE 500 AS PER IS:1786.
- DO NOT SCALE THE DRAWINGS.
- CLEAR COVER TO REINFORCEMENT
A) COLUMN / PEDESTAL = 50MM
C) SLAB = 20MM
D) RFAM = 25MM
- DEVELOPMENT LENGTH SHALL NOT BE LESS THAN 46Ø BAR.
- CONSIDER SBC 300 KN/M2 AS PER SOIL CONDITION

ISSUED FOR APPROVAL

DATE BY _____

IN ORDER TO SCHEDULE THIS PROJECT IN THE MOST EFFICIENT MANNER, RETURN THESE DOCUMENTS, MARKED WITH YOUR COMMENTS, WITHIN THE SPECIFIED TIME, TO THE ABOVE MENTIONED DATE.

ANY CHANGES MADE AFTER APPROVAL OF THESE DRAWINGS WILL BEAT THE DESIGNER AND DESIGN PROCESS.

THESE DRAWINGS ARE NOT FOR CONSTRUCTION.

1. ☐ APPROVED
NO CHANGES PROCEED WITH EXECUTION.

2. ☐ APPROVED AS NOTED
CORRECTIONS ARE PROCEED ON THE BASIS OF CORRECTIONS REQUIRED.

REVIEWED BY: _____

REVISOR: _____ DATE: _____

LEGEND:

FSW = FRONT SIDE WALL
BSW = BACK SIDE WALL
LEW = LEFT END WALL
REW = RIGHT END WALL

NO	DATE	BY	REVISION	FOR	BY	DATE
1	20.02.24	BS	ISSUED FOR APPROVAL	RF	PM	TD
2	20.02.24	BS	ISSUED FOR APPROVAL	RF	PM	TD
3	20.02.24	BS	ISSUED FOR APPROVAL	RF	PM	TD

STRUCTURAL CONSULTANT

B. M. GHAWADE & ASSOCIATE
CONSULTING ENGINEERS & STRUCTURAL DESIGNERS
105 MAJESTIC COURT, BESA SQUARE NAGPUR-34
PH: 09890799975
e-mail : bhaughawade@gmail.com

DRAWING NUMBER : PSB-J-101/GA-01

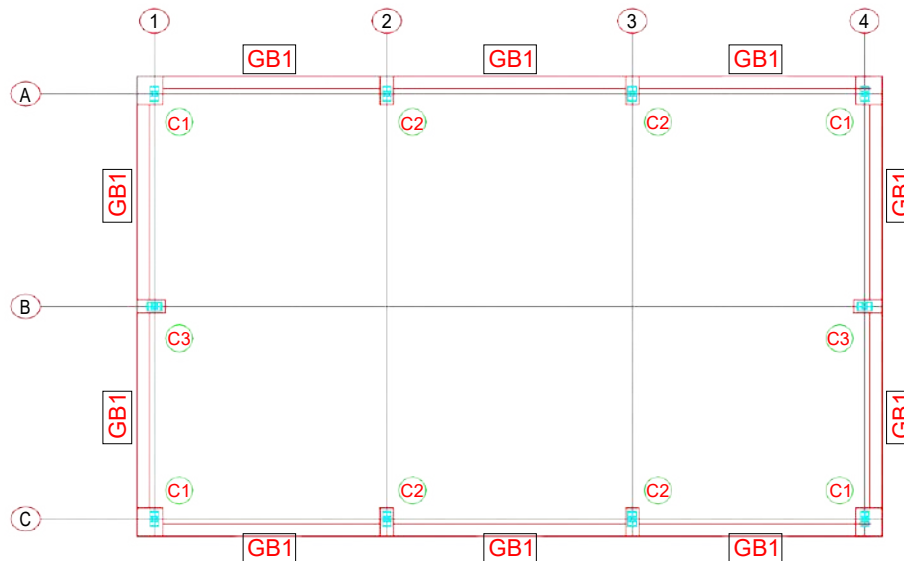
PROJECT NAME : CONSTRUCTION OF FEB SHED FOR LABORATORY

CLIENT : JALISCO

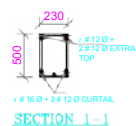
JOB SITE LOCATION : NAGPURA,MAHARASHTRA

DRAWING TITLE : COLUMN LAYOUT

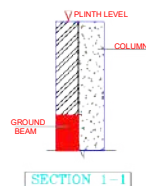
CHG. No. : C-04



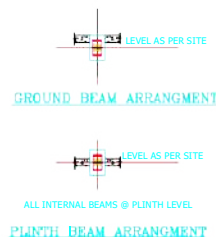
GB & PB LAYOUT



SECTION 1-1

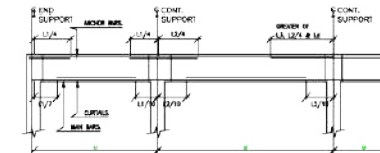


SECTION 1-1

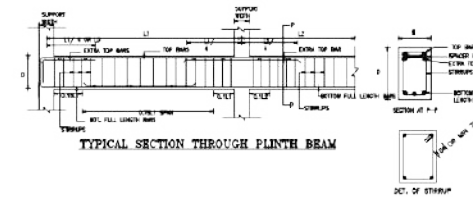


GROUND BEAM ARRANGMENT

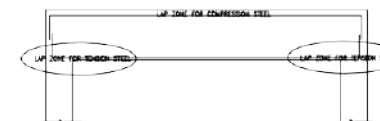
PLINTH BEAM ARRANGMENT



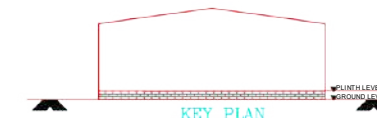
TYPICAL SECTION THROUGH RCC BEAM



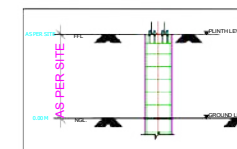
TYPICAL SECTION THROUGH PLINTH BEAM



DETAILS FOR LAPPING ZONE



KEY PLAN



GENERAL NOTES

- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS, FOR CIVIL CONSTRUCTION.
- ALL DIMENSIONS ARE IN MILLIMETER UNO.
- GRADE OF STRUCTURAL CONCRETE M25 FOR BUILDING INCLUDING FOUNDATIONS, COLUMNS, BEAMS CONFORMING TO IS:456:2000
- REINFORCEMENT IMT CONFORMING TO GRADE FE 500 AS PER IS:1786.
- DO NOT SCALE THE DRAWINGS.
- CLEAR COVER TO REINFORCEMENT
- COLUMN / PEDESTAL = 50MM
- SLAB = 20MM
- BEAM = 25MM
- DEVELOPMENT LENGTH SHALL NOT BE LESS THAN 46# BAR.
- CONSIDER SBC 300 KN/M2 AS PER SOIL CONDITION

ISSUED FOR APPROVAL

ISSUED FOR APPROVAL

IN ORDER TO SCHEDULE THIS PROJECT IN THE MOST EFFICIENT MANNER, RETURN THESE DOCUMENTS, MARKED WITH YOUR COMMENTS, RETURN TO DESK FROM THE ABOVE MENTIONED DATE.

ANY CHANGES MADE AFTER APPROVAL OF THESE DRAWINGS MAY AFFECT THE EXECUTION AND DELIVERY PROCESS. THESE DRAWINGS ARE NOT FOR CONSTRUCTION.

1. ☐ APPROVED

2. ☐ APPROVED AS NOTED

REVISIONS BY: NAME

SIGNATURE DATE

LEGEND:

FSW = FRONT SIDE WALL
BSW = BACK SIDE WALL
LEW = LEFT END WALL
REW = RIGHT END WALL

1	04.03.24	ISSUED FOR APPROVAL	BY	PN	PN
2	04.03.24	ISSUED FOR APPROVAL	BY	PN	PN
REV	DATE	DESCRIPTION	BY	PN	PN

STRUCTURAL CONSULTANT
B. M. GHAWADE & ASSOCIATE

CONSULTING ENGINEERS & STRUCTURAL DESIGNERS
105 MAJESTIC COURT, BESA SQUARE NAGPUR-44
PH: 09890799975
e-mail: bhaughade@gmail.com

DRAWING NUMBER : PEB-2-101/GA-01
PROJECT NAME : CONSTRUCTION OF PEB SHED FOR LABORATORY

CLIENT : INARDOO

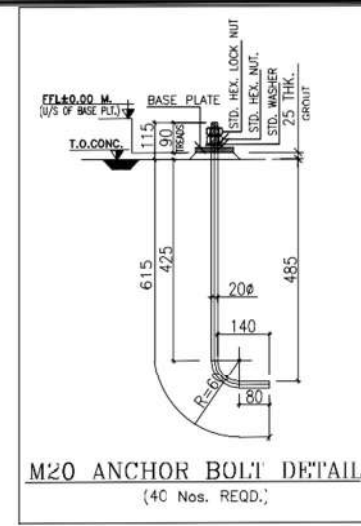
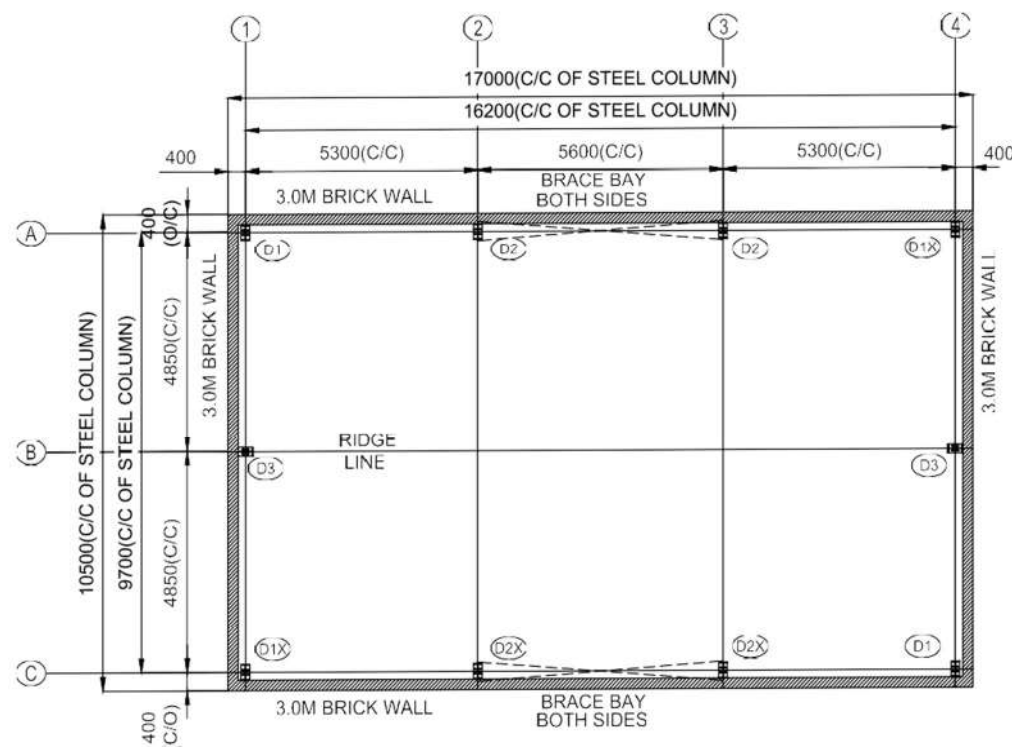
SUB SITE LOCATION : NAGPUR, MAHARASHTRA

DRAWING TITLE:

DWG. No.

