

BEML LIMITED
(A Government of India Undertaking)
BEML Soudha, S.R. Nagar, Bangalore-560 027
080-22963 179

TENDER DOCUMENT

For

Construction of 2nd PEB Hangar, Road, Electrical work and associated works in EPC Mode (Design and Build basis) at BEML Plot, SEZ, KIADB, Devanahalli, Bangalore.

Tender Document No. 6300039411 dtd 26.03.2025

DATE OF SUBMISSION 05/05/2025 BEFORE
14:00 HRS

ISSUED BY

The General Manager (Corporate Materials)
BEML LIMITED., Room No.1
BEML SOUDHA, 23/1, 4th Main,
S.R. Nagar,
Bangalore – 560 027
KARNATAKA, India

Signature of the Contractor(s) with seal

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Date: 26/03/2025

Sub: Tender For “Construction of 2nd Phase PEB Hangar, Road, Electrical work and associated works in EPC Mode (Design and Build basis) at BEML Plot, SEZ, KIADB, Devanahalli, Bangalore”.

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Note:

1. The tenderer shall download the complete set of tender documents. The tender documents from Serial Page No: 01 to 99 shall be duly filled, signed along with the company seal, scanned and upload the requisite documents as per the technical bid in 'C-Folder Technical Attachments' in the SRM system.
2. Commercial bid shall be submitted on BEML SRM platform.
3. The Commercial bids of technically qualified tenderers/bidders shall be considered for opening.

BRIEF ON PROJECT AND INSTRUCTIONS

Sub: Tender For "Construction of 2nd Phase PEB Hangar, Road, Electrical work and associated works in EPC Mode (Design and Build basis) at BEML Plot, SEZ, KIADB, Devanahalli, Bangalore".

BEML Limited invites tenders for the subject work in Three bid system (Part 'A'- Pre-qualification Bid, Part 'B'-Technical bid & Part 'C'-Commercial bid) through e- Tendering mode i.e BEML SRM platform.

1. INTRODUCTION:

BEML is a premier heavy engineering manufacturing company working in India for more than 50 years. The company is a Public Sector Schedule 'A' Company Undertaking under the Ministry of Defence, Govt of India. To meet the business requirements, it is proposed to construct a PEB Hangar at SEZ, Devanahalli, Bangalore, India.

An area of around 4 to 5 acres (approx..) is proposed for development out of 25 acres of land for construction of 2nd Phase Hangar and other required facilities. The Balance available area is kept for future expansion. The proposed Layout of development is enclosed as 'ANNEXURE- A'.

The work shall be executed on **EPC Mode (Design & Build)** which includes soil testing, structural design & drawings, construction & commissioning of hangar/buildings & structures for required related services and liaisoning work to facilitate BEML for getting all local body clearances viz., obtaining commencement certificate, completion/occupancy certificate in accordance with the approved layout plan and architectural/structural drawings.

The PEB Hangar of size 62 Mtrs X 75 Mtrs X 15 Mtrs (LWH) (Total Ridge height) will be made out of rolled structural steel fabrication with RCC foundation pedestals & columns with block work masonry all-round the building superstructure masonry wall upto 4 Mtr. The steel structure shall be of Pre-Engineered Building system. The hangar shall be designed for suitable spans and sufficiently rigid to take wind & seismic load as applicable in that area. The vacuum dewatering flooring is to be considered. Building portion, Soak pit, water sump, fire sump, water supply, PVC overhead tank, sanitary installations, Bituminous road, car & 2-wheeler parking, storm water drains, rain water harvesting, internal and external electrical work, street lighting, CCTV, LAN System, Firefighting system etc in **EPC mode (design and build basis)**.

The orientation of all the hangars, all allied required works, utility services etc., has to be planned in such a way so that, optimum utilization of land with adequate ventilation & light

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is achieved. The interested contractors are requested to visit the site for better understanding of requirement before submission of their offer.

The successful bidder shall design and finalize the dimensions of all buildings/hangars/utilities and facilities, as per “**SCOPE OF WORK**” (as mentioned in page No. 18), and execute the work. The required description of utilities and facilities essential for this green field project shall be finalized with successful bidder and all of these shall be deemed to be part of the work and no extra payment shall be admissible for design/consultancy work.

2. SEZ NORMS COMPLIANCE:

The contractor/supplier/vendor will be eligible for the exemptions from duty, taxes and cess as per provisions of SEZ Act as amended from time to time. Accordingly, the supplies made to the unit or developer operating in SEZ will be exempt from duty, taxes and cess etc., The contractor/supplier/vendor are required to follow the provisions laid down in the SEZ act for availing of these exemptions specified.

The quoted amount shall exclude and shall be deemed to have excluded all taxes and any other duties or taxes whatsoever leviable under the State or Central Govt. or any other local authorities, as per SEZ Act, amended from time to time. The rates shall also include & shall be deemed to have included any other expenses like transportation of materials to the work site, handling, loading and unloading thereof etc., whatsoever on materials.

The bidders to know that, the company will be executing a bond cum legal undertaking (BLUT) with development commissioner and custom authorities for purchase/import of duty-free material to be used in SEZ unit for authorized operation. Contractor needs to comply with Rule of special economic zone for movement of material for job work/repair/testing/calibration etc Successful contractor have to submit monthly reconciliation of material purchased and used (as per input: output norms) inside the SEZ unit for authorized operations in specified format to the satisfaction of ‘Authorized Officer’ for Aerospace SEZ, Devanahalli, Bangalore. Any shortage/ wastages/ misuse/pilferage of material in monthly reconciliation sheet will be dealt with as per SEZ rules and regulations at the cost of the contractor, by paying duty foregone on such material and /or other associated/related cost, if any as decided by the ‘Authorized Officer’ for Aerospace SEZ, Devanahalli, Bangalore as per SEZ rules and any such payment will be settled/recovered from the amount payable to the Contractor,

As per Special Economic zone (SEZ) act and rules, concerned party is bound to comply with certain procedures with reference to:

- (a). Receipt/safety/security of Material & complete documents with -material purchased during transit/send on returnable basis for job work or repair/assembly /fabrication
- (b) Intimation & permission of specified officer /authorized officer of material received/ or other movement of material necessary for the execution of work, making available to officers all necessary documents and record to their satisfaction and
- (c) Procedural compliance of bringing duty free material under bond to be followed.

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(d) Procedure for bring returnable material with in permitted time of 120 days otherwise duty foregone to be paid immediately.

(e) Full quantity of the material sent on returnable basis must be received after value addition otherwise duty on short material to be paid.

The successful contractor hereby unconditionally undertakes to comply with the following;

(a). The contractor shall take care of all compliances mentioned at sl no: (a) to (e)

(b). The contractor shall make available documents/records for inspections/refund of taxes to the company (with proper acknowledgement)

(c). Any loss/claim due to no-compliance of SEZ rules and regulations as far as receipt of materials/loss of duty-free materials/movement of materials/noncompliance of intimations and permissions of Authorized officer will be borne by the contractor.

(d). The contractor undertakes to indemnify the company for any losses caused/to be caused to the company due to the non-compliance/violation of any of the above by the company/contractor.

3. Contract Agreement: The successful contractor shall within SEVEN DAYS of the acceptance of his tender enter into and execute a formal indenture of contract as per the enclosed format (Page No: 70 to 76). The contractor shall not be entitled to make any charges for perusal of the contract.

4. Integrity Pact Agreement: Contractors should enter into integrity pact with BEML. the format of integrity pact as per Annexure D. The integrity pact should be signed with company seal. The signed original Integrity pact shall be submitted along with the with EMD as a part of the Pre-qualification bid.

5. Earnest Money Deposit (EMD):

a) EMD amount of **Rs. 64,00,000/- (Rupees Sixty-Four Lakhs Only)** can be paid online or can be submitted in the form of Account Payee Demand Draft / Banker's Cheque. Bidders exempted from Earnest Money Deposit (EMD) shall submit exemption certificate from competent authority.

Online Payment of EMD amount can be made as mentioned below:

i) Open the following link:

<https://www.onlinesbi.com/sbicollect/icollecthome.htm?corpID=9359>

ii) Read the terms & conditions, tick the acceptance box and click on Proceed.

iii) In 'Select State' dropdown, select All India and click on the Go button.

iv) In 'Select Payment Category', select EMD/ Tender Fee.

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- v) Enter details of payment, details of Bank Account for refund and click on Submit to make the online payment of the required EMD amount of **Rs. 64,00,000/- (Rupees Sixty-Four Lakhs Only)**

Please ensure that online payment of EMD amount is made well ahead of the EMD Submission Date & Time mentioned in the Tender.

Or

Payment of EMD amount through DD / Banker's Cheque:

b) EMD in the form of Account Payee Demand Draft (DD) / Banker's Cheque for **Rs. 64,00,000/- (Rupees Sixty Four Lakhs Only)** drawn in favour of BEML Ltd, Bangalore payable at Bangalore.

c) The above said Demand Draft DD / Banker's Cheques/ EMD Exemption Certificate shall be submitted in **Sealed envelope** duly superscribing the **Bid Invitation No. 6300039411 dated 26/03/2025 Closing date 05/05/2025 Time 14:00 Hrs** at the top of the envelope. The words "**PRE-QUALIFICATION BID**" shall also to be written in bold letters at the top of the envelope. The name and address of the bidder shall be printed or written legibly on the left hand bottom corner of the envelope.

Please attach the details duly filled-up for refund of EMD amount (for bidders who do not qualify in the Technical Bid) in the following format along with the DD / Banker's Cheque for EMD;

BANK NAME	
BRANCH NAME	
CITY	
IFSC CODE	
ACCOUNT NO	
BENEFICIARY NAME	

The above sealed envelope has to reach the address as mentioned below on or before the closing date & time of the tender.

The General Manager (Corporate Materials)
BEML LIMITED., Room No.1
BEML SOUDHA, 23/1, 4th Main,
S.R. Nagar,
Bangalore – 560 027
KARNATAKA, India

Alternatively, it can also be dropped in the Tender Box kept at Room No.1, Ground Floor, BEML Soudha, SR Nagar, Bangalore.

d) Bidders exempted from Earnest Money Deposit (EMD) shall submit exemption certificate from competent authority.

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Note: Bidder shall ensure that their EMD (DD)/EMD Exemption Certificate is dispatched well in advance so that it reaches this office before the time and date stipulated. Requests will NOT be entertained for late receipts.

General Instructions with regard to EMD:

- a) Quotation submitted online without submission of EMD/EMD Exemption Certificate in-time will not be considered.
- b) EMD submitted in any other form will not be accepted and the offer is liable to be rejected.
- c) EMD lesser than **Rs. 64,00,000/- (Rupees Sixty Four Lakhs Only)** will not be accepted and the quotation is liable to be rejected.
- d) EMD of technical disqualified bidders will be returned.
- e) EMD does not carry any interest on return.
- f) Pre-qualification and technical bids shall be opened **on closing date i.e., 05/05/2025 @ 14.00hrs**
- g) No responsibility will be taken for postal delay or non-delivery/non-receipt of EMD/firms claiming EMD exemption.

Tenderers shall ensure that, the Demand Draft/Bankers Pay Order towards EMD in original shall reach the above said office on or before the closing time of the tender.

Offers without EMD or EMD in the form other than the one specified or EMD with lesser amount shall not be considered and tenders will be rejected. No Interest would be paid on the Earnest Money Deposit.

6. Completion Period: The period allowed for execution of the work is **12 (Twelve) Months** from the date to be mentioned in the Purchase order to be placed on the successful bidder.

7. Firms willing to participate in the tender may contact through e-mail: admin.srm@beml.co.in to obtain the user name and password for submitting the bids. The bidders have to submit their quotation ON LINE THROUGH SUPPLIER RELATIONSHIP MANAGEMENT (SRM) PLATFORM. All corrigendum, addenda, amendments, time extension etc., if any to the tender will be hosted on BEML website www.bemlindia.com only. Bidders shall regularly visit BEML's website to keep themselves updated. No separate advertisement shall be published in the newspaper in this regard.