GB & PB LAYOUT

C-05

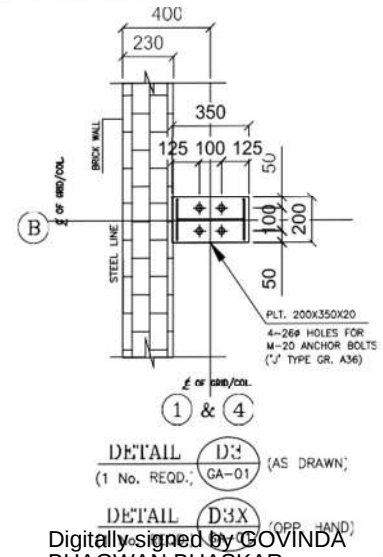
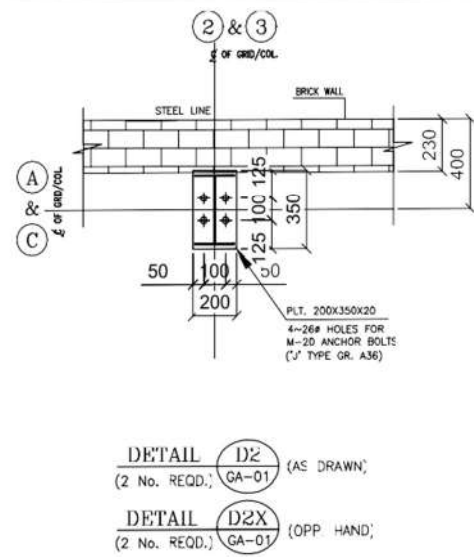
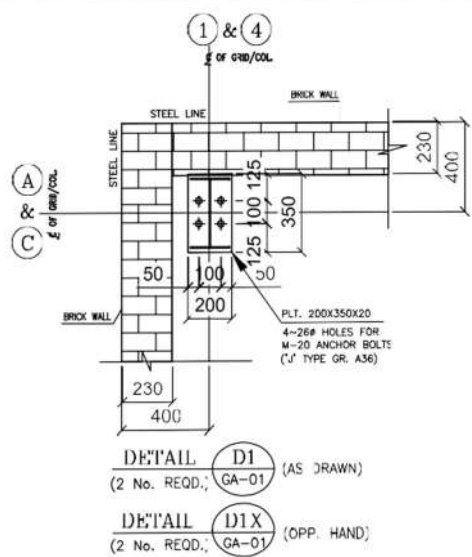


GENERAL NOTES

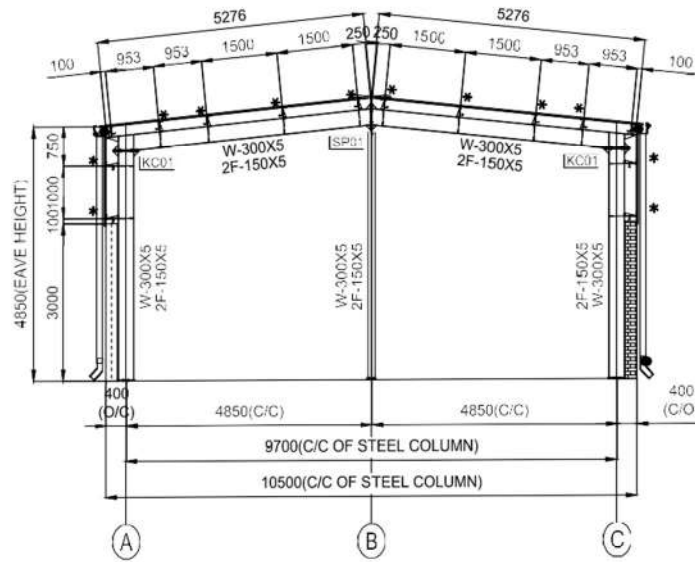
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ARE FOR ALL AND STRUCTURAL DRAWINGS.
- ALL DIMENSIONS ARE IN MILLIMETERS AND UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
- DO NOT SCALE THE DRAWING.

LEGEND:

FSW = FRONT SIDE WALL
BSW = BACK SIDE WALL
LEW = LEFT END WALL
REW = RIGHT END WALL

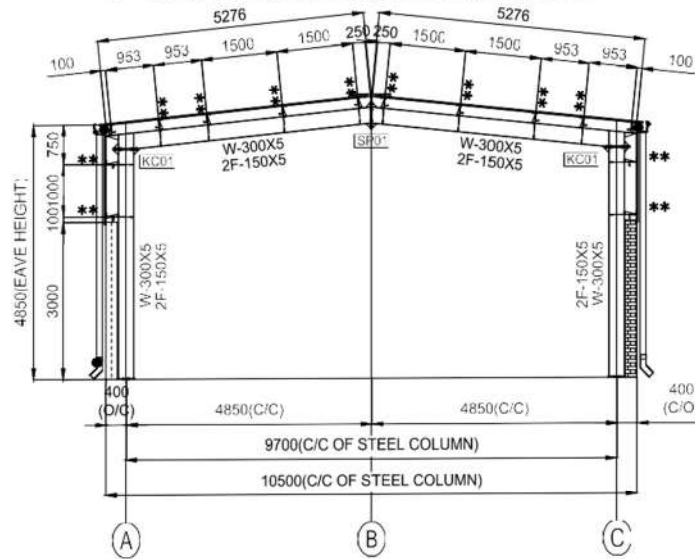


8	09.02.04	ISSUED FOR APPROVAL	NO	PM	PM
REV.	DATE	DESCRIPTION	BY	CHK.	APP.
STRUCTURAL CONSULTANT					
B. M. GHAWADE & ASSOCIATE					
GENERAL ENGINEERING & STRUCTURAL DESIGNERS					
100, MARKET STREET, 2ND FLOOR, CHENNAI - 600 009					
www.bmgawade.com					
DRAWING NUMBER : PE3-2-101/GA-01					
PROJECT NAME : CONSTRUCTION OF FEB BHEC FOR LABORATORY					
CLIENT : JNARC					
JOB SITE LOCATION : NAGPUR, MAHARASHTRA					
DRAWING TITLE:					
ANCHOR BOLT PLAN & DETAILS				DWG. No.	
					GA-01



FRAME ELEVATION AT GL - 1 & 4

* DENOTES SINGLE SIDE FLANGE BRACE



FRAME ELEVATION AT GL - 2 & 3

** DENOTES DOUBLE SIDE FLANGE BRACE

SCHEDULE OF ALL FRAME CONNECTION DETAIL

MARKING	QUANTITY	BOLT DIA	PITCH	GAUGE	PLT. THK
KC01	8	20	100	100	16
SP01	8	20	100	100	16

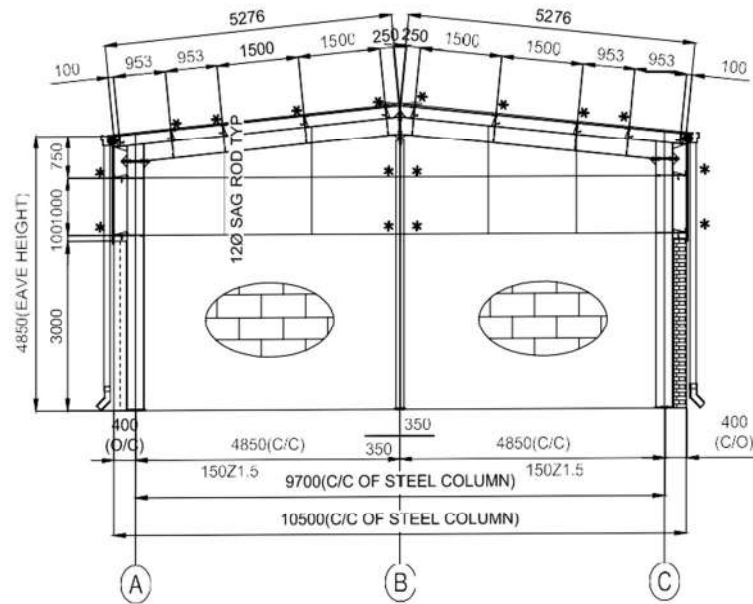
GENERAL NOTES

1. DIMENSIONS GIVEN IN PARENTHESIS ARE FOR REFERENCE ONLY.
2. ALL DIMENSIONS ARE TO BE TAKEN FROM THE CENTER LINE OF THE MEMBER UNLESS SPECIFIED OTHERWISE.
3. DIMENSIONS ARE TO BE TAKEN FROM THE CENTER LINE OF THE MEMBER UNLESS SPECIFIED OTHERWISE.

LEGEND:

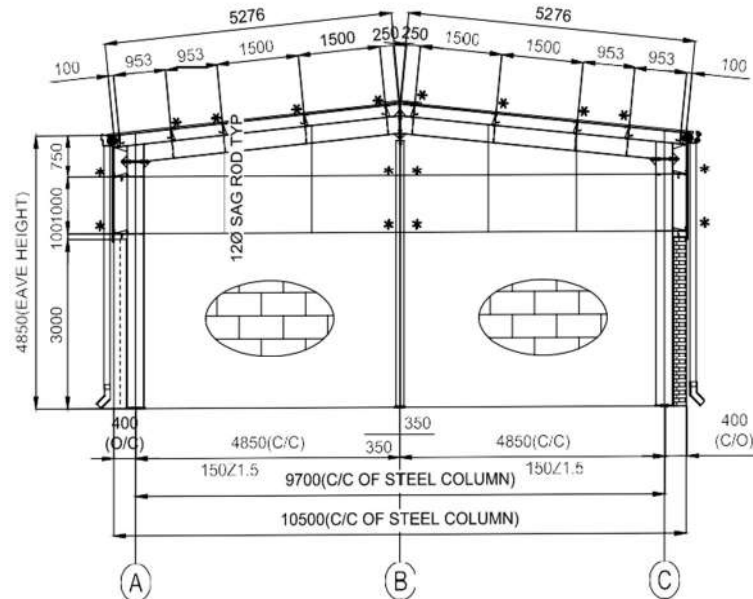
FSW = FRONT SIDE WALL
BSW = BACK SIDE WALL
LEW = LEFT END WALL
REW = RIGHT END WALL

0	20.02.24	ISSUED FOR APPROVAL	BY	PM	PM
REV	DATE	DESCRIPTION	DRN	CHKD	DRN
STRUCTURAL CONSULTANT					
B. M. GHAWADE & ASSOCIATE					
CONSULTING ENGINEERS & STRUCTURAL DESIGNERS					
105, MIDC INDUSTRIAL ESTATE, BOKA SQUARE, NAGPUR-465 014					
PUN: 020-2600700/0					
E-MAIL: bghawade@bga.com					
DRAWING NUMBER : PEB-J-101/GA-02					
PROJECT NAME : CONSTRUCTION OF PEB SHED FOR LABORATORY					
CLIENT : JNARDDC					
JOB SITE LOCATION : NAGPUR, MAHARASHTRA					
DRAWING TITLE:			DWG. No.		
FRAME ELEVATION			GA-02		



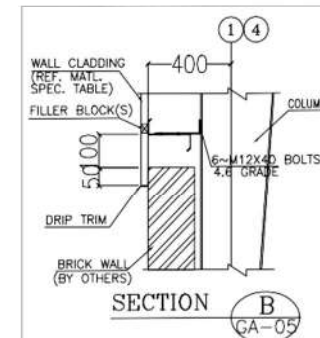
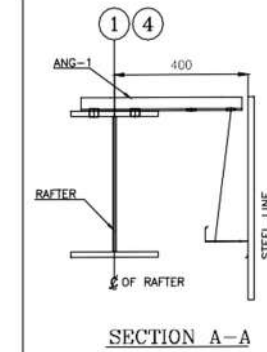
FRAME ELEVATION AT GL - 1

* DENOTES SINGLE SIDE FLANGE BRACE



FRAME ELEVATION AT GL - 4

* DENOTES SINGLE SIDE FLANGE BRACE

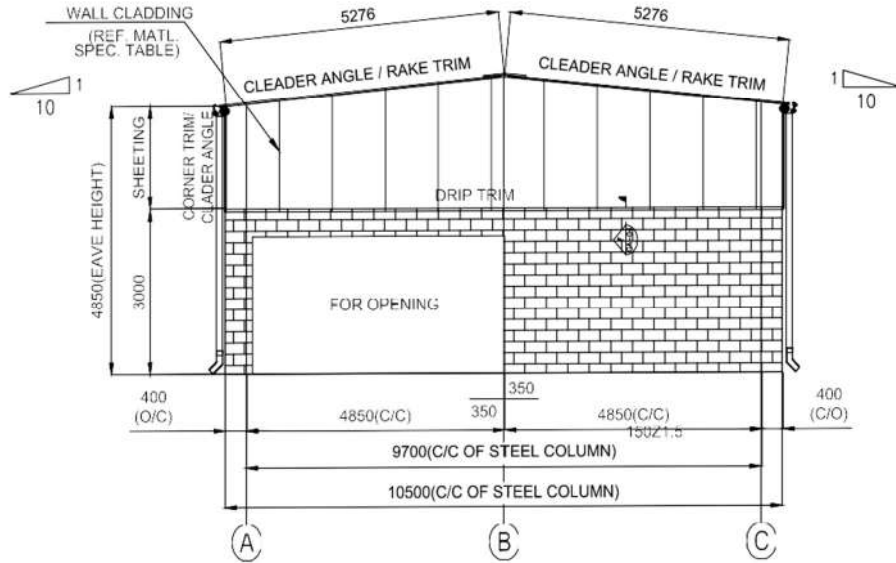


GENERAL NOTES
1. DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ARCHITECTURAL AND STRUCTURAL DRAWINGS.
2. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
3. DO NOT SCALE THE DRAWING.

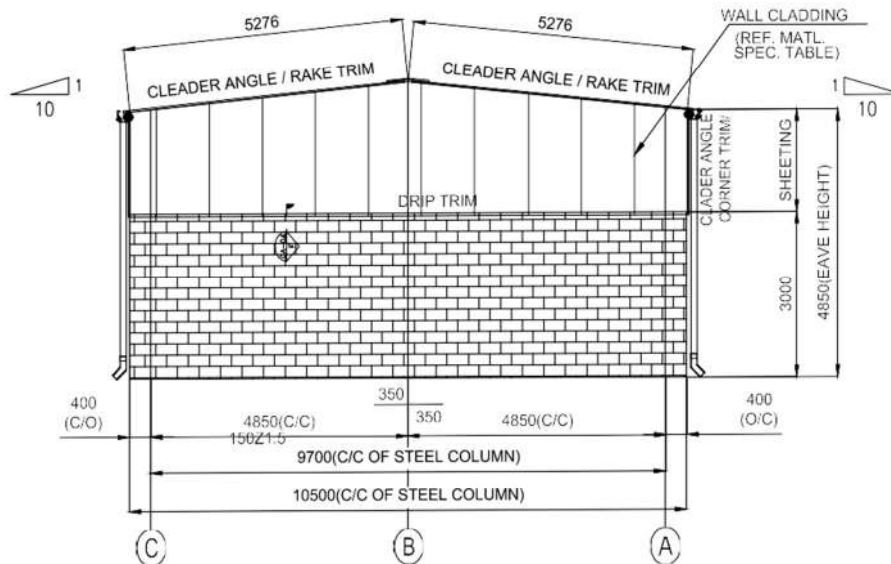
LEGEND:

FSW = FRONT SIDE WALL
BSW = BACK SIDE WALL
LEW = LEFT END WALL
REW = RIGHT END WALL

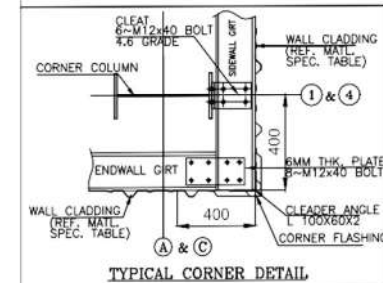
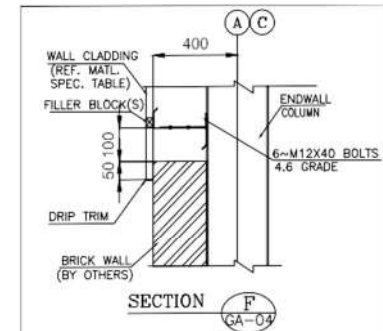
REV	DATE	DESCRIPTION	DRN	CHKD	DSN
0	28.02.24	ISSUED FOR APPROVAL	NY	PM	PM
STRUCTURAL CONSULTANT					
B. M. GHAWADE & ASSOCIATE					
CONSULTING ENGINEERS & STRUCTURAL DESIGNERS					
106 MAHESHI COMPT, BESA SQUARE, NAGPUR-462001					
PH: 09660766975					
e-mail: b.m.ghawade3@gmail.com					
DRAWING NUMBER : FEB-J-101/GA-03					
PROJECT NAME : CONSTRUCTION OF FEB SHED FOR LABORATORY					
CLIENT : JNARDDC					
JOB SITE LOCATION: NAGPUR, MAHARASHTRA					
DRAWING TITLE:				DWG. No.	
END FRAMING ELEVATION				GA-03	



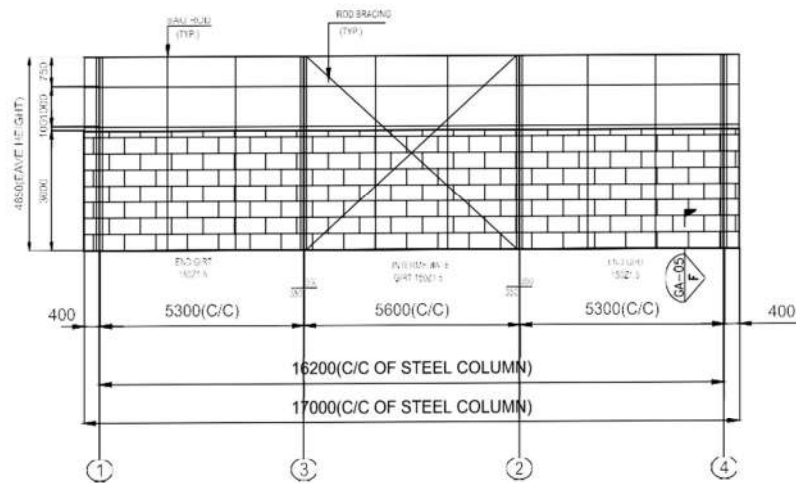
SHEETING ELEVATION AT GL - 1



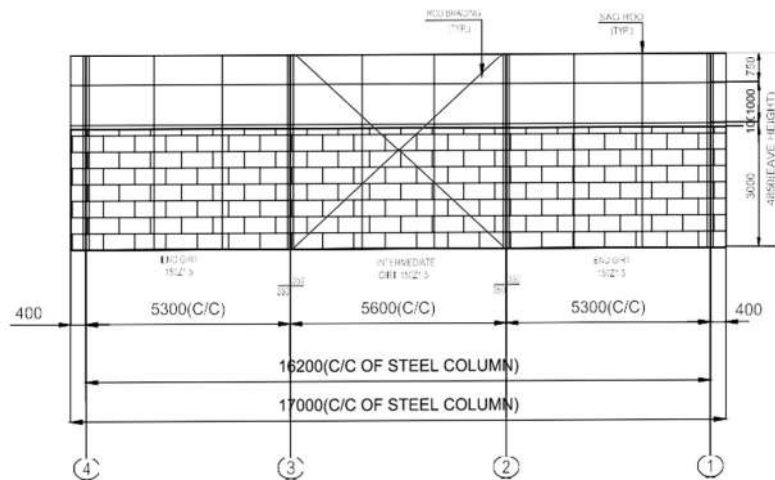
SHEETING ELEVATION AT GL - 4



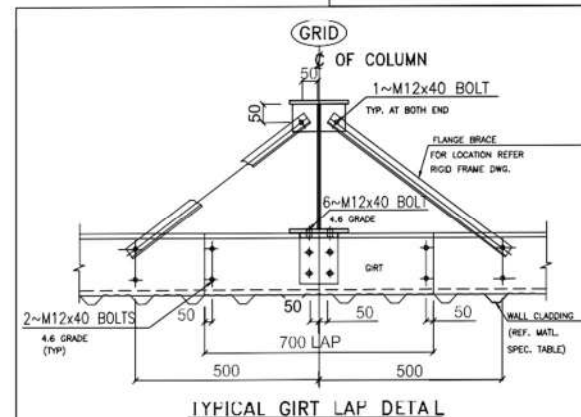
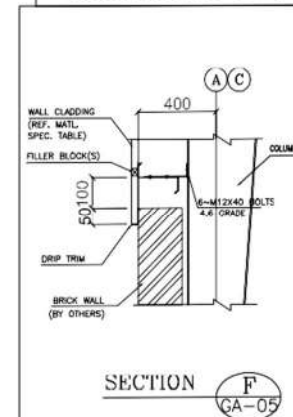
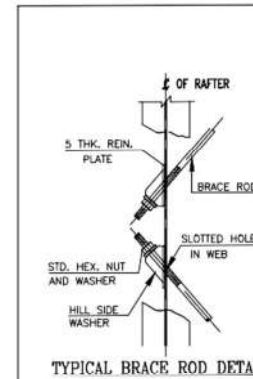
GENERAL NOTES				
1. SEE DRAWING IN TOWER FOR A COMPLETE SCHEDULE OF ALL OTHER RELEVANT ARCHITECTURAL AND STRUCTURAL DRAWINGS.				
2. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.				
3. SEE PLAN FOR THE DRAWING.				
LEGEND:				
FSW = FRONT SIDE WALL				
BSW = BACK SIDE WALL				
LEW = LEFT END WALL				
REW = RIGHT END WALL				
0	29.02.24	ISSUED FOR APPROVAL	NY	7M
REV.	DATE	DESCRIPTION	DRN/COD	DSN
STRUCTURAL CONSULTANT				
B. M. CHAWADE & ASSOCIATE				
CONSULTING ENGINEERS & STRUCTURAL DESIGNERS				
105, MAHARAJA COURT, RESA SQUARE, NAGPUR-46				
PH: 020-26790075				
E-MAIL: bmc@bmc.co.in				
DRAWING NUMBER : FEB-3-101/GA-03A				
PROJECT NAME : CONSTRUCTION OF PEB SHED FOR				
LABORATORY				
CLIENT : JNARDC				
JOB SITE LOCATION: NAGPUR, MAHARASHTRA				
DRAWING TITLE:				
ENDWALL SHEETING ELEVATION				
DWG. No.				GA-03A