8. Any queries/clarification / information / details regarding tender enquiry to be communicated through email Id: lakshmana.murthy@bemltd.in, girish.hj@bemltd.in queries/clarification/ information/details will be accepted up to 03 (Three) days prior to the closing date of the tender. Phone No: 080-22963206, 22963179

9. Any queries related to submission of quotation may please be communicated through e-mail: admin.srm@beml.co.in or the bidder may contact BEML SRM team at Phone No.080-22963269.

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10. DIGITAL SIGNATURE: To participate in this e-tender, the bidder shall have a valid class III Digital Signature issued by Authorized Certifying Authority to submit bid in our SRM e-procurement system.

11. The tender shall remain open for acceptance for a period of 120 **days** from the date of opening of tenders.

12. The tenderers shall visit the site and acquaint themselves with the conditions of the site prior to submission of tenders and no claims will be entertained later on the grounds of ignorance.

13. Successful tenderer is required to employ qualified Engineers to supervise the work and they should be present when the work is under progress.

14. The successful tenderer is required to sign the purchase order prepared based on the quoted rates placed on him by the Accepting Officer.

15. The Accepting Officer reserves the right to place order as a whole or part of any item only as deemed fit.

16. In case, the contractor / firm after quoting withdraw from the tender or refuse / delay in commencing the work or stop the work abruptly, their EMD will be forfeited.

17. Bidders exempted from Earnest Money Deposit (EMD) shall submit exemption certificate from Competent Authority.

Note: Bidder shall ensure that their EMD (DD/EMD Exemption certificate) is dispatched well in advance so that it reaches this office before the time and dates stipulated. Request will not be entertained for late receipt.

18. Conditional tenders are liable to be rejected.

Thanking you

Yours faithfully,
for BEML Limited

**General Manager
Corporate Materials Department.**

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DETAILS OF PRE-QUALIFICATION AND TECHNICAL BID

Sl. No.	Item Description	Estimated Cost (In Rs. Lakhs)	EMD Amount (Rs)	Last date for submission of Tenders	Similar Nature of Work
				Date of opening of pre qualification bid	
				Date of opening of technical bid	
				Date of opening of commercial bid	
Completion Period		Date of opening of the commercial bids will be intimated to only the technically qualified Tenderers/bidders.			
1	“Construction of 2 nd Phase PEB Hangar, Road, Electrical work and associated works in EPC Mode (Design and Build basis) at BEML Plot, SEZ, KIADB, Devanahalli, Bangalore”.	Rs. 31.60 (approx.) Crores (Excluding of all taxes & duties)	Rs 64 Lakhs	05/05/2025 at 14:00 Hrs 05/05/2025 at 14:30 Hrs 05/05/2025 at 15:00 Hrs	Design & Build projects in SEZ
12 (Twelve) Months					

Mode of submission and Documents

Sl. No.	Nature of Bid	Mode of submission	Documents required to be submitted by the bidder
A	Pre-qualification bid	1. Online Payment of EMD amount OR Payment of EMD amount through DD / Banker's Cheque to reach General Manager (Corporate Materials), BEML LIMITED., Room No.1, BEML SOUDHA, 23/1, 4 th Main, S.R. Nagar, Bangalore – 560 027 KARNATAKA, India OR Alternatively, it can also be dropped in the Tender Box kept at Room No.1, Ground Floor, BEML Soudha, SR Nagar, Bangalore. 2.The sealed envelope of Prequalification bid will be opened on closing date 05/05/2025 at 14:00 Hrs in	EMD: Rs. 64 Lakhs- OR EMD Exemption certificate & (+) Integrity Pact

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		<p>presence of the bidders, who wish to be present at the above venue.</p> <p>3.Pre-qualification bid received late on account of any reason whatsoever will be rejected.</p>	
B	Technical Bid	<p>1) Through e-mode / BEML SRM Platform wherein Tenderers/bidders to submit their technical bids will be opened on closing date & time in presence of the bidders, who wish to be present at the above venue.</p> <p>2) However, technical bids of those firms who meet the pre-qualification criteria in all aspects will only be considered for further evaluation.</p>	<p>The complete tender documents shall be duly filled, signed along with the company seal, scanned and upload the requisite documents as per the Eligibility Criteria in 'C-Folder Technical Attachments' in the SRM system</p>
	Commercial Bid	<p>1) Through e-mode / BEML SRM Platform.</p> <p>2) The commercial bids of only the shortlisted / qualified Contractors will be opened.</p>	<p>Commercial bid shall be submitted on BEML SRM platform.</p>

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ELIGIBILITY CRITERIA OF TECHNICAL BID

In the Technical Bid, the firm has to furnish the following details / documents with regard to their experience etc:

CREDENTIALS i.e., EXPERIENCE / FINANCIAL STATUS ETC.

1. **Financial Position:** Average Annual financial turnover during the last Three (3) years, ending 31st March of the previous financial year, should be minimum of **Rs. 9,48,000,00/-**

Details of Annual financial turnover during the last three (03) years, ending 31st March of the previous financial year.

Financial Year	2021-22	2022-23	2023-24
Annual turnover (Rs in Lakhs)			
Profit / Loss (Rs in Lakhs)			

NOTE: Copies of the Audited Balance sheet along with the Profit and loss statement for the last Three (03) years duly certified by auditor shall be scanned and uploaded along with the technical bid.

2. **Experience:** Experience of having successfully completed similar Design & Build projects in during last Seven (07) years ending last day of month previous to the one in which applications are invited should be either of the following:

- (i) Three similar completed works costing not less than the amount equal to **Rs. 12,64,00,000/-**

Or

- (ii) Two similar completed works costing not less than the amount equal to **Rs.15,80,00,000/-**

Or

- (iii) One similar completed work costing not less than the amount equal to **Rs.25,28,00,000/-**

Details of having successfully completed similar Design & Build projects in during last Seven (07) years ending last day of month previous to the one in which applications are invited from any Government/Public Sector Undertakings/Large Private Organizations with Certificates.

NOTE: Copies of the completion certificate issued by respective clients shall be scanned and uploaded along with the technical bid. If the completion certificate is from Private organization, the same shall be scanned and uploaded along with the technical bid along with TDS certificate.

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Evaluation and Comparison of Bids

The evaluation of bids shall be as per QCBS with weightage of 70% for technical bid and 30 % for financial bid.

Evaluation and Qualification Criteria.

A. Eligibility & Qualification Criteria

Sl. No.	Eligibility Criteria	Supporting Documents
1.	Must be Indian Registered Company under Companies Act 1956/ Public or corporation, registered with the appropriate government authority as Proprietorship/ Limited company/ Private limited company/ LLP/ Partnership/ and shall be in the Construction business for at least last 5 years.	Copy of the incorporation / registration certificate clearly indicating the nature of business.
2.	The bidder should have valid Class I contractor enlistment with Central / State Government department for civil works.	(Please submit the proof of the same.)
3.	Joint venture agreement if applicable	-
4.	Original Authorization Letter to sign the Tender.	
5.	Proof of Payment for EMD.	
6.	Must possess a valid GST, PAN, ESIC, EPFO number	Copies GST, PAN, ESIC, EPFO
7.	Name, Address, details of the Organization, Name(s) of the Owner/ Partners/Promoters and Directors of the firm/company.	Details to be submitted in the Letter Head of the Firm
8.	Bidder should not be blacklisted/ debarred by any government/ semi government department/ PSU. Bidder should submit the declaration of not being ineligible for corrupt or fraudulent practices.	(Form-3A), Page No 20
9.	Letter of understanding the project site on bidder letter Head	Annexure (F), page No 96
10.	Consent Letter to execute the Integrity Pact	Annexure (D), Page No 91
11.	Bidder shall confirm or otherwise that the building as described in Section 5 can be completed within 10 months from date of award or 1 st April 2025 whichever is earlier using innovative construction methodology such as precast technology, RCC etc. but not limited to the same and which meets all the design parameters as required by the client.	Self-certified undertaking on company letterhead confirming acceptance of the timelines for handing over the building as specified in the Scope of Work.

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Experience certificate issued by the same management/sister concern/ joint ventures etc. are not acceptable.		
15.	Key personnel's and their qualification Annexure-H, Page No 98 to be certified on the company letter head by the HR Head or Head of the company that the same are available on the payroll of the company.	
a.	Project Manager (PM)	Postgraduate or Graduate in Civil Engineering with minimum 20 years of similar work experience and designated as Project Manager for at least 1 project with Similar Cost of Project
b.	Resident Construction Manager (RCM)	Degree in Civil Engineering with minimum 15 years of similar work experience and designated as RCM for at least 1 project with Similar Cost of Project
c.	Lead Architect	Master in Architect <i>with</i> minimum 10 years of similar work experience for at least 1 project with Similar Cost of Project
d.	Lead Structural Engineer	Master in Infrastructure/Structural Engineering <i>with</i> minimum 10 years of similar work experience for at least 1 project with Similar Cost of Project.
e.	Lead MEP Engineer	Degree in Mechanical or Electrical Engineering Discipline with minimum with minimum 10 years of similar work experience for at least 1 project with Similar Cost of Project

B. SCORING CRITERIA

The bidder meeting the eligibility criteria will be evaluated by scoring method on the basis of details furnished by them

- (a) Financial strength -Maximum **30 Marks** (Last Three years)
- (b) Experience in similar nature of work - Maximum **25 + 10 Marks** (Past 7 years)
- (c) Presentation - Maximum **25 Marks**
- (d) Key personnel -Maximum **10 Marks**

Gross Marks **Total 100 Marks**

Sl. No.	Attributes	Marks	Evaluation
1	Annual turnover for Last 3 (Three) years	30 Marks	Rs. 9.50 to 20 Crs. – 10 Marks Rs. 21 to 50 Crs. – 20 Marks Rs. 50 Crs. & Above – 30 Marks
EXPERIENCE IN SIMILAR NATURE OF WORK			
2	Similar work experience in EPC mode in last 7 year as mentioned in Page 13	25 Marks	Less than Rs. 26 Crs. – 5 Marks Rs. 26 Crs. to 50 Crs. – 12 Marks Greater than Rs. 50 Crs.– 25 Marks.
	Similar work experience during last 7 years as mentioned in Page 13	10 Marks	Less than Rs. 26 Crs. – 4 Marks Greater than Rs. 26 Crs. – 10 Marks.

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PRESENTATION			
3	Understanding the Scope of Project	25 Marks	3 Marks
	Design Concept		7 Marks
	Construction Methodology & Techniques to be adopted for Completing the project as per given timeline		7 Marks
	Work Plan, QAP including proposed team structure		4 Marks
	Manpower deployment as per clause 15 (page No 14)		4 Marks
<i>The firm has to make detailed ppt presentation during evaluation process</i>			
KEY PERSONNEL (Manpower deployment as per clause 15 (page No 14))			
	Project Manager (PM)	10 Marks	3 Marks
	Resident Construction Manager (RCM)		2 Marks
	Lead Architect		2 Marks
	Lead Structural Engineer		1.5 Marks
	Lead MEP Engineer		1.5 Marks

EVALUATION AND RANKING OF BIDS

The ranking of the bids shall be done as follows

➤ **Combined Evaluation Process (QCBS)**

• **Minimum qualifying Technical Score**

Only those Bidders who obtain at least 70 marks out of 100 in the technical evaluation process (**Technical bid + Design Concept Presentation**) shall be eligible for financial bid opening.

• **Weights for quality and Cost.**

For the purpose of combined evaluation, the following weights shall be considered: Technical Score: 70%; Financial Score: 30%.

• **Calculation of weighted technical score**

For the purpose of combined evaluation, the following weights shall be considered: Technical Score: 70%; Financial Score: 30%.

• **Calculation of weighted financial score**

For calculation of financial score, the lowest financial proposal shall be accorded a financial score of 100 out of 100 and all other Bidders shall be given proportionate scores. An illustrative example is provided below:

Bidder Name	Price Quoted	Financial Score out of 100
Bidder A	Rs. 50,00,000	$= \frac{40,00,000}{50,00,000} \times 100 = 80$
Bidder B	Rs. 40,00,000	100
Bidder C	Rs. 60,00,000	$= \frac{40,00,000}{60,00,000} \times 100 = 66.67$

- After calculating the financial score out of 100, the weighted financial score shall be calculated by multiplying the financial score by a factor of 0.30. Thus, for example, a

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Bidder obtaining 80 marks out of 100 would have a weighted financial score of 24 out of 30.