SIDE WALL FRAMING ELEVATION AT GL - A



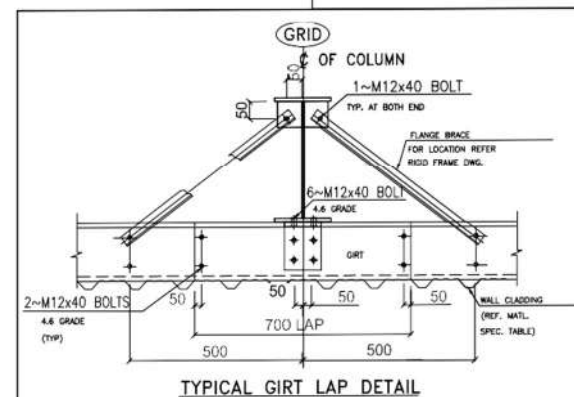
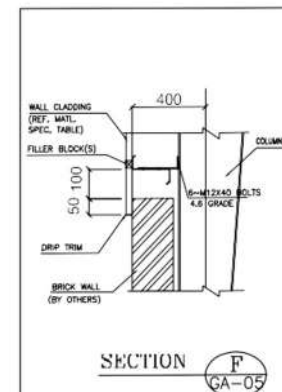
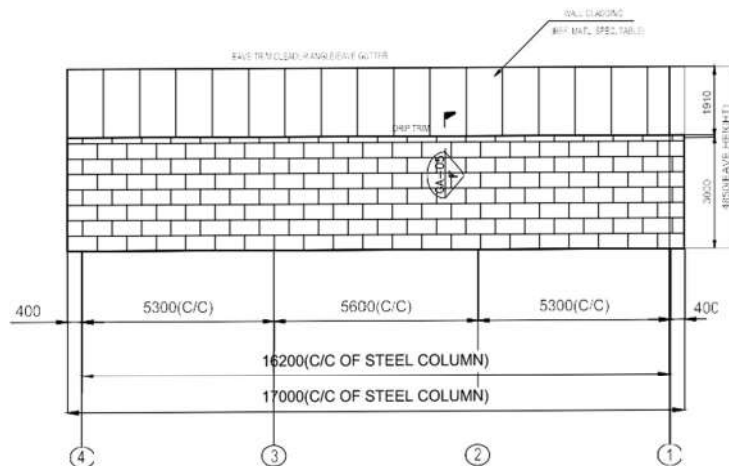
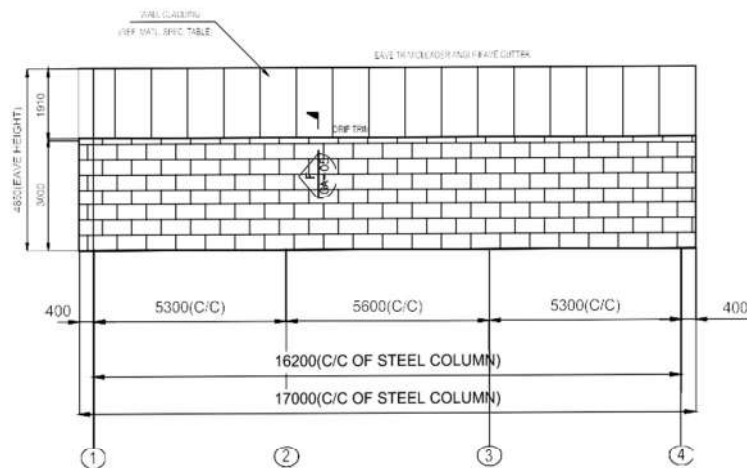
SIDE WALL FRAMING ELEVATION AT GL - C



GENERAL NOTES
THIS DRAWING IS TO BE USED IN CONJUNCTION WITH THE
GENERAL NOTES TO THE DRAWING AND THE
SPECIFICATIONS TO THE DRAWING.
ALL WORKMANSHIP IS TO BE IN ACCORDANCE WITH THE
REQUIREMENTS OF THE DRAWING.

LEGEND:
FSW = FRONT SIDE WALL
BSW = BACK SIDE WALL
LEW = LEFT END WALL
REW = RIGHT END WALL

REV.	DATE	ISSUED FOR APPROVAL	BY	PN	PN
		DIRECTION			
		CHKD			
STRUCTURAL CONSULTANT					
B. M. GHAWADE & ASSOCIATE					
CONSULTING ENGINEERS & ARCHITECTS					
PLOT NO. 10, COLONY, DESAI VILLAGE, SURGAON					
P. M. GHAWADE					
E-MAIL: bmgawade@gmail.com					
DRAWING NUMBER : PEB-2-101/GA-04					
PROJECT NAME : CONSTRUCTION OF PER BRID FOR					
LABORATORY					
C.D.P. : JALNDC					
JOB SITE LOCATION: NAGPUR, MAHARASHTRA					
DRAWING TITLE: SIDE WALL FRAMING ELEVATION					
GA-04					



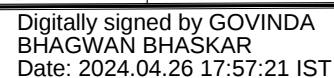
GENERAL NOTES

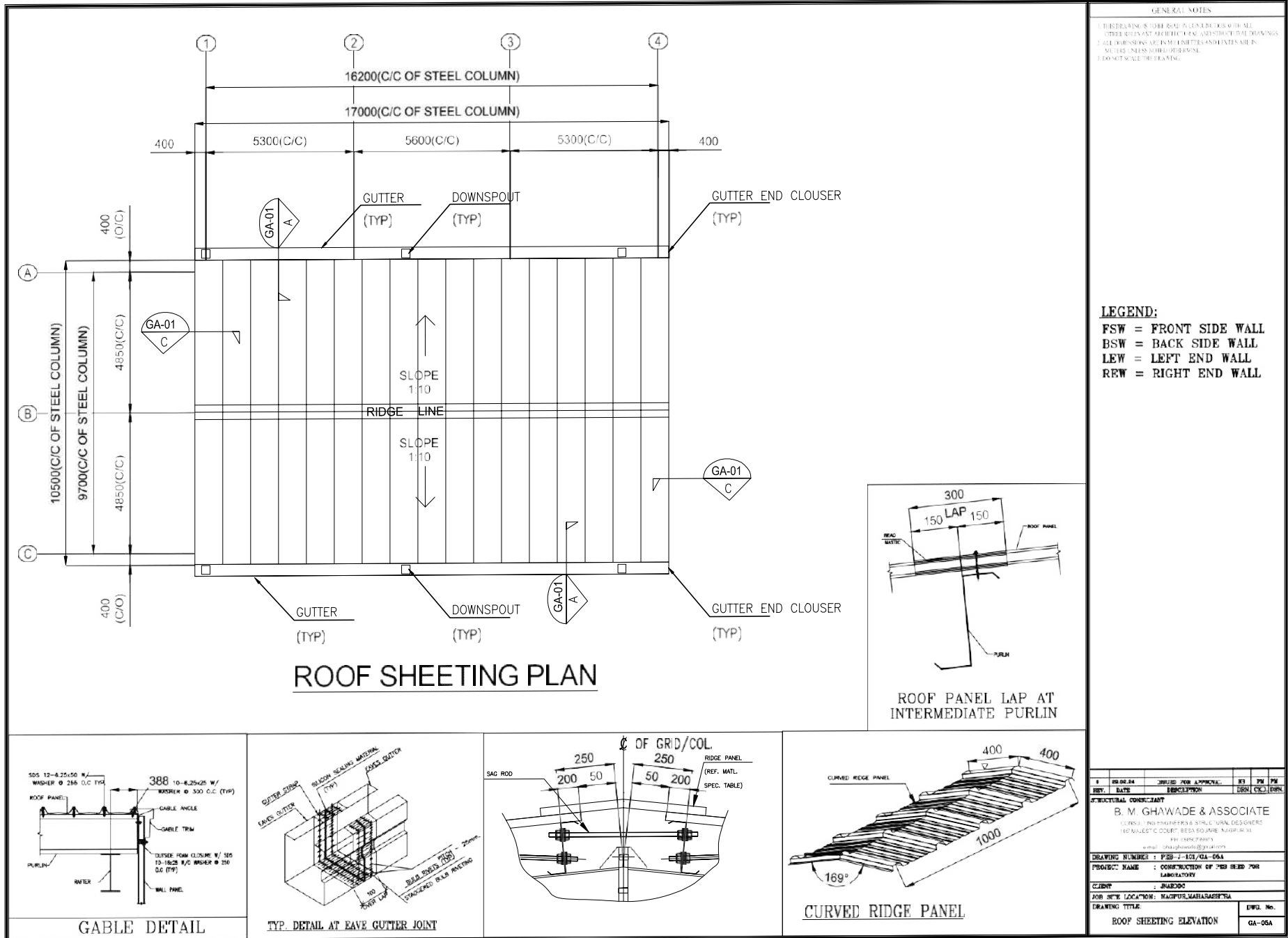
1. 用C语言编写程序, 求100以内所有奇数之和。
2. 用C语言编写程序, 求100以内所有偶数之和。
3. 用C语言编写程序, 求100以内所有能被3整除的数之和。