➤ **Combined evaluation and recommendation for award of contract**

The combined evaluation score shall be the sum of weighted technical and weighted financial scores. An example of weighted scores and combined scores is given below:

Bidder	Technical Score	Weighted Technical Score (0.70)	Financial Score	Weighted Financial Score (0.30)	Combined Score	Ranking
A	80	56	100	30	86	H2
B	90	63	90	27	90	H1

The Bidder obtaining the highest combined score shall be recommended for award of contract by the evaluation committee.

FOR WHATEVER REASON IF THE PRICE SCHEDULE IS SUBMITTED AS PART OF THE TECHNO COMMERCIAL BID, THE BIDDER SHALL BE DISQUALIFIED AND THE SUBMITTED BID SHALL NOT BE EVALUATED FURTHER.

3. Prebid Meeting : Prebid meeting will be scheduled on 11.04.2025 at 15.00 Hrs through online / MS Teams. Interested firms to participate in meeting/any queries, please send mail to lakshmana.murthy@bemltd.in before 10.04.2025 15.00 Hrs .

4. Earnest Money Deposit: You are requested to submit original Demand Draft/Bankers Cheque for **Rs. 64,00,000/- (Rupees Sixty Four Lakhs Only)** in favour of “BEML LIMITED, Bangalore” payable at Bangalore, in a sealed envelope superscripting the name of work, towards Earnest Money Deposit on or before the closing date & time of the tender to the office of “ The Chief General Manager (Corporate Materials), BEML LIMITED., Room No.1, BEML SOUDHA, 23/1, 4th Main, S.R. Nagar, Bangalore – 560 027, KARNATAKA, India, ” as part of the Pre-Qualification Bid.

Offers without EMD or EMD in the form other than the one specified or EMD with lesser amount shall not be considered and tenders will be rejected. No Interest would be paid on the Earnest Money Deposit.

Bidders exempted from Earnest Money Deposit (EMD) shall submit exemption certificate from Competent Authority.

Note: Bidder shall ensure that their EMD (DD/EMD Exemption certificate) is dispatched well in advance so that it reaches this office before the time and dates stipulated. Request will not be entertained for late receipt.

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5. The bidders are required to mention and submit copies of the following:

- (i) Please quote your PAN/GIR No.
(Registration Certificate of
PAN/PAN Card/GIR issued by the IT Authorities
shall be scanned and uploaded along
with the technical bid)
- (ii) Please quote your ESI No.
(Registration Certificate issued by
the ESI Authorities shall be scanned
and uploaded along with the technical bid)
- (iii) Please quote your PF No.
(Registration Certificate issued by
the PF Authorities shall be scanned
and uploaded along with the technical bid)
- (iv) Please quote your GST No.
(Registration Certificate issued by
the GST Authorities shall be scanned
and uploaded along with the technical bid)
- (v) EMD details: Amount, DD No & date

5. The commercial bids of the tenderer who have submitted the satisfactory documentary evidence for the above requirements shall be opened. The commercial bids of other tenderer i.e., who does not qualify in the Technical requirements will not be opened and EMD shall be refunded.

PRICE BID through e-mode on BEML SRM platform

Price bid of only technically qualified firms will be open for further evaluation.

Price Bid to be submitted through e-mode on or before due date and time mentioned above.-

- i. Non-compliance with any of the tender conditions and incomplete, conditional and ambiguous offers are liable for rejection. However, SRM platform enables the bidder to alter the **Price unit** and any of such changes then bidder shall invariably substantiate / clarify by way of note in the notes column.
- ii. **Prices to be updated in SRM . only the final amount to be entered in SRM excluding taxes.**
- iii. **Bidder to fill up the Total Value exclusive of all Taxes and Duties in Rs as per Annexure –J in Excel format (Price Breakup format) for the quoted items and shall upload the Excel File under “Notes & Price Attachments”**
- iv. **Please don't attach Annexure-J in Technical bids**
- v. **Note:** Price quoted in SRM only will be considered for price evaluation
Incomplete/invalid tenders will be rejected and no correspondence will be entertained in case of rejection

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DETAILS TO BE FILLED/ UPLOADED BY THE PARTICIPATING FIRM
(to be given on the Firm's Company letter head)

Sl. No.	Description	Details to be filled/uploaded
1	Name of the Firm & Postal address for correspondence (With name of the Contact Person) with telephone number, fax and email id	
2	Bank Details like Bank account numbers & IFSC code with Banker's Name, Address & Contact No.:	Bank account numbers: - IFSC Code: Banker's Name: - Branch Name: Address:- Contact Number:-

I / we hereby certify that all the information given above is factual.

Signature with date of Authorized signatory

Name: _____

Designation: _____

Firm's Seal: _____

Signature of the Contractor(s) with seal



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TENDER CONDITIONS ACCEPTANCE LETTER

(to be given on the Firm's Company letter head)

To,
M/s. BEML Ltd,
BEML Soudha,
S.R. Nagar,
Bangalore-560027.

Dear Sir,

Sub: Acceptance of terms and conditions of the tender

Tender Reference No. _____

I/We have downloaded / obtained the tender documents for the above mentioned "Tender/Work from the website(s) namely **“Construction of 2nd Phase PEB Hangar, Road, Electrical work and associated works in EPC Mode (Design and Build basis) at BEML Plot, SEZ, KIADB, Devanahalli, Bangalore”**.”

As per your advertisement given in the above-mentioned website(s).

2.I/ We hereby certify that I/We have read entire terms and conditions of the tender documents (containing 101 pages), Which form the part of Contract agreement and I/we shall abide hereby the terms /conditions/clauses contained therein.

3. The corrigendum issued from time to time by your department/organization to have also been taken into consideration while submitting this acceptance letter.

4. I/We hereby unconditionally accept that the tender conditions of the above-mentioned tender documents / corrigendum in its totality/entirety.

5. In case any provision of this tender is found violated, your department / organization shall be at liberty to reject this tender/bid including the forfeiture of the full said Earnest Money Deposit absolutely and we shall not have any claim/right against department in satisfaction of this condition.

Date:

Signature with date of Authorized signatory

Name: _____

Designation: _____

Firm's Seal: _____

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Form 3(A)

UNDERTAKING

(to be given on the Firm's Company letter head)

- a. This is to certify that _____ (Name of the Firm) has not been banned / black listed / debarred from Trade by any Central /State Govt. Dept. / Autonomous Institution / PSUs in India at the time of bidding.
- b. Not be insolvent, in receivership, bankrupt or being wound up, not have its affairs administered by a court or a judicial officer, not have its business activities suspended and must not be the subject of legal proceedings for any of these reasons. (including their affiliates or subsidiaries or Contractors/ subcontractors for any part of the contract)
- c. Not have a conflict of interest, which substantially affects fair competition. The prices quoted should be competitive and without adopting any unfair/unethical/ anti-competitive means. No attempt should be made to induce any other bidder to submit or not to submit an offer for restricting competition

I / we hereby certify that all the information given above is factual.

Signature with date of Authorized signatory

Name: _____

Designation: _____

Firm's Seal: _____

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DESIGN CONSIDERATIONS & REQUIREMENTS

1. The PEB Hangar of size (internal area size) 75 Mtrs X 62 Mtrs X 15 Mtrs (LWH) (Total Ridge height) shall be made out of rolled structural steel fabrication with RCC foundation pedestals & columns with block work masonry all-round the building superstructure masonry wall upto 4 Mtr. The steel structure shall be of Pre-Engineered Building system. The hangar shall be sufficiently rigid to take wind & seismic load as applicable in that area. The Floor is to be designed for the Ware Housing Purpose. The vacuum dewatering flooring is to be considered. Building portion, Soak pit, water sump, fire sump, water supply, PVC overhead tank, sanitary installations, Bituminous road, car & 2 wheeler parking, storm water drains, rain water harvesting, internal and external electrical work, street lighting, CCTV, LAN System, Firefighting system etc in EPC mode (design and build basis).

The orientation of all the hangars, all allied required works, utility services etc., has to be planned in such a way so that, optimum utilization of land with adequate ventilation & light is achieved.

2. All concrete to be used /prepared at site shall be Design Mix concrete/ RMC as per mix design approved by Engineer-in-charge.

3. Design criteria of RCC structural units shall conform to the Design requirements of Latest Version of IS:456-2000.

4. IS marked TMT bars of various grades shall be procured for works.

5. Basic load calculations shall be provided for all values of loads applied on all members

6. Water retaining structures shall be designed in accordance with relevant provision of IS: 3370 (Part-I to part-IV, Latest Version). In addition, Earthquake forces as per IS -1893 latest version shall also be considered.

7. Subsurface investigation shall be carried out through an approved agency / institution, indicating vertical sections of the strata, testing of soil samples on the site and in a laboratory for determining shear strength parameters, bearing capacity of the soil, permeability, index properties, water table, compressibility characteristics, swelling properties type & classification of soil and other geophysical information in the field to decide economical & sound foundation type.

8. Proof checking: The contractor shall design and submit the complete structural drawings, calculations, soft copies on CDs and two set hard copies for proof checking. Proof check to be got done from any Government Institute, IITs, NITs, IISC. After getting the proof checking done the contractor shall submit corrected and final structural design, drawings in two set soft copies on CDs and hard copies. The consultancy fees for proof checking shall be borne by the contractor.

Note: Whether specifically mentioned or not, all latest IS codes are to be used with amendments upto last date of submission of bid.

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SCOPE OF WORK

1. Local Body Approval

The contractor shall liaise with the concerned statutory Authority/ local body to facilitate BEML obtain all mandatory approval and No Objection Certificate/ Consent for Establishment/Commencement certificate from local body/Statutory authorities like KIADB, SEZ, BESCOM, BWSSB, Industrial inspectorate, Fire department, Pollution Control Board/ Environmental clearance, Airport Authority of India (AAI) etc., or any other applicable approval and as required for the project. The contractor shall also liaise and facilitate BEML obtain Occupancy/ completion certificate on completion of project. The statutory payments or fees made to Statutory Authority/ local bodies shall be reimbursed by BEML on production of proof of such payments.

The contractor has to prepare all the documents as required and submit directly to the local statutory bodies under intimation to BEML.

The contractor shall at his own cost collect field samples and carry out all necessary tests required for submission of necessary applications.

The contractor has to comply and, if necessary, resubmit applications as required by the local bodies. If required the contractor has to appoint at his own cost consultants for obtaining local body approval.

Three final copies of the documents prepared shall be submitted to BEML for record.

All the documents created out of the assignment will become the sole property of the BEML.

Note: BEML reserves the rights to short close the contract if commencement certificate / clearance certificates are not provided by the governing authorities such as KIADB and SEZ.

2. Complete cleaning and removal of rank vegetation (if any) including leveling/dozing, filling as required with available earth and compacting in layers as per the MES SSR Specification, where the Building is being Constructed and the surrounding area (Building area + 25 Mtrs. all-round) where the building is being constructed and disposal/carting away the debris/plants/rank vegetation outside the premises to a far-off place not objected by any civic authorities.

3. The work shall be executed on EPC Mode (Design & Build) basis including soil testing, structural design & drawings, constructions & commissioning of buildings & services and liaising for obtaining completion / occupancy certificate in accordance with layout plan and architectural/structural drawings. The work is to be executed according to the drawings. Scope of work contained in the paras mentioned below is only indicative and not exhaustive. In addition, the contractor shall be responsible for executing all items required for completing the building/ development activities in all respects to make it habitable and ready for occupation complete, as per architectural drawings and direction of Engineer-in-charge.

4. Successful Contractor shall get the detailed soil investigation done as per relevant IS code as applicable through the soil consultant having professional experience & one set of test report shall be deposited with the BEML. Block Levels for the area where the proposed Building is been constructed plus an additional 30 Mtrs. on all the side is to be done and submitted to BEML.

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5. Planning, preparing drawing for internal services and execution of the same i.e. internal sanitary work, water supply work, drainage system etc. complete for the building including all pipes, its fittings, testing etc. complete as per approval.
6. Water supply: Water supply lines shall be laid as per scheme prepared, submitted by the contractor and approved by Engineer-in-charge.
7. Planning, designing and construction/ installation of UG Sump for water supply, for firefighting as well as Domestic water tank including installing of pumps, stand by pumps, as per approval.
8. Storm water catch drains with covers for proper drainage of rain water to the rain water harvesting system. Any structural design required shall be carried by the tenderer at his own cost. Nothing extra shall be payable in this regard.
9. Planning and providing Water supply network around and inside the building from the source of water supply.
10. Connection charges/fees, if any to be paid to the local bodies or any other agency shall be borne by the BEML on production of receipts.
11. Complete leveling and dressing as per Building and landscape plan including filling with available earth and compacting, disposal of surplus earth as the case maybe, is to be completed as directed by the Engineer-in-charge.
12. The site has to be kept clean of all debris, rubbish and dirt & surplus/waste material all the time. It also includes maintenance, cleaning & de-silting the drains, pipe lines laid by the for all services etc. executed to the entire satisfaction of the Engineer- in-charge during the construction period. Cleaning and de-silting will also be done before handing over the completed building to BEML. All machines, equipment's and labour for this purpose will be arranged by the contractor.
13. All labour employed shall have ESI and EPF.
14. The finished ground level / stilt level / plinth level will be decided soon after actual start of work at site. However, the plinth level of the building shall be generally 600-750 mm above the crown of finished road. Contour plan with levels/survey, if required shall be carried out by the contractor at his own cost.
15. Planning, designing and providing required electrical installations for the proposed building shall be as per the norms.
16. Rain water harvesting, surface run off harvesting and ground water recharge system as per approved norms. Planning designing and execution of the roof top rain water harvesting system for storage, reuse and recharge of the sub soil water including laying of pipe lines and construction of substructure/ super structures is included in the scope of work.
17. Planning designing and providing required firefighting system for proposed Hangar as per IS 3594 and Office Building as per IS 1641 to IS 1646.

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18. The above scope of work includes cost of all materials, manpower, equipment's, T&P, fixtures, accessories, watch & ward and all other essential elements for completion and maintenance of works as aforesaid whatsoever. The approval accorded by BEML before acceptance of tender is only for tender evaluation. Any changes, modifications, revisions etc. required to be done by BEML, local bodies, proof consultants etc. in accordance with applicable standards will have to be done at contractor's cost and nothing extra shall be payable.

19. The scope of work includes dismantling, if any, of the required services and utilities falling in the project area and supporting/shifting & making functional existing services/sewerage, water supply lines and Electrical lines etc. The contractor shall properly take care & safe guard all the existing services in the area while execution of work. Also to make good the dismantled portion of any type of structure, fittings etc.,

20a). PEB Hangar

a) PEB Hangar of size (Internal clear Dimension) 62 Mtrs x 75 Mtrs X 15 Mtrs (LWH) (Total Ridge height) shall be made out of rolled structural steel fabrication with RCC foundation pedestals & columns as per the approved design with block work superstructure masonry all-round the building upto 3.50 Mtr height. The steel structure shall be Pre-Engineered Building system. The hangar has to be designed for suitable spans. The hangar should be sufficiently rigid to take wind & seismic load as applicable in that area. The hangar shall be provided with the following facilities;

- i. The hangar of size 62 Mtrs.x75 Mtrs. should be divided into 4 Equal Bays. Provision should be made for providing Crane of 10T in the 2nd and 4th Bay of the Hangar (Columns should be designed for fixing 10T cranes, Girder support should be provided in the Column for fixing the main girder of the crane over the column supports. However Main Girder of the crane is not to be considered).
- ii. 0.50 mm thick colour coated galvalume sheet roofing and 0.45 mm thick galvalume sheet for external cladding (75 mm Puff / Sandwich sheets is to be provided for the roof).
- iii. Poly Carbonate (PC) sheet for skylight (15% roof area) and PC Sheet for the vertical side also (max. of 6 to 8% of side area or as directed by the Eng.-In-Charge).
- iv. Turbovent (Light weight, heavy duty) for roof – 20 Nos is to be provided.
- v. Block work masonry upto 4 Mtr height finished with 20 mm thick Cement mortar plastering with required tie beams and column for support. Inside wall surfaces shall be finished with two coats of plastic emulsion paint over a coat of primer and putty and external wall surfaces shall be finished with exterior emulsion paint over a coat of primer
- vi. Vacuum dewatered flooring (VDF) of RCC 150 mm thick with subbase of 150 mm PCC to withstand a UDL of 7~8 Tons/Sq. Mtr. Surface Hardness should not be less than 5 on the Mohr Scale. Floor should be with an accuracy of +/- 5mm within a 2000 mm Section.

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vii. Preparing the surfaces and providing Epoxy coating on the existing Flooring of total 2.5 mm thick with high performance, self-levelling epoxy coating and polyaspartic top finish over a coat of epoxy resin primer of approved colour scheme inside the hangar. Aisle ways including aisle ways strip all as per the users requirement etc., complete with the following scope of works:

- Preparing the surface like washing and cleaning the surface using a degreaser.
- Preparation also includes removing of all laitance, porous layers, paint marks, etc., by using heavy duty mechanical grinding systems like Diamond disc grinding, Scarifier etc., and cleaning all the floor area including vacuum suction to make surface free from all dirt, dust and other contaminants, etc. Concrete floor surface should be slightly textured for best bonding.
- Providing and applying 2-part solvent free epoxy resin primer @ approximately 0.25 Kg/Sq.Mtrs. per layer and allow it dry for 6 to 8 Hrs.
- Providing and applying high performance glossy Self levelling epoxy screed (underlay coating) on primed surface at spread rate of 4.8 to 5.55 Kg/Sq.M to attain 3 mm thick and allow it dry for 24 Hrs.
- Epoxy coating should meet the following technical requirement.
 - *Avg. Compressive strength IS 9162-1979 50 N/mm²
 - *Flexural strength IS 9162-1979 8 -10 N/mm²
 - *Tensile strength ASTM D 2370-1973 10-15 N/mm²
 - *Pull-off bond strength ISO 4624 [N/mm²] 1.8- 2 (concrete failure)
 - *Shore-D hardness DIN 53505 70
 - *Gloss at 60 angle ASTM D 523 90
- Polyaspartic Coating:
 - Providing and applying a solvent free, low odour, high performance, rapid curing flooring product based on polyaspartic coating of thickness 1000 Microns at 1 Ltr/SqM.
 - The Polyaspartic coating should have the following properties & to meet following technical requirement.
 - a) Excellent Colour and Gloss retention
 - b) Excellent abrasion resistance
 - c) Resistant to most chemicals, solvents, acids and caustics.
 - Solids content DIN EN 827 / ASTM D-2697 100%.
 - Density [g/cm³] EN ISO 1183 / ASTM D-792 1.14 ± 0.02
 - Tensile strength [MPa] ISO 37-2005 / ASTM D-638 ≥ 12
 - Elongation at tear [%] ≥ 109
 - Hardness [Shore D] ISO 868-2003/ASTM D-2240 After 3 sec.: 45 ± 5
 - Tear growth resistance[N/mm] ISO 34-1 method A ≥ 12
 - Pull off strength [N/mm²] DIN EN ISO 4624 / ASTM D-4541 Concrete: ≥ 1,5.

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Note:

- a All materials are to be produced with samples and to obtain prior approval of E-I-C before commencing the work.
- b All the materials should be procured from the reputed manufacturers like Fosroc Chemicals (India) Pvt Ltd / Pidilite Industries Ltd / Berger Paints India Ltd / STP Ltd / Araldite / Asian Paints Ltd
- c Different Color for floor finishing to be maintained, Aisle ways with borders etc., all as per the user's choice during execution.
- d Any undulations in the floor are to be leveled with required epoxy based mortar/material to get uniform floor surface.
- e Both the coating materials (i.e. Epoxy & Polyaspartic) are to be tested as per the standards prescribed from the reputed laboratory for the following parameters.
- f The sample will be sent from BEML directly to the laboratory with a request to send test report directly to BEML. Charges for testing & the test reports is to be borne by the firm.
 - (i) Testing required for Epoxy floor coating :
 - a) Compressive strength (N/mm²)
 - b) Flexural strength (N/mm²)
 - c) Tensile strength (N/mm²)
 - d) Pull-off bond strength (N/mm²)
 - e) Shore-D hardness
 - f) Gloss at 60 angle.
 - (ii) Testing required for Polyaspartic coating :
 - a) Solids content (%)
 - b) Density [g/cm³]
 - c) Tensile strength [MPa]
 - d) Elongation at tear [%]
 - e) Hardness [Shore D]
 - f) Tear growth resistance [N/mm]
 - g) Pull off strength [N/mm²]
- viii. Aisle way should be marked with a suitable different Colour as approved by the Engineer-In-Charge is to be Provided.
- ix. 1.5 Mtr Plinth protection all-round the Hangar & Office area with proper slope.
- x. Three track Powder coated Aluminum glazed windows with mosquito proof mesh with Bright Bar Grill of 12 mm size square bars is to be provided. Window Size should be with a minimum of 2 Mtrs width x 1.5 Mtrs. Ht. or as per the approved drawings by the BEML.
- xi. Galvalume Puff Roof sheet, gutters with 110 mm dia PVC rain water down taking pipes are to be provided.
- xii. RCC storm water drains all-round the building connecting to main drain is to be provided.

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- xiii. Sunshades for all the entrance wherever the rolling shutters and Windows are fixed, is to be provided (Not less than 2 Mtrs. for Rolling Shutters, 0.90 Mtrs. for Doors and 0.75 Mtrs. for windows).
- xiv. Front of the Hangar a Loading Platform of 2 Mtrs. is to be provided for the full length of the Hangar where the Rolling Shutter is provided. The Floor Level of the Main Hangar should be 1.2 ~ 1.4 Mtrs. Ht. from the Road Level for easy loading and unloading of the items from the Lorry / Truck.
- xv. Approach Road - Concrete Hard standing (100mm thick PCC + 150 mm RCC M-25 of required thickness with nominal reinforcement) with required slope and gradient to the Entrances of the PEB Hangar (Rolling shutters) from main road is to be provided.
- xvi. Toilets (Ladies – 1 No. WC, 1 No. washbasin & Rest area) and (Gents – 3 Nos. of WC, 3 Nos. of washbasin and 4 Nos. of Urinals) (Ladies and Gents Toilets should be separate) is to be provided outside the Main Hangar with Adequate Ventilation including providing Exhaust Fan. The Drainage line is to be connected to the septic tank or STP.

20b) Rolling Shutters: Rolling Shutters should be provided along the full length of the hanger i.e., along the 75 Mtrs. length of a size not less than 3.5 Mtrs X 3.5 Mtrs. of heavy-duty type rolling shutters and 1 No. of 6 Mtrs. x 5.5 Mtrs. rolling shutter of gear operated Rolling shutters in the entrance of PEB Hangar is to be provided. The Rolling Shutter is to be provided with Heavy Duty Door Lock.

- i. Necessary Civil Work is to be provided for the Dock Leveler for the Alternative Rolling Shutter. Pit size of 2.86 x 2.06 x 0.485 is to be provided for fixing the Dock Leveler with necessary Electrical piping and Electrical Points for fixing the Dock Leveler (The Dock Leveler is not included in the scope of work, BEML will separately procure and fix the same).

20c) Office Area: An Office area of size 12 Mtrs X 30 Mtrs (GF & FF) (of internal dimension) with Suitable Staircase size of 1.5 Mtrs. width shall be constructed outside the PEB Hangar (**Lean to roof system**) consisting of the following.