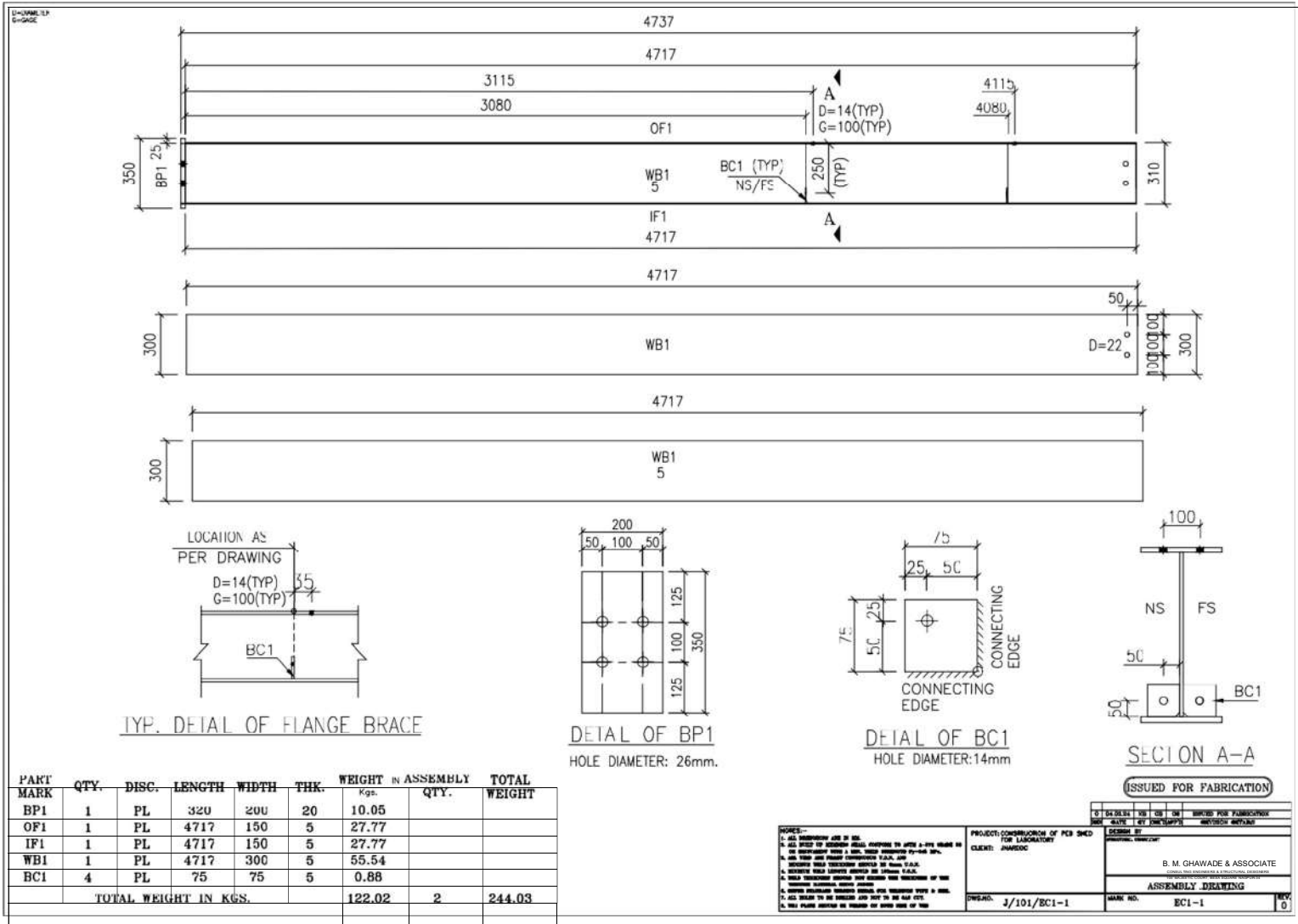
LEGEND:

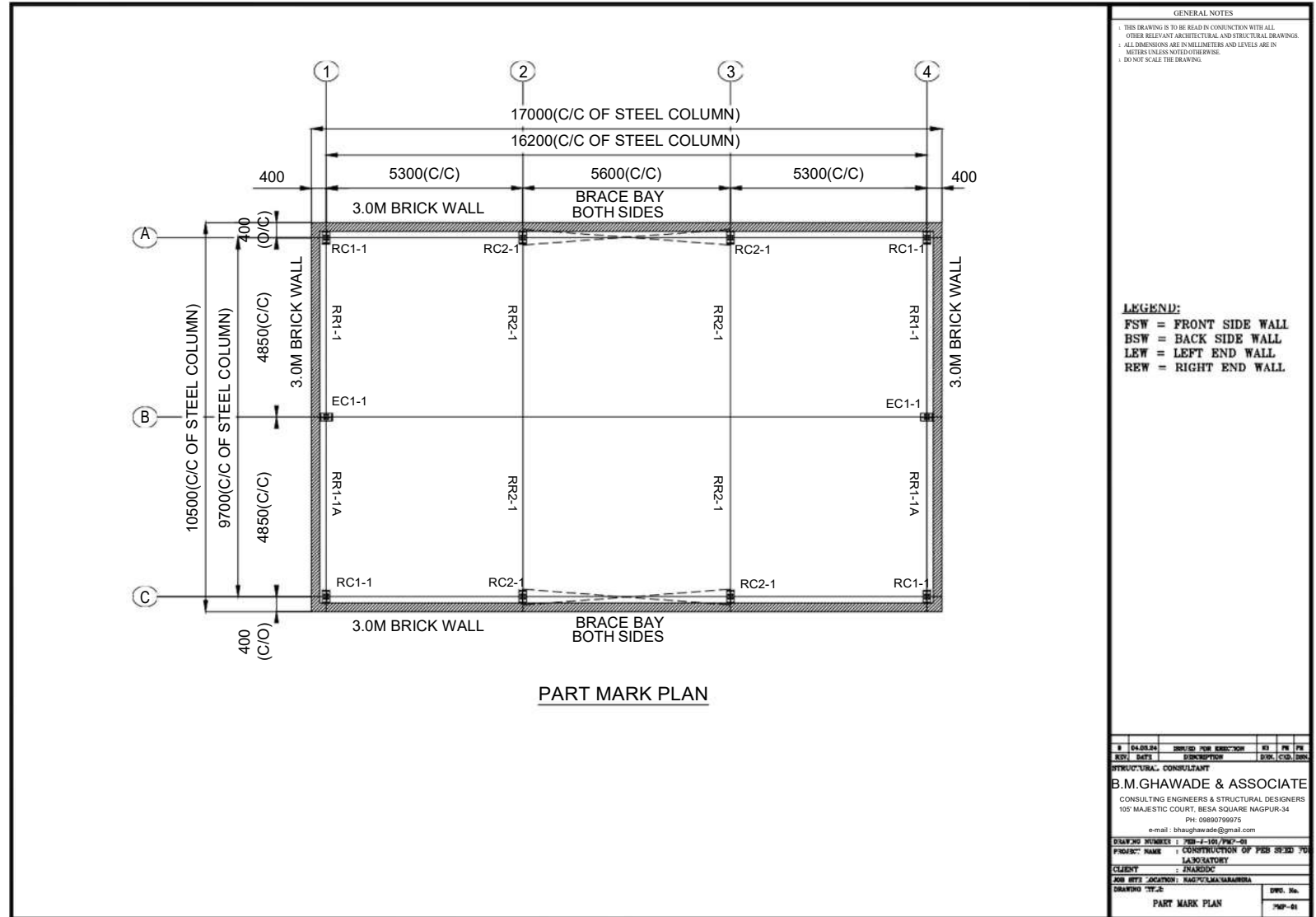
FSW = FRONT SIDE WALL
BSW = BACK SIDE WALL
LEW = LEFT END WALL
REW = RIGHT END WALL

0	08.04.24	2025/07 FOR APPROVAL	X3	PM	IN
REV.	DATE	DESCRIPTION	ISSN	CRD	CHK
STRUCTURAL COMMENT					
B. M. GHAWADE & ASSOCIATE					
CONSULTANTS IN CIVIL ENGINEERING & STRUCTURAL ENGINEERING 14, P. V. N. ROAD, KOTDAWARA, PUNE-411 004					
E-MAIL: bmgawade@gmail.com					
DRAWING NUMBER : PEB-1-101/GA-04A					
PROJECT NAME : CONSTRUCTION OF PE3 REED FOR LABORATORY					
CLIENT : DRACOC					
JOB SITE LOCATION : NAGPUR, MAHARASHTRA					
DRAWING TITLE :					
SIDE WALL SHEETING ELEVATION					
					YEG. No.
					GA-04A





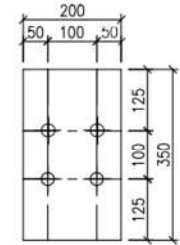




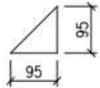
Digitally signed by
RAGHUPATHY SRINIVASAN
Date: 2024.04.04 16:06:38 IST

Digitally signed by GOVINDA
BHAGWAN BHASKAR
Date: 2024.04.26 17:57:21 IST

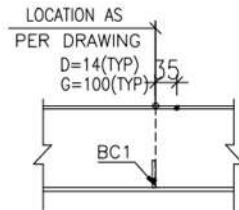
3=PARAMETER
2=PAGE



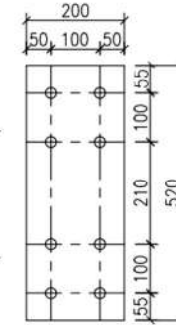
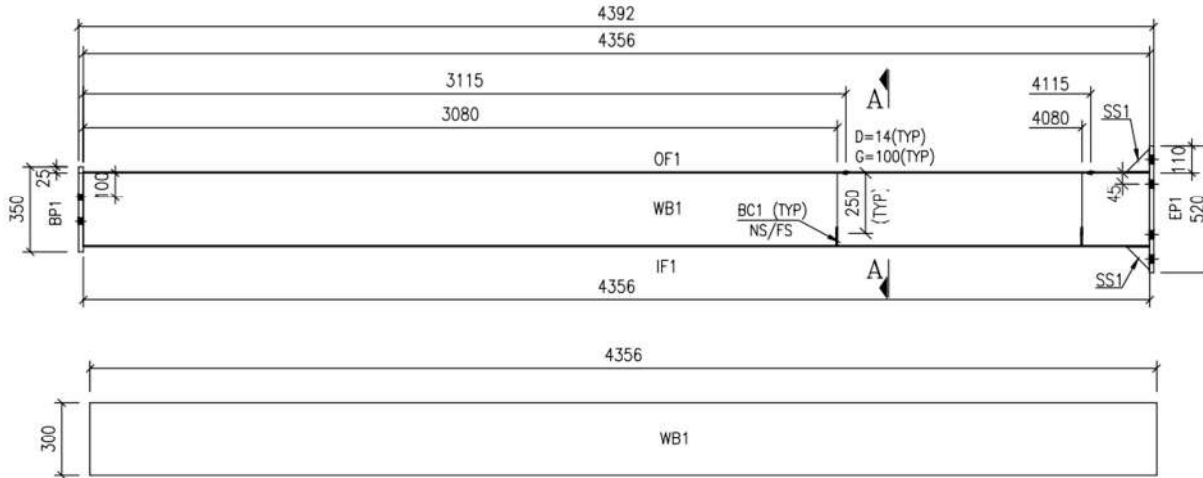
DETAIL OF BP1
HOLE DIAMETER: 26mm.