1. 1 No. of VIP Chamber, (in GF) with attached Toilet Room including Exhaust Fan
2. 2 Nos. of Executive Chamber (in GF).
3. Office Area to accommodate 45 Persons (including Work stations of 45 Nos.) (in GF), each work station should be having Electrical point and Data Cable Connection.
4. Conference Room / Board Room to accommodate 40 Persons (in FF)
5. Cafeteria of around 35' x 40' (in FF)
6. Toilets (Ladies – 1 EWC, washbasin & Rest area) and (Gents – 3 Nos. of EWC, 3 Nos. of washbasin and 4 Nos. of Urinals) (Ladies and Gents Toilets should be separate) both in GF & FF with Adequate Ventilation including providing Exhaust Fan.
7. A Visitor Lounge room of Size 3 Mtrs. x 3 Mtrs. is to be provided with Sofa and TV facilities (Preferably at the entrance of the office area).
8. A small area is to be provided for the Mini Kitchen in the GF Office Area along with Kitchen Washbasin with necessary Tap as approved by the Engineer-In-Charge.

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9. One Room of Size 4.25 Mtrs. x 4.25 Mtrs. is to be provided for the Data Center (in FF)
10. Portico in front of the Office area for a size of 4 Mtrs. x 4 Mtrs. with 4 Mtrs. clear Ht. from the Finished Floor or Road is to be provided.
11. The front side of the Office Building is to be provided with good aesthetic front elevation by using structural glazing or ACP material as approved by the Eng.-In-Charge.

The FF should be provided with the Structural steel roof frame work with 75mm thick Puff panel/Sandwich panel (Lean to roof type). The complete office area (GF & FF) shall be provided with false ceiling.

Walls – Office area and Drivers Retiring room is to be Constructed with 200mm thick block masonry wall of minimum Ht of 11' 6" (Clear Ht. from Floor to Roof) is to be provided and finished with 20mm, 1:6 cement mortar plastering with required tie beams and column for support. Inside wall surfaces shall be finished with two coats of plastic emulsion paint over a coat of primer and putty and external wall surfaces shall be finished with exterior emulsion paint over a coat of primer.

Roof : GF is to be constructed with RCC Roof and FF with the Structural steel roof frame work with 75mm thick Puff panel/Sandwich panel. The complete office area shall be provided with false ceiling (Both Ground Floor & FF).

Office Flooring – RCC Concrete flooring (not less than 75 mm thick) with nominal reinforcement including sub base of PCC (not less than 125 mm) is to be provided. The concrete flooring shall be finished with Vitrified tile flooring (Full Body Vitrified tiles) of minimum size 600 mm x 1200 mm. & skirting of approved colour (4" Ht.) (Basic cost shall not less than Rs 140/Sq. Ft.) with cement mortar bedding layer for other areas.

Toilet blocks of suitable sizes (Office Area) : Wall tiles shall for 7 feet height, with 600mm X 600 mm size or bigger size vitrified tiles (full body vitrified tiles) of approved shade and colour is to be provided. Floor tiles shall be 600 mm x 600 mm size antiskid vitrified tiles (full body vitrified tiles) of approved shades and colour is to be provided. Basic cost of tile shall not less than Rs 100/Sft. (both type of tiles). The Drainage line is to be connected to the septic tank or STP.

Doors - 75mm X 125mm 2nd class hardwood for door frame and 35mm thick solid Flush door shutters finished 1.0mm thick laminate of approved colour. Each door shall be provided with the heavy-duty brass hardware such as Hinges, Mortise lock, door closer etc.

Windows – Three track Powder coated Aluminium glazed windows with mosquito proof mesh with Bright Bar Grill of 12 mm size square bars is to be provided. Window Size should be with a minimum of 2 Mtrs width x 1.5 Mtrs. Ht. or as per the directives of the Eng.-In-Charge is to be provided.

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20d) Modular Office Furnitures:

- (a) Executive Table with cable management system – 4 Nos
- (b) Very High Back chairs (revolving type with chromium pedestal). – 10 Nos.
- (c) Visitor Chairs (revolving type with chromium pedestal) – 18 Nos.
- (d) Storage file cabinet (door type) – 25 Nos. (3 Ft. x 3 Ft.)
- (e) Three-Seater Sofa – 05 Nos.
- (f) Two-Seater Sofa. - 07 Nos.
- (g) 5 ft X 5 ft Workstations with cable management system - 45 Nos.
- (h) Work station chairs revolving type with chromium pedestal – 45 Nos.
- (i) 25 people Capacity Conference table with cable management system- 01 Nos.
- (j) Conference Chairs (revolving type with chromium pedestal) – 40 Nos
- (k) Steel Almirah of 7 feet Ht. : 4 Nos.
- (l) TV of reputed make with Warranty of 2 Years is to be provided -- a. TV Size of 86” – 2 Nos. & b. TV Size of 48” – 2 Nos. is to be fitted at Conference Hall, VIP Chamber & Visitors Lounge.

20e) Toilet blocks of suitable sizes: Toilet block of suitable size shall be constructed outside the PEB Hangar (**Lean to roof system**) consisting of Ladies Toilet : 1 EWC, washbasin & Rest area and Gents Toilet – 3 Nos. of EWC, 3 Nos. of washbasin and 4 Nos. of Urinals) (Ladies and Gents Toilets should be separate). Structural steel roof frame work with 75mm thick Puff panel/Sandwich panel is to be provided. The Toilet should be with Adequate Ventilation including providing Exhaust Fan.

Walls - Constructed with 200mm thick block masonry wall not less than 10’ Ft. Ht. (all the 4 sides) and finished with 20mm, 1:6 cement mortar plastering. Inside wall surfaces shall be finished with two coats of plastic emulsion paint over a coat of primer and putty and external wall surfaces shall be finished with exterior emulsion paint over a coat of primer.

Flooring: RCC Concrete flooring (not less than 75 mm thick) with nominal reinforcement including (8 mm x 8mm dia rod @ 7”c/c), PCC (not less than 125 mm)

Roof - Structural steel roof frame work with 75mm thick Puff panel/Sandwich panel.

Tiles: Wall tiles shall for 7 feet height, with 600mm X 600 mm size or bigger size vitrified tiles (full body vitrified tiles) of approved shade and colour is to be provided. Floor tiles shall be 600 mm x 600 mm size antiskid vitrified tiles (full body vitrified tiles) of approved shades and colour is to be provided. Basic cost of tile shall not less than Rs 100/Sft. (both type of tiles).

Sanitary lines: Internal and external waterlines shall be provided with CPVC pipes including connecting to overhead tank.

Sewage lines: PVC waterlines for sewage lines connecting to the STP with required number of chambers.

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Sanitary Fittings:

- (i) VIP Toilet and Ladies toilet shall be provided with EWC and Counter top washbasin with granite platform and bottom storage in toilet.
- (ii) General toilet shall be provided with EWC and Counter top washbasin with granite platform and bottom storage in each of the Toilets.

Bathroom fittings: Brass chromium plated Pillar taps, Bib taps, Health faucet, angle/stop cock of reputed make as mentioned at Page No. 39-40 (Acceptable brands of Material) is to be provided etc.,

Suitable joineries with hardware for toilets

Ventilator: Factory made uPVC ventilator (Openable/Top hung) with exhaust fan is to be provided.

Each wash basin shall be provided with suitable size Mirror (not less than 3'x2') & light fittings.

20f). PVC Tank: PVC Overhead tank for Toilets supported by MS Structural frame work and foundation is to be provided for each of the Toilet Block separately (i.e., 2000 Ltrs. For GF Toilet, 2000 Ltrs. For FF Toilet and 2000 Ltrs. For Toilet provided outside the Hangar).

20g). UG Sump: 1 No. of 10,000 Liters capacity RCC Wall with water proofing and RCC covering including supplying, fixing and commissioning 2.5 HP water pump with required plumbing work. And 1 No. of 50,000 Liters Capacity UG Sump for Fire Safety requirement may be provided at a suitable location as informed by the Engineer-In-Charge.

20j) Drivers Retiring Room : A separate room for Drivers Retiring Room of size 5 Mtrs. x 5 Mtrs. is to be provided near to the Material Gate Security Room. A separate Toilet within the Retiring room of Size 1.2 Mtrs. x 1.2 Mtr. is to be provided with 1 No. of EWC and 1 No. of Urinals. A separate Bathroom within the Retiring Room of size 1.2 Mtrs. x 1.2 Mtrs. is to be provided with Hot and Cold water Shower facilities (with suitable mixer unit).

20k) Diesel Power House (DPH) : Room size of 4.5 Mtrs x 4.5 Mtrs. with the following details is to be provided near to the transformer (i.e., Material Gate Security room) with PEB Gable end type Roof.

- i. Dwarf wall with CC Block of 200mm width for an Ht. of 1.5 Mtr. is to be constructed all-round the room.
- ii. Roof with 0.5 mm thick colour coated galvalume sheet (Puff/Sandwich Sheet) and 0.45 mm thick galvalume sheet for the external cladding over the Dwarf Wall al-round the room.
- iii. RCC Flooring of 150 mm with reinforcement of 8 Dia @ 7"x7"C/c. with a sub base of PCC M7.5 of 100 mm is to be provided.
- iv. Suitable Steel Door of width 1.2 Mtrs. is to be provided for the room with suitable sun shade of 0.9 Mtrs. width for the Door.
- v. Above the Drawf Wall

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- vi. UPVc Window of size 1.5 Mtrs. x 1.2 Mtrs. Ht. is to be provided windows on 3 sides of the Room with suitable sun shade of 0.9 Mtrs. width for the windows. The windows should be having 3 Track along with Mosquito mesh.
- vii. Suitable switch over control for electrical is to be provided from this room.
- viii. Main Electrical connection from this room to office building and Hangar is to be provided with suitable electrical cables.
- ix. The Room is to be provided with suitable Electrical Plug points, LED Lights and Ceiling Fan.
- x. Ceiling Ht. should be 4 Mtrs. to the Ridge Point from the Finished Floor Level.
- xi. At either side of the Gable end, for ventilation purpose, at Roof Level, steel mesh for an Ht. of 600 mm for the full length of the building is to be provided.

20) 50 Ton Weigh Bridge : Room size of 4 Mtrs x 4 Mtrs. with the following details is to be provided near to the Security Gate (i.e., Material Gate Security room) with PEB Gable end type Roof.

- i. Dwarf wall with CC Block of 200mm width for an Ht. of 1.5 Mtr. is to be constructed all-round the room.
- ii. Roof with 0.5 mm thick colour coated galvalume sheet (Puff/Sandwich Sheet) and 0.45 mm thick galvalume sheet for the external cladding over the Dwarf Wall all-round the room.
- iii. RCC Flooring of 150 mm with reinforcement of 8 Dia @ 7"x7"C/c. with a sub base of PCC M7.5 of 100 mm is to be provided.
- iv. Suitable Steel Door of width 1.2 Mtrs. is to be provided for the room with suitable sun shade of 0.9 Mtrs. width for the Door.
- v. Above the Dwarf Wall
- vi. UPVc Window of size 1.5 Mtrs. x 1.2 Mtrs. Ht. is to be provided windows on 3 sides of the Room with suitable sun shade of 0.9 Mtrs. width for the windows. The windows should be having 3 Track along with Mosquito mesh.
- vii. Suitable switch over control for electrical is to be provided from this room.
- viii. Main Electrical connection from this room to office building and Hangar is to be provided with suitable electrical cables.
- ix. The Room is to be provided with suitable Electrical Plug points, LED Lights and Ceiling Fan.
- x. Ceiling Ht. should be 4 Mtrs. to the Ridge Point from the Finished Floor Level.
- xi. At either side of the Gable end, for ventilation purpose, at Roof Level, steel mesh for an Ht. of 600 mm for the full length of the building is to be provided.
- xii. Drawing for the Civil work for the Pit less type of 50 MT is enclosed for Construction as per drawing at **page No 101** (in the drawing typical details are given which will change as per the E-In-C, only Ramp as mentioned in the Drawing is to be constructed).
- xiii. LAN Point from the main office Building is to be provided with LAN Cable.
- xiv. Necessary Cabling work for electrical/computer etc., from the Weigh Bridge to the Room is in the scope of the contractor.