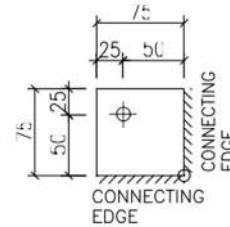
DETAIL OF SS1



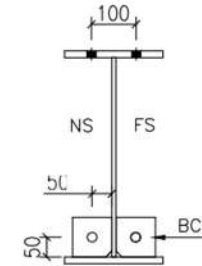
TYP. DETAIL OF FLANGE BRACE



DETAIL OF EP1
HOLE DIAMETER: 22mm.



DETAIL OF BC1
HOLE DIAMETER: 14mm



SECTION A-A

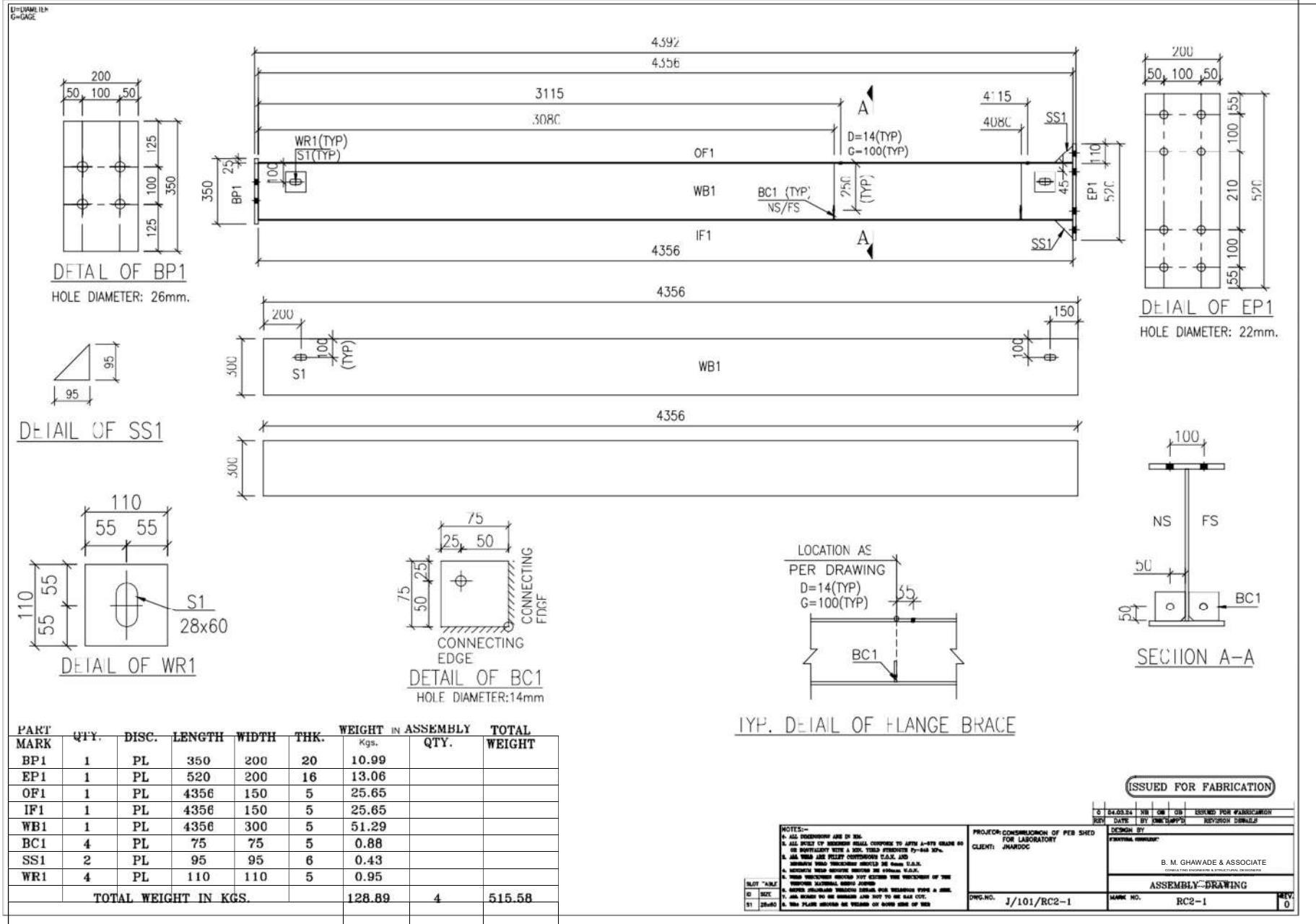
PART MARK	QTY.	DISC.	LENGTH	WIDTH	THK.	WEIGHT IN Kgs.	ASSEMBLY QTY.	TOTAL WEIGHT
BP1	1	PL	350	200	20	10.99		
EP1	1	PL	520	200	16	13.06		
OF1	1	PL	4356	150	5	25.65		
IF1	1	PL	4356	150	5	25.65		
WB1	1	PL	4356	300	5	51.29		
BC1	4	PL	75	75	5	0.88		
SS1	2	PL	95	95	6	0.43		
TOTAL WEIGHT IN KGS.						127.94	4	511.78

ISSUED FOR FABRICATION

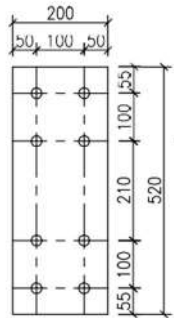
NOTES:-
1. ALL DIMENSIONS ARE IN MM.
2. ALL STEEL OF UNKNOWN GRADE TO BE A-STEEL GRADE OR AN EQUIVALENT TYPE & ALL TENSILE PROPERTIES TO BE A-STEEL GRADE.
3. ALL TENSILE AND TENSILE PROPERTIES TO BE A-STEEL GRADE.
4. ALL TENSILE AND TENSILE PROPERTIES TO BE A-STEEL GRADE.
5. ALL TENSILE AND TENSILE PROPERTIES TO BE A-STEEL GRADE.
6. ALL TENSILE AND TENSILE PROPERTIES TO BE A-STEEL GRADE.
7. ALL TENSILE AND TENSILE PROPERTIES TO BE A-STEEL GRADE.
8. ALL TENSILE AND TENSILE PROPERTIES TO BE A-STEEL GRADE.
9. ALL TENSILE AND TENSILE PROPERTIES TO BE A-STEEL GRADE.
10. ALL TENSILE AND TENSILE PROPERTIES TO BE A-STEEL GRADE.

PROJECT: CONSTRUCTION OF PER SHED FOR LABORATORY
CLIENT: JNMDC

DESIGN BY
B. M. GHAWADE & ASSOCIATE
DESIGNER: B. M. GHAWADE
CHECKER: B. M. GHAWADE
DATE: 10/01/2024
ASSEMBLY DRAWING
DWG. NO. J/101/RC1-1
MARK. NO. RC1-1
REV. 0



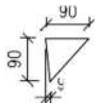
J=JAWBETEN
C=CHAGE



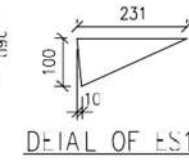
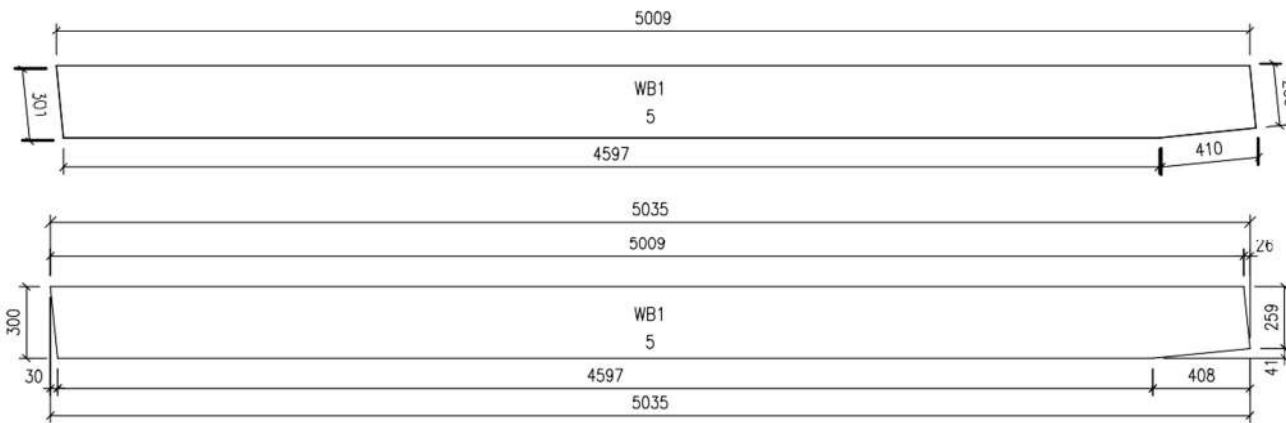
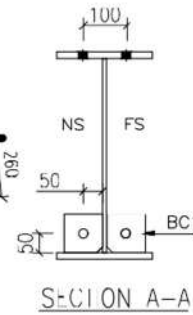
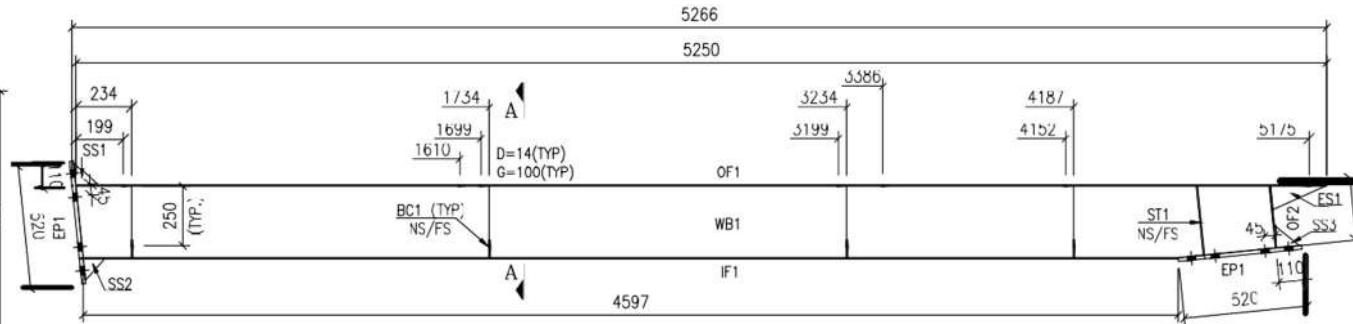
DETAIL OF EP1
HOLE DIAMETER: 22mm.



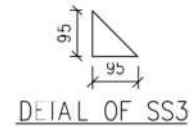
DETAIL OF SS1



DETAIL OF SS2

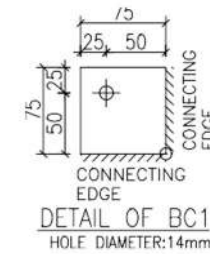
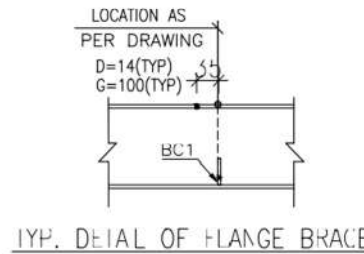


DETAIL OF ES1



DETAIL OF SS3

PART MARK	QTY.	DISC.	LENGTH	WIDTH	THK.	WEIGHT IN Kgs.	ASSEMBLY QTY.	TOTAL WEIGHT
EP1	2	PL	520	200	16	26.12		
OF1	1	PL	5250	150	5	30.91		
OF2	1	PL	260	150	5	1.53		
IF1	1	PL	4597	150	5	27.06		
WB1	1	PL	5035	300	5	59.29		
BC1	8	PL	75	75	5	1.77		
SS1	1	PL	95	95	6	0.21		
SS2	1	PL	90	90	6	0.19		
SS3	1	PL	95	95	6	0.21		
ES1	1	PL	231	100	6	0.54		
ST1	2	PL	290	5	70	0.80		
TOTAL WEIGHT IN KGS.						148.64	2	297.28



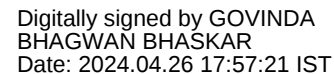
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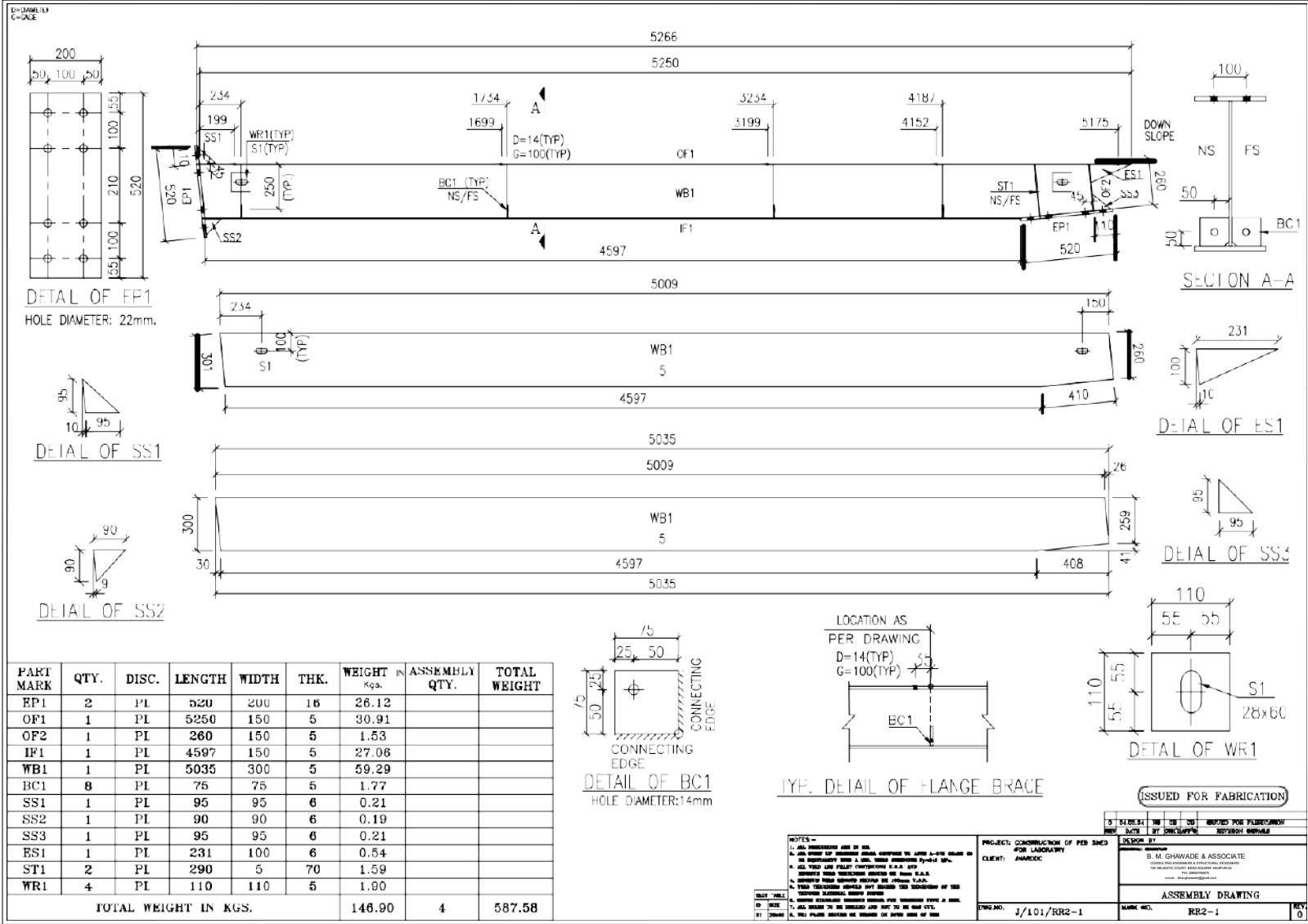
NOTES:-
1. ALL DIMENSIONS ARE IN MM.
2. ALL SURFACES SHALL BE FINISHED TO A-100 GRADE.
3. ALL SURFACES SHALL BE FINISHED TO A-100 GRADE.
4. ALL SURFACES SHALL BE FINISHED TO A-100 GRADE.
5. ALL SURFACES SHALL BE FINISHED TO A-100 GRADE.
6. ALL SURFACES SHALL BE FINISHED TO A-100 GRADE.
7. ALL SURFACES SHALL BE FINISHED TO A-100 GRADE.
8. ALL SURFACES SHALL BE FINISHED TO A-100 GRADE.

PRODUCTION CONSTRUCTION OF FILE TYPE
FOR LABORATORY
CMENT: JAWBETEN

DWG. NO. J/101/RR1-1

REV	DATE	BY	CHKD	APPD	REVISION
1	04/03/24	MM	CS	MM	ISSUED FOR FABRICATION
DESIGN BY					
DESIGNER: G. M. GHAWADE & ASSOCIATE					
CONSULTANT: G. M. GHAWADE & ASSOCIATE					
PROJECT: JAWBETEN					
ASSEMBLY DRAWING					
MARK NO.				RR1-1	REV 0

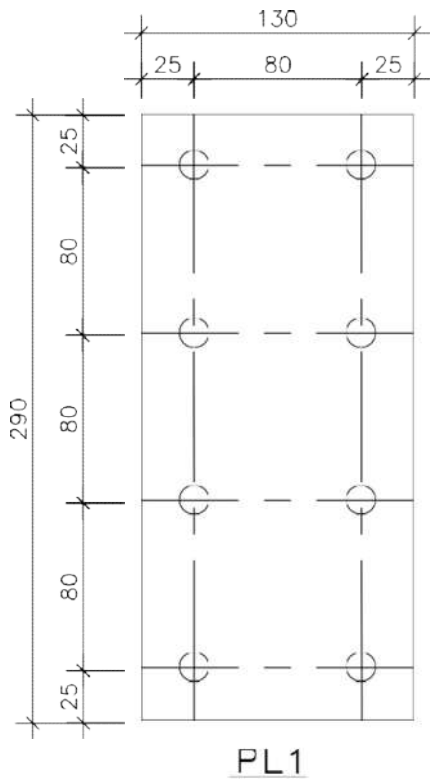




STRUCTURAL CONSULTANT B. M. GHAWADE & ASSOCIATE CONSULTING ENGINEERS & STRUCTURAL DESIGNERS 105' MAJESTIC COURT, BESA SQUARE NAGPUR-34 PH: 09890799975 e-mail : bhaughawade@gmail.com	PROJECT: CONSTRUCTION OF PEB SHED FOR LABORATORY			JOB NO. PEB-J-101		DRAWING NO. PEB-J-101/SK/05			
	CLIENT: JNARDDC			REV.	DATE	PREP D	CHK'D	APP D	DESCRIPTION
				D	04/03/24	DY	RU	RU	ISSUED FOR FABRICATION
	PLATE								

HOLE DIA :- 14MM. UNO,

ISSUED FOR FABRICATION



PART MARK	QTY.	DISC.	LENGTH	WIDTH	THK.	WEIGHT IN Kgs.	ASSEMBLY QTY.	TOTAL WEIGHT
PL1	1	PL	290	130	6	1.78		
TOTAL WEIGHT IN KGS.						1.78	8.0000	14.21

STRUCTURAL CONSULTANT

B. M. GHAWADE & ASSOCIATE

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e-mail : bhaughawade@gmail.com

PROJECT: CONSTRUCTION OF PEB SHED
FOR LABORATORY

JOB NO.

PEB-J-101

DRAWING NO.

PEB-J-101/SK/C5A

CLIENT: JNARDDC

REV.

DATE

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DESCRIPTION

ROOF CLEAT

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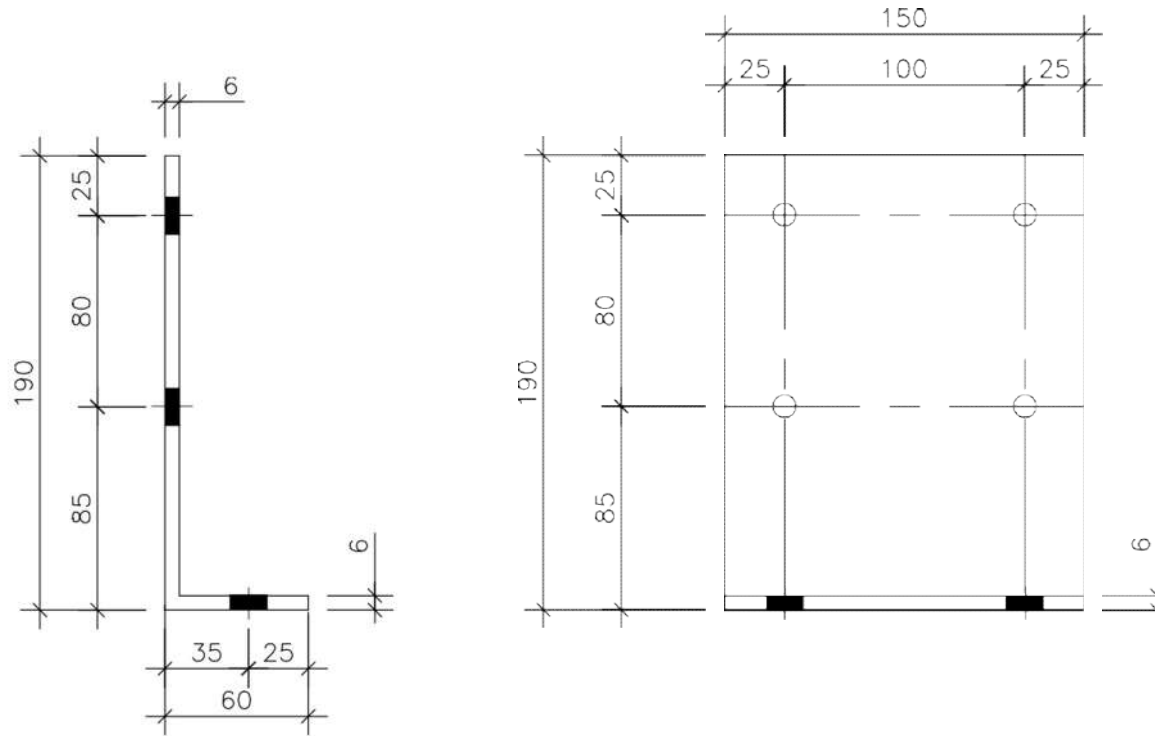
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ISSUED FOR FABRICATION

HOLE DIA :- 14MM. UNO.