21. Parking shed: A. Car parking sheds of suitable design of size 30 Mtrs x 6 Mtrs. x 2 Nos. (Preferably back to back) shall be constructed outside the PEB hangar with 0.50 mm thick colour coated galvalume sheet roofing with 100 mm thick PCC (M7.5) sub base for the floor and 150 mm RCC hard standing of M25 (with nominal reinforcement of 8 mm @ 150 mm C/C both way).

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B. **Two Wheeler** parking sheds of suitable design of size 30 Mtrs x 1.75 Mtrs. x 2 Nos. (Preferably back to back) shall be constructed outside the PEB hangar with 0.50 mm thick colour coated galvalume sheet roofing with 100 mm thick PCC (M7.5) sub base for the floor and 150 mm RCC hard standing of M25 (with nominal reinforcement of 8 mm @ 150 mm C/C both way).

C. **The Car Parking** and Two Wheeler Parking are to be constructed parallel to each other with a central gap of 5 Mtrs. The 5 Mtrs. width is to be provided with 100 mm thick PCC (M7.5) sub base for the floor and 150 mm RCC hard standing of M25 (with nominal reinforcement of 8 mm @ 150 mm C/C both way).

22. Internal Road & storm water drains, Lorry/Truck Parking, WBM Road -

- xv. Providing WBM road: - 2 Mtr wide x 100 Mtrs. + 10 Mtrs. x 200 Mtrs. Length for the side of the Hanger including Preparation, levelling, maintaining required gradient, consolidation of 40mm downgraded granite aggregate WBM / WMM subgrade of required thickness. The road shall be designed for 40 Ton Load Lorry. Also required CC Kerb Stone is to be provided where ever required of size 150 mm thick x 300 mm Ht.
- xvi. Providing bituminous chip carpeting road size 10 Mtrs. X 100 Mtrs. including Preparation, levelling, maintaining required gradient. The road shall be designed for 40 Ton Load Lorry. Also required CC Kerb Stone is to be provided where ever required of size 150 mm thick x 300 mm Ht.
- xvii. Providing 150 mm RCC (M25) Hard standing over a 100 mm PCC (M7.5) with Reinforcement of 10 mm Rod @ 5" C/C both Way (Size of 10 Mtrs x 85 Mtrs.). Also required CC Kerb Stone is to be provided where ever required of size 150 mm thick x 300 mm Ht.

Storm water drain for the Internal Road shall be provided on either side of the Road with RCC wall along with the RCC Covers including excavation, maintaining required gradient, refilling etc., connecting to the main drain. The width of the Storm water drain should not be less than 600 mm width (clear opening of the Drain).

Double Wall Corrugated HDPE Pipe of 600 mm dia. (of SN8 Standard) is to be provided where-ever required for taking service lines from the existing source, particularly below the Roads by suitably cutting & consolidation.

Double Wall Corrugated HDPE Pipe of 300 mm dia. (of SN8 Standard) is to be provided from behind of Security Room (Material Gate) to the new Office Block/Hangar.

23. General Details.

Foundation: RCC foundation as per the approved design

Roof: RCC roofing as per the approved design

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Flooring:

Office : RCC Concrete flooring (not less than 75 mm thick) with nominal reinforcement (8 mm x 8mm dia rod @ 7”c/c) including sub base of PCC (not less than 125 mm) is to be provided. The concrete flooring shall be finished with Vitrified tile flooring (Full Body Vitrified tiles) of minimum size 600 mm x 1200 mm & skirting of approved colour (4” Ht.) (Basic cost shall not less than Rs 140/Sq. Ft.) with cement mortar bedding layer for other areas.

Toilet : RCC Concrete flooring (not less than 75 mm thick) with nominal reinforcement (8 mm x 8mm dia rod @ 7”c/c) including PCC. Wall tiles shall be for 7 feet height, with 600mm X 600 mm size or bigger size vitrified tiles (full body vitrified tiles) of approved shade and colour is to be provided. Floor tiles shall be 600 mm x 600 mm size antiskid vitrified tiles (full body vitrified tiles) of approved shades and colour is to be provided. Basic cost of tile shall not less than Rs 100/Sft. (both type of tiles). The toilet should be with Adequate Ventilation including providing Exhaust Fan.

Walls - Constructed with 200mm thick solid block masonry wall finished with 20mm, 1:6 cement mortar plastering with required tie beams and column for support. Inside wall surfaces shall be finished with two coats of plastic emulsion paint over a coat of primer and putty and external wall surfaces shall be finished with exterior emulsion paint over a coat of primer.

Doors - 75mm X 125mm 2nd class hardwood for door frame and 35mm thick solid Flush door shutters finished 1.0mm thick laminate of approved colour on both sides. Each door shall be provided with the heavy-duty brass hardwires such as Hinges, Mortise lock, door closer etc.

Windows – Three track Powder coated Aluminium glazed windows with mosquito proof mesh with Bright Bar Grill of 12 mm size square bars is to be provided. Window Size should be with a minimum of 2 Mtrs width x 1.5 Mtrs. Ht. or as per the directives of the Eng.-In-Charge is to be provided..

Tiles: Wall tiles shall for 7 feet height, with 600mm X 600 mm size or bigger size vitrified tiles (full body vitrified tiles) of approved shade and colour is to be provided. Floor tiles shall be 600 mm x 600 mm size antiskid vitrified tiles (full body vitrified tiles) of approved shades and colour is to be provided. Basic cost of tile shall not less than Rs 100/Sft. (both type of tiles).

Sanitary lines: Internal and external waterlines shall be provided with CPVC pipes including connecting to overhead tank.

Sewage lines: PVC pipes (Schedule 80 Types of pipes are to be provided) for sewage lines connecting to the STP with required number of chambers.

Sanitary Fittings: Reputed make as mentioned at Page No. 31 (Acceptable brands of Material) is to be provided etc., and approved brand of EWC and Counter top washbasin with granite platform and bottom storage in the toilet is to be provided.

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Bathroom fittings: Reputed make as mentioned at Page No. 31 (Acceptable brands of Material) is to be provided etc make and approved brand Brass chromium plated Pillar taps, Bib taps, Health faucet, angle/stop cock etc., is to be provided.

Suitable joineries with hardware for toilets is to be provided.

Ventilator: Factory Made uPVC ventilator (Openable/Top hung) with exhaust fan of required Nos. is to be provided.

Each wash basin shall be provided with suitable size Mirror & light fittings.

24. LED Signage Board: 02 Nos: LED Signage with acrylic box of size 2.0 Mtr X 0.75 Mtr. is to be provided.

25. Sewage Treatment Plant (STP): Supplying, installation, Testing and Commissioning of Packed unit of required Capacity Sewage Treatment Unit (for an strength of 100 Persons is to be considered for calculation purpose) 3as per norms including required Civil, electrical and mechanical works is to be provided.

26. Rainwater Harvesting system of required size as per norms with RCC rings and covering including plumbing connections is to be provided.

27. INTERNAL-EXTERNAL ELECTRICAL INSTALLATIONS, NETWORKING, TELEPHONE, CCTV & UPS

The scope of work includes Planning, Design & preparation of Drawings, obtaining approvals from the department, supply, Installation, testing and commissioning of Internal and External Electrical Installations, Power wiring, telephone/TV conduiting, EPBAX, LED light Fittings, call bell, Exhaust fans, Ceiling/wall fans, Switch boards, switches, sockets, MCB's, MCB DBs, Rising Main, lighting & protection requirement, earthing, street lights, bollards, associated panels etc for the building as per approval. Complete wiring in the building for light, power, communication etc. shall be done in appropriate size PVC/MS conduits. Fire alarm and PA wiring shall be done in MS Conduits and all conduits, switch & socket are to be air sealed. The details are follows;

a) PEB Hangar: – Internal Industrial LED luminaire (Suspended light fittings) and heavy-duty wall mounting industrial fans, 05/15Amps sockets as per the approved layout is to be provided.

b) Office Area: - Recessed LED downlighters for false ceiling, wall mounting fans, 05/15Amps sockets as per the approved layout. All chambers, work station area & conference hall shall be provided with 2 Ton Capacity Split AC's - 6 Nos, All tables/workstations/conference table shall be provided with the telephone and data networking facility with network eqpts. of Cisco Make switches (24 Port x 2 Switches) and 2 Nos. of Routers.

Two separate network connectivity shall be laid one is for accessing our Business Applications & the other is for Internet Connectivity. For first phase 20 nodes + 20 nodes to be planned which shall be scalable further.

The online UPS shall be provided for the office area & security area.

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c) Toilet block, Parking area: LED Light fittings, Mirror Light fittings, Exhaust fans, 05/15Amps sockets as per the approved layout.

d) External Lighting: Internal Road at 10 Mtr Spacing (Road around the Hangar i.e., 75 + 75 Mtrs + Front of the Hangar 100 Mtrs), all four corners of PEB Building & outdoor parking areas shall be provided with LED lamps street light fixtures Mounted on 6 Mtr high poles or as required with RCC foundation and connected to the external light circuit with suitable control panel.

e) External Electrical Installations: Electrical Panel/Transformers etc as per the requirement, standards and approvals.

f) CCTV: Surveillance area shall cover road, Hangar entrances and Hangar around area. CCTV system shall consist of the following. (As per the enclosed Sketch @ Annexure-I at Page 99).

- i. OFC 6-Core Armoured Cable (900mtrs to be fitted on the wall).
- ii. OFC 6-Core Armoured Cable (50mtrs Underground).
- iii. Indoor 360 5MP Fisheye IR Camera (2nos: one each inside the security cabin)
- iv. Outdoor 4MP AI Enforcement ANPR Bullet Camera, 30mtr IR (2nos-one at each gate).
- v. Outdoor 5MP WDR, 50mtr IR Bullet Camera (14nos for hangars, veh-parking, perimeter wall).
- vi. Gigabit PoE 8-Ports with Gigabit Uplink 2-Ports, 06kv Surge Protection (8nos).
- vii. CAT6 Network Cable (900mtrs).

(All the above accessories shall be supplied and installed on 'Turn-key basis'. Any accessories remain balance after completion of installation & commissioning shall be handed over to BEML Ltd.)

g) UPS (ONLINE MODULAR TYPE) The scope of work includes supply, installation, testing and commissioning of Online modular type Un-Interrupted (UPS) power supply of required capacity which shall be derived after the detailed design of the system for all other building IP based services like CCTV, Fire Alarm & PA system, LAN switchers, BMS, EPBAX, 5% emergency lighting etc. The UPS is required for providing backup power to the components listed as follows:

- 1) LAN system
- 2) Emergency lighting
- 3) CCTV monitoring system
- 4) Escape lighting
- 5) Fire alarm system
- 6) Public address system
- 7) IP based EPABX

Note: (i). Above mentioned requirements are minimum and for indicative purpose only, bidders are requested to evaluate the actual UPS power requirements and provide the actual capacities accordingly. If calculated power arrives more than the above-mentioned capacities, the higher capacities shall be provided and payment for the same shall be done on pro-rata basis over minimum capacity. If calculated power arrives less than the above-mentioned

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capacities, then the minimum capacities as mentioned above shall be provided by the contractor. Bidders are requested to quote accordingly.

(ii). Minimum 30 Minutes Power Backup with maintenance free batteries shall be provided.

h) Earthing: As per IS standards and approval.

i) Fire protection & alarm and PA;

The scope of work includes Fire sprinkler systems, Intelligent addressable automatic Fire alarm system (AFAS) complete with various type of detectors, devices, addressable fire alarm panel, repeater panel, copper wiring in MS (Mild steel) conduits recessed in ceiling/wall as required, integration with Public Address System (PA) system.

Public Address System for building evacuation, by selecting a particular zone, floor, all areas

The latest development in fire alarm system, Detectors Technology is Intelligent Addressable Fire Alarm System over conventional system. It is now become almost necessary to install this system in every functional and important building because the system has many advantages over conventional automatic fire alarm system such as;

- (i) Early fire warning
- (ii) Individual Device identification / location
- (iii) Analog Signal feed back
- (iv) Pre-alarm notification.

Construction **50,000 liters RCC UG sump** for fire safety measures.

j) Landscaping work: 1/2 Acre of plain grass Landscaping in the developed area and tree samplings of (100 Nos.) are to be Planted in the Premises.

k) Advanced ESE (Early Streamer Emission) Lightning Conductor as per IS Standard IS/IEC 62305 (Part 1 to Part 4) is to be provided for all the Buildings.

28. Safety Aspects: The Works shall include all Civil, Electrical, Mechanical, all Safety Aspects and any other Works required for the Construction and Completion of the Works in all respects and to the Satisfaction of the Engineer-in-Charge.

29. Proof checking: The contractor shall design and submit the complete structural drawings, calculations, soft copies on CDs and two set hard copies for proof checking. Proof check to be got done from any Government Institute, IITs, NITs, IISC. After getting the proof checking done the contractor shall submit corrected and final structural design, drawings in two set soft copies on CDs and hard copies. The consultancy fees for proof checking shall be borne by the contractor.

Note: Whether specifically mentioned or not, all latest IS codes are to be used with amendments upto last date of submission of bid.

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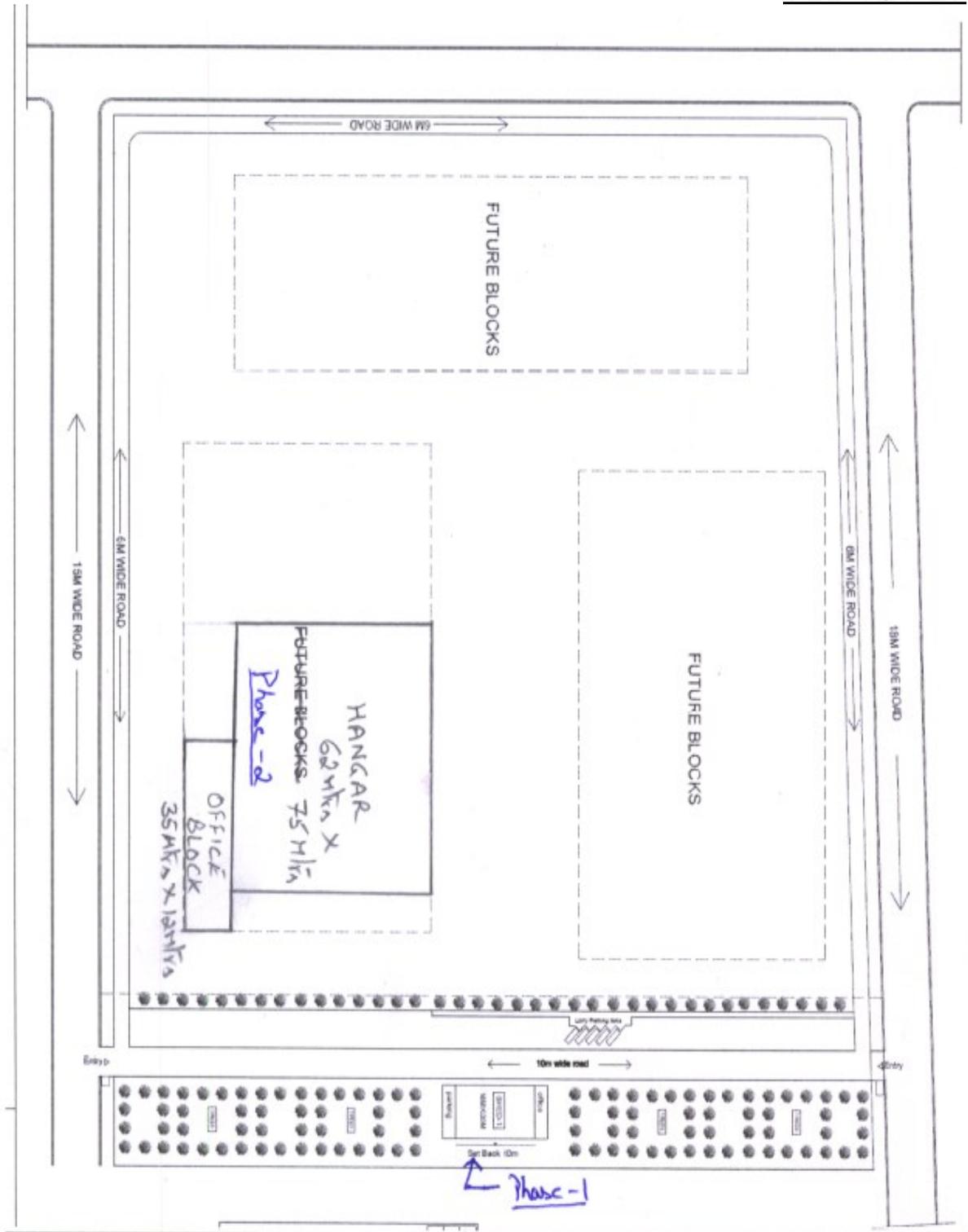
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30. All Drawings shall be made in Latest Version of AutoCAD and the Soft Copies on CDs and eight Hard Copies of Prints of all Approved Drawings and "As Built" Drawings shall be supplied by the Contractor to the BEML at Free of Cost.
31. CDs and eight Hard Copies of all Approved Design Calculations shall be submitted by the Contractor to the BEML at Free of Cost.
32. Successful Contractor shall submit work schedule for completion of work. The work schedule shall be submitted to BEML.
33. The contractor shall obtain Occupancy/Completion certificate after completion of the project from statutory local bodies before handing over the same to BEML.
34. Termite Treatment at foundation level, before flooring and plastering level as per the standard or as per the direction of the Eng.-in-charge is to be carried out.

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ANNEXURE- A



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ACCEPTABLE BRANDS OF MATERIALS

Sl.No.	Item	Brand/Make
1	Cement	M/s ACC/Ultratech/Birla/Ramco/Ambuja/JK
2	Paints	M/s Asian Paints/Berger/JSW
3	Galvalume Sheet for Roofing, Cladding, Sandwich panel, etc.,	M/s. Lloyd, Indal, Jindal, Tata steel [Tatablue Scope], bhushan, JSW, Essar.
4	Reinforcement steel / Structural Steel	M/s Sail/Tisco/Tata/ Vizag Ispat [RINL]/Jindal
5	CPVC Pipes	M/s Finolex/Supreme/Astral/Ashrivadh
6	GI pipes	Indian Tube Co, Zenith, TATA, Jindal, Suryaprakash.
7	PVC	M/s Finolex/Supreme/Prince
8	White cement	M/s Birla/JK/Laticrete
9	Putty	M/s. Asian Paint, Berger, Nerolac, ICI, J.K., Birla
10	Concrete Paver Blocks	M/s. Eurocon Tiles, Basant Beton, Sobha, Apco, Nitco (Rockard), Jyothi Group.
11	M.S sliding Doors- Motorised/ Hangar doors/Boom Barriers./MS rolling Shutters-Motorised.	M/s. Areen, Gandhi Automations, Securetronix, SaiAutomation, Avians,
12	Gully trap/Nahani trap	M/s Supreme/Finolex
13	Waterproofing compound	M/s. Fosroc/Roff/BASF
14	Mirror/Toughened/beveled glass	M/s Modi Float, Saint Gobian, Hindustan Pilkington, Triveni, Asahi & Atul.
15	Ceramic/Vitrified tiles	M/s.Johnson/ Kajaria/ Nitco/RAK/Somany/Euro
16	Gypsum Board	M/s India Gypsum/Armstrong/Saintgobain
17	Ply wood/Block Board	M/s Archid/Greenply/Century/Kitply.
18	Laminate/Veneer	M/s Archid/Greenply/Century/Kitply.
19	Flush Door Shutter & Block Board	M/s. Mysore Plywood, Kutty, Indian Plywood Manufacturing Co, Kenwood, Durian, Greenlam, National, Shakti, Archid, Nikki.
20	UPVC Partition/Doors/Windows	M/s. Fenesta, Saint Gobian, Encraft, Deccan Woodmate, LG, Madhu Industries
21	PUF sandwich Panel	Manufactured by AIFa, Karthik, Lloyd, Kirby, Metecno, TATA Bluescope
22	Polycarbonate Sheet	M/s. Tufflite, danpalon, Gallina, Tatablue Scope.
23	False Ceiling	M/s. Saint Gobin (Gyproc), Armstrong, Shera, Hunter Douglas, Metalium, USG Borel.
24	Door closure	M/s Everite/Dorma
25	Locks, mortice locks	M/s. Godrej/Europa
26	Plumbing fittings (Brass Chromium Plated Plumbing fittings)	M/s Parryware/Hindware/ESS ESS/Cera/Jaquar

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27	Sanitary Fittings (EWC/IWC/Washbasin)	M/s Jaquar/Hindware/Parryware/Cera
28	Galvalume sheet/	M/s Tata bluescope/JSW/LLYOD (India)
29	Polycarbonate sheet	M/s Danpalon, Alcox, Polygal, V.A Corporation, Alfa, GE, Lexon, Tuftile
30	CCTV Camera	M/s Hikvision/Sony/Panasonic/Samsung
31	PVC Tank	M/s Sintex/Ganga/Kaveri
32	FR PVC Copper wires	M/s Finolex/Anchor/Roma/Havells/Polycab
33	MCB's/MCCB's /ELMCB's/Industrial Switches/Electrical panels	M/s L&T/ABB/Legrand/Schneider/Merlin Gerin
34	XLPE power cable	M/s Anchor Roma /Finolex /Havells/Crabtree/ABB/Schneider/Polycab
35	Modular Switches/Socket	M/s Anchor/Roma/Havells/Crabtree/ABB
36	CAT 06 cable	M/s Dlink/Amp
37	AC'S	M/s Hitachi/Daikin/Carrier
38	Grid false ceiling	M/s Armstrong
39	LED Light Fittings	M/s Crompton Greaves/Philips/Wipro
40	Electrical panel/Control switch	M/s L&T/ABB/Legrand/Schneider/Merlin Gerin
41	Executive Tables/Workstation/Chairs/Sofas/ Furniture	M/s Godrej/Featherlight/Durian
42	ALUMIN COMPOSITE PANEL (ACP)	M/s. Alcobond, Durabond, Eurobond, Alstrong
43	Epoxy/PU Flooring & other specialised floorings	Fosroc, Pidilite, Sika, Dr.Beck, Ardex Endura, Asian, Tikidan, STP, Tremco.
44	PVC Doors /FRP Doors	Rajashree, Fimen, Sintex
45	Any Other Items not mentioned above	IS Standard Should be followed.