ISSUED FOR FABRICATION



CL1

PART MARK	QTY.	DISC.	LENGTH	WIDTH	THK.	WEIGHT Kgs.	IN ASSEMBLY QTY.	TOTAL WEIGHT
CL1	1	PL	244	150	6	1.72		
TOTAL WEIGHT IN KGS.						1.72	40	68.95

Digitally signed by GOVINDA
BHAGWAN BHASKAR
Date: 2024.04.26 17:57:21 IST

STRUCTURAL CONSULTANT

B. M. GHAWADE & ASSOCIATE

CONSULTING ENGINEERS & STRUCTURAL DESIGNERS
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PH: 09890799975
e-mail : bhaughawade@gmail.com

PROJECT: CONSTRUCTION OF PEB SHED
FOR LABORATORY

CLIENT: JNARDDC

SIDEWALL CLEAT

JOB NO.

PEB-J-101

DRAWING NO.

PEB-J-101/SK/C5B

REV.

DATE

PREP'D

CHK'D

APP'D

DESCRIPTION

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01/03/24

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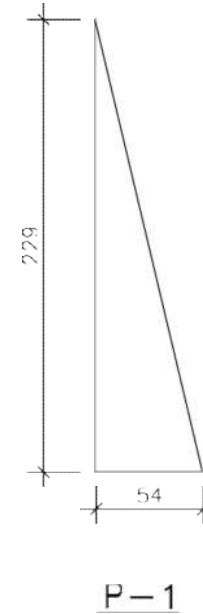
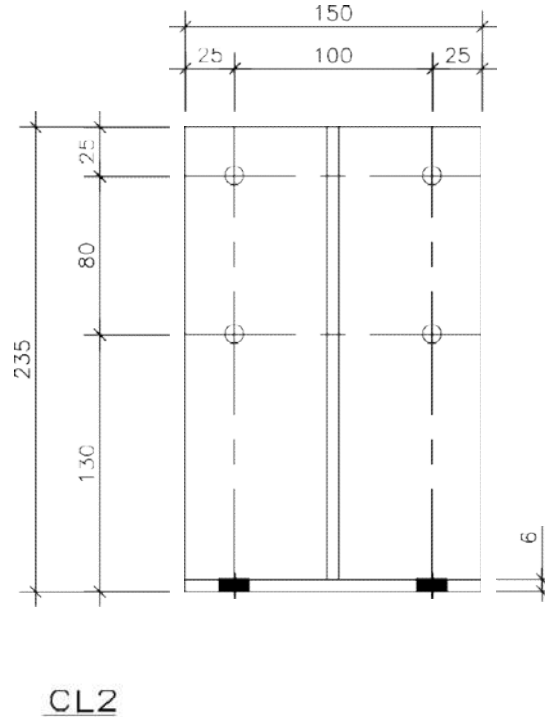
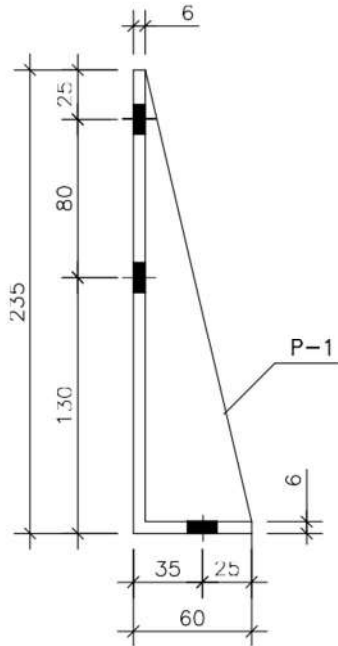
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HOLE DIA :- 14MM. UNO.

ISSUED FOR FABRICATION



PART MARK	QTY.	DISC.	LENGTH	WIDTH	THK.	WEIGHT IN Kgs.	ASSEMBLY QTY.	TOTAL WEIGHT
CL2	1	PL	289	150	6	2.04		
P1	1	PL	229	54	6	0.29		
TOTAL WEIGHT IN KGS.						2.33	20	46.66

Digitally signed by GOVINDA
BHAGWAN BHASKAR
Date: 2024.04.26 17:57:21 IST

Digitally signed by
RAGHUPATHY SRINIVASAN
Date: 2024.04.04 16:06:38 IST

STRUCTURAL CONSULTANT

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PH: 09890799975

e-mail : bhaughawade@gmail.com

PROJECT: CONSTRUCTION OF PEB SHED
FOR LABORATORY

CLIENT: JNARDDC

SIDEWALL CLEAR

JOB NO.

PEB-J-101

DRAWING NO.

PEB-J-101/SK/C5B

REV.

DATE

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DESCRIPTION

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01/03/24

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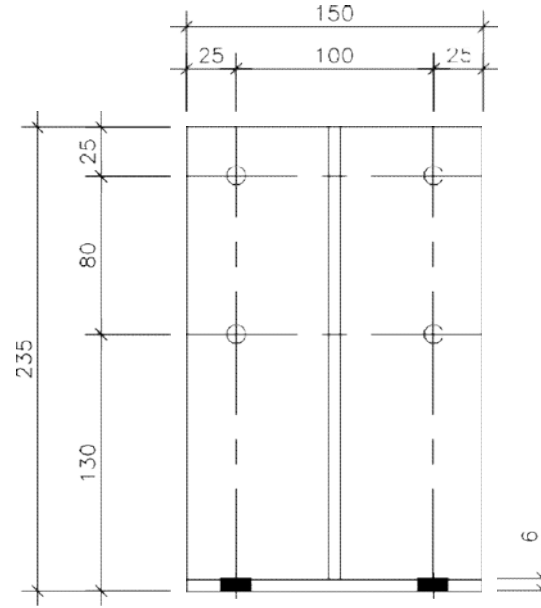
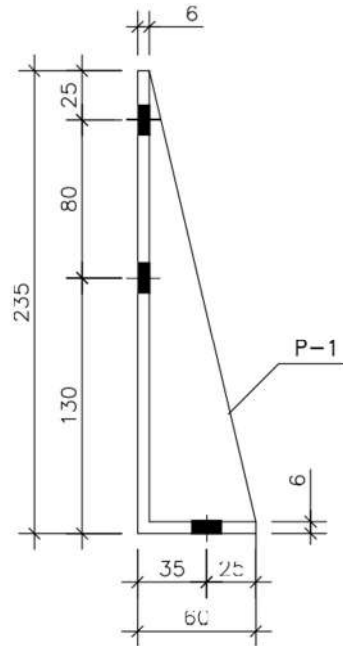
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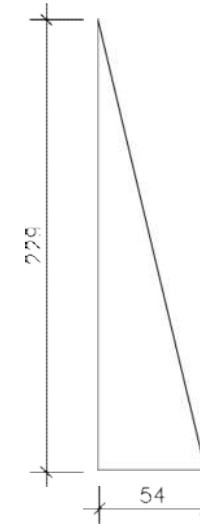
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CL2



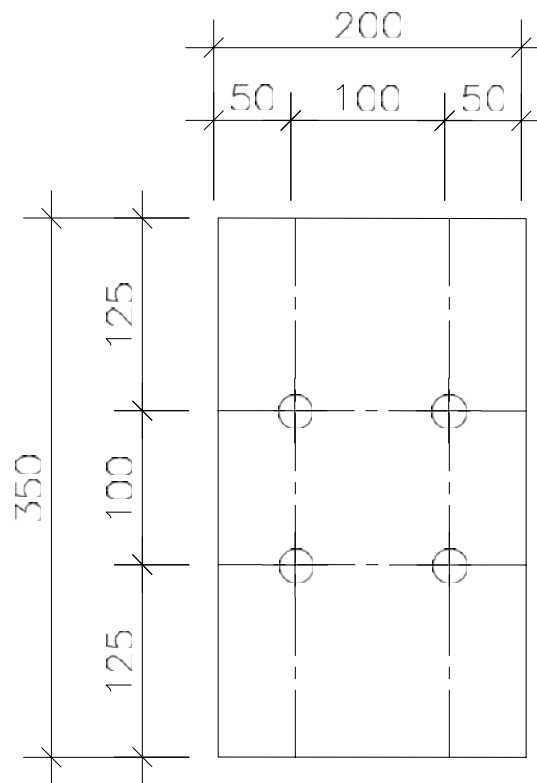
P-1

PART MARK	QTY.	DISC.	LENGTH	WIDTH	THK.	WEIGHT IN KGS.	ASSEMBLY QTY.	TOTAL WEIGHT
CL2	1	PL	289	150	6	2.04		
P1	1	PL	229	54	6	0.29		
TOTAL WEIGHT IN KGS.						2.33	20	46.66

STRUCTURAL CONSULTANT B. M. GHAWADE & ASSOCIATE CONSULTING ENGINEERS & STRUCTURAL DESIGNERS 105' MAJESTIC COURT, BESA SQUARE NAGPUR-34 PH: 09890799975 e-mail : bhaughawade@gmail.com	PROJECT: CONSTRUCTION OF PEB SHED FOR LABORATORY			JOB NO. PEB-J-101		DRAWING NO. J/101-TP/01			
	CLIENT: JNARDDC			REV.	DATE	PREP'D	CHK'D	APP'D	DESCRIPTION
	TEMPLATE			0	04.03.24	HC	GB/PS	-	ISSUED FOR FABRICATION

HOLE DIA :- 22MM. UNO.

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NOS. QTY.=5
PLT. 200x4-350LG.