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SCHEDULE OF PAYMENTS AT STAGES

<u>Sl No</u>	<u>Description</u>	<u>Individual in % on contract value in EPC mode</u>	<u>Cumulative on Contract value in EPC Mode</u>
1	Submission & approval of Plan, Elevation, Section Etc., drawings and 3D walk through presentation as required for commencement of the project.	0.5%	0.5%
2	Submission of Soil investigation report with Layout Plan, Architectural Elevation and Section of proposed structures for approval of BEML. Leveling/dozing of earth for the Main Hangar area, Office area and the surrounding area of the building proposed including cleaning and removal of rank vegetation (if any) and disposal of debris outside the premises not objected by any local civic authority. Submission of Block Levels at an interval	0.5%	1%
3	On submission of proof check of design & drawings by Government Institute, IITs, NITs, IISC. After getting the proof checking done the contractor shall submit corrected and final structural design, BOQ, drawings in two set soft copies and hard copies.	0.5%	1.5%
4	Completion of foundations and upto plinth level for PEB Hangar, Drivers Room, Office Area and all other Buildings / Structures.	6%	7.5%
5	Completion of Superstructure above plinth Masonry wall, RCC Columns upto 4 Mtrs for PEB Hangar & Masonry wall upto 4 Mtrs. Including Construction upto Roof Level (both GF & FF) of the Office Area and Other Buildings.	8%	15.5%
6	Completion of inside & outside Plastering work for the PEB Hangar Superstructure above plinth Level and all other Buildings including Office Block (GF & FF) & Drivers Room.	6%	21.5%
7	Erection of PEB Structure of main hanger and Office viz., columns, purlins, roof truss, bracings & other related works.	20%	41.5%
8	Completion of roof sheet and cladding galvalume sheet, Poly carbonate sheet (sky light), wind turbine ventilators, Roof gutters and rain water down take pipes	10%	51.5%
9	Completion of VDF flooring inside PEB hangar including electrical cable duct & Vitrified Tile laying in the Office Area, including Epoxy/Polyaspartic Coating.	6%	57.5%

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<u>Sl. No.</u>	<u>Description</u>	<u>Individual in % on contract value in EPC mode</u>	<u>Cumulative on Contract value in EPC Mode</u>
10	Completion of bituminous Road, storm water drains, UG sumps for Domestic purpose and Firefighting purpose, plinth protections all-round the hangar & Other Buildings and Soak pit for toilet, Overhead PVC Tanks, Parking roofing and concrete hard standing.	10%	67.5%
11	Completion of office area, Toilet blocks with roofing & false ceiling, flooring, doors & windows, Sanitary fittings, water lines and sanitary lines including connection to chambers/soak pit/underground drain, Rolling shutters for hangar	10%	77.5%
	Electrical work		
12	Completion of supply, installation, commissioning & testing of internal electrical work viz., wiring, electrical sockets, light fitting & fixtures, AC's, telephone and data networking, DB's, UPS, firefighting systems of PEB Hangar, office area, toilet blocks.	6%	83.5%
13	Completion of supply, installation, commissioning & testing of external electrical work viz., electrical panel, transformer, cabling works, street light fittings, compound wall light fittings, CCTV.	6.5%	90%
14	Completion of Finishing works viz., internal & external painting works of Hangar, Office Building and other buildings & locks, Sign/Name boards, landscaping work and any other works as per scope of work. Obtaining Occupancy/ completion certificate on completion of project & submission of as-built drawings & handing over the project	10%	100%

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GENERAL CONDITIONS OF CONTRACT

(UNDER WHICH THE WORKS HEREINAFTER DESCRIBED ARE TO BE PERFORMED)

1. INTERPRETATION CLAUSE:

In these General Conditions and the Specifications attached, the word 'COMPANY' shall be held to mean 'BEML LIMITED', the work 'CONTRACTOR' shall be held to mean one or more contractor or contractors jointly or generally engaged in the works to which these General Conditions and the specifications relate, and shall include his/their heirs, executors and administrators. The word 'ENGINEER-IN-CHARGE, shall be held to mean a Member of the staff of the BEML to supervise the work. The expression 'SITE OF WORKS, shall be held to mean the extent of land which the Company places at the disposal of the Contractor from time to time for the purpose of executing the contract works. The word 'DRAWINGS' shall be held to mean 'THE PLANS, SECTIONS, ELEVATIONS AND DETAILS OF WORKS' annexed to the contract and such further drawings, as the Engineer in charge may issue from time to time during the progress of the works and shall be held to include tracings and photographic prints. The word SPECIFICATIONS shall be held to include the tender General Conditions, Specifications, Schedule of Prices and Bill of Quantities.

2. CONTRACTOR TO EXECUTE CONTRACT WITH THE COMPANY:

The successful contractor shall within SEVEN DAYS of the acceptance of his tender enter into and execute a formal indenture of contract to be prepared by the Company's Solicitor. The contractor shall not be entitled to make any charges for perusal of the contract.

3. CONTRACT NOT TO BE ASSIGNED OR UNDERLET AND CONSEQUENCE OF GRATUITIES BEING GIVEN:

The contractor shall not assign or make over the contract to any other person, or underlet it, or make a sub-contract with any workmen or workman for the execution of any part of work(s), but shall employ his own workmen for the labour thereof, who shall be paid by him in wages by the day. And in case the Contractor assigns or makes over the contract, or underlet or make sub-contract, contrary to this clause or either himself or his agents give any gratuity to any employee of the Company, the company shall be at liberty to terminate the contract.

4. TENDER OR AGREED RATE:

The contractor shall agree not to petition for revision of rates tendered for by him under any circumstances at any stage of the work, either during execution or when the final claims are settled.

5. In the event of anything evidently necessary to the due and complete performance of the works being omitted to be shown on the drawings or described in the specification or being omitted from the Bill of Quantities through oversight or error, the contractor shall, notwithstanding, execute (in the most perfect manner) all such works the same as if they had been severally shown, described and included without being entitled to make any extra claim or charge.

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6. The contractor shall satisfy himself or shall be deemed to have satisfied himself as to the nature of the sub-soil, the three dimensions, levels, character and nature of all roads, existing drains, sewers, water, gas or other mains, electric cables and other things as regards any connection they may have with the works the subject of the contract, and he shall also inspect the site of the works and surroundings, the means of access there to and egress therefrom and shall generally obtain his own information on all matters and things which can in any manner influence his tender, No claims for extra works otherwise will be allowed in consequence of any misunderstandings, error or incorrect information on these points, or of any other inaccuracies in reference thereto, which may appear on the drawings, or in the specification, nor shall the contract be nullified in consequence of any such misunderstanding, error incorrect information or in-accuracies.

7. **ENGINEER IN CHARGE'S ORDERS TO COMMENCE WORKS AND AS TO NON-DELIVERY OF SITE:**

The Contractor having signed the contract, the Chief Engineer will forthwith give him notice to commence the works and the contractor shall upon receipt of such notice, commence the works and carry them on at such point and points and in such portions as the Engineer in charge may direct.

The Company shall, with the Engineer in charge written order to commence the works, give to the contractor, the use of so much of the site of works, as may in the opinion of the Chief Engineer be required in order to enable the contractor to commence and continue the construction of the works, and shall from time to time as works proceed give the contractor the use of such further portions of such site as the Engineer in charge may from time to time consider proper in that behalf, but the non delivery in manner aforesaid of the use of such site or any portion thereof shall not vitiate or affect the contract, nor any provision contained in the specification nor entitle the contractor to any increased allowance in respect of money.

8. **SETTING OUT WORKS AND NOTICES:**

The Contractor shall set out the whole of the works and be responsible for the correctness of the position, levels and dimensions of the several works, according to the drawings and written instructions of the Engineer in charge. If at any time during the progress of the works any error shall appear or arise in the position, levels or dimensions of the several works, the contractors on being required to do so by the Engineer in charge, shall at his own expense remove and amend the works to the satisfaction of the Engineer in charge, notwithstanding that he may have been assisted by Engineer-In-Charge in setting out the same. The contractor shall observe, perform and comply with the requirements of all statutes and byelaws and shall also serve notice on the authorities having control of the road surfaces before the same are broken up and he shall likewise serve notices on the owners of the sewers, drains, water, gas or other mains, electric cables and other things which may be in any way affected by the execution of the contract work.

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9. **TIME OF WORKING (APPLIES ONLY FOR FACTORY AREA):**

As the entry and exit of the workmen into the factory area is controlled by the Security Authorities of the Factory, the contractor should strictly adhere to the timings of entry and exit, laid down by the authorities and the rates quoted are deemed to include for this provision.

10. **NIGHT WORKS:**

The works shall be carried on day and night continuously without extra charge. If bad or treacherous ground be met with or if there be any other causes whatsoever, which in the judgment of the Engineer-In-Charge, requires, it, but no work shall be carried on in the night without the knowledge and sanction of the Engineer-in-charge.

11. **WATCHMEN, LIGHTS, ETC., TO BE PROVIDED BY THE CONTRACTOR:**

The Contractor, shall at his own cost provide night watchmen to all parts of the work where necessary required by the Engineer-in-charge. He shall also keep all open trenches, excavation or other dangerous places properly and sufficiently lighted between sunset and sunrise, and shall provide and fix proper fencings and boarding and temporary bridges to protect and assist the public traffic. The contractor shall also at his own cost erect temporary fences on the site of works where required by the Engineer-in-charge.

12. **TEST MATERIALS:**

All the materials to be used in and on every part of the works shall be subjected from time to time to such tests as the Consultant and Engineer in charge may direct. Such tests shall be performed at the expense of the contractor but the Company shall refund to the Contractor the actual cost of testing any of the materials which are proved to conform with the conditions of the specifications but the samples shall be, in all cases, selected by the Engineer in charge, and supplied by the contractor as part of the contract. If, at any time, any materials so tested is not equal to the test for such materials, hereinafter specified, the same shall be removed from the site of works, and other materials substituted therefor, but in the absence of any specified test, the decision of the Engineer in charge, shall be final as to whether the said material or materials shall be used in the works, or forthwith removed and other materials substituted.

13. **MATERIALS, TOOLS ETC., BROUGHT ON TO WORKS TO BECOME PROPERTY OF COMPANY DURING CONTINUANCE OF CONTRACT:**

All materials, tools, implements and other things brought by the Contractor upon Company's works shall there upon become and shall continue to be the absolute property of the Company and be considered in its possession, the Contractor having only the right of using the same for the purpose of the contract. After the works have been completed and all obligations under the contract duly fulfilled, the Company shall return to the Contractor the tools, implements and surplus or waste materials then remaining upon the Company's works to be removed by him forth-with and cleared away. Nevertheless, the Company shall not at any time be liable for the loss of any of the said materials, tools, implements or other things but the whole of this liability shall fall upon the Contractor, the same as if they had remained in his possession.

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14. POWER TO VARY WORKS:

The Company shall have full power and authority from time to time, and at all times, to order works additional to the contract, and to make and issue such further drawings and to give such further instructions and direction as may appear necessary or proper for the guidance of the contractor and the good and sufficient execution of the contract, and the contractor shall receive, execute, obey and be bound by the said further drawings, instruction and directions, according to the true intent and meaning thereof and as fully and effectively as though they had accompanied, or had been mentioned or referred to in the original drawings and specifications. The company shall also have power to vary or alter the levels or position of any of the works, the subject of this contract, or may order any of the works contemplated thereby to be omitted with or without the substitution, of any other works in lieu thereof, or may order any work, or any portion of work executed or partly executed, to be removed, changed or altered, and if needed that other work shall be substituted in lieu thereof and the difference of expense occasioned by any such increase, diminution or alterations so ordered and directed shall be added to or deducted from the amount of the contract agreeable to the prices for similar works set forth in the Bill of Quantities, or failing which the Schedule of Prices attached hereto, and in the absence of any such similar work being scheduled, the Engineer in charge shall determine the amount to be paid for such additions or deductions. The company will in no case become liable to the payment of any charge in respect of any such conditions, alteration or deviations, unless the instructions for the performance of the same shall have been given in writing and signed by the Engineer in charge, nor unless such instructions distinctly states that the matter thereof is to be subject of an extra or varied charge, in the form of an order hereinafter set forth nor unless the claim thereof shall be made in writing, signed by the Contractor and in the form of claim herein as set forth and properly filled up nor unless such claim be made within the week in which the work is executed and materials used, and before the same shall have been placed out of view, or beyond check of measurement, nor unless the value of any altered or varied works, or any further works shall wherever practicable have been determined and settled before such altered, varied or further works shall have been commenced. Such value in case of dispute shall be ascertained by the Engineer in charge, who shall determine in all cases whether such previous determination and settlements were practicable or not, and in all the cases where he shall consider the same to have been practicable, the contractor shall not be entitled to make any claim in respect of such altered, or varied or further works if it shall, in the opinion of the Engineer in charge, if any special instance become necessary to execute any additional or substituted work, either wholly or in part by the day the claim therefor, shall not be recognized unless the contractor shall have delivered to the Engineer-in-charge, within one working day, and so on from day to day a true and exact list of the name, occupations, time and wages of the several workmen engaged during the previous day on any and every such works in respect of when a charge 'BY THE DAY' is intended to be made in the next succeeding weekly claim of contractor, Nevertheless, no charge 'BY THE DAY' shall be made unless, in the opinion of the Engineer in charge, it is impracticable or unreasonable to determine the value of the amount of work in manner otherwise provided for in these general conditions. All such instruction given by the Engineer in charge, shall be in the following form or as near there to as may be:

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ORDER No:

CONTRACT No.

In pursuance of clause-15 of the General Conditions of contract and subject as there in mentioned, we request you to perform the under mentioned at the under mentioned price, namely :

SUCH WORK
BEING IN

ADDITIONAL TO
SUBSTITUTION FOR

WORK INCLUDED
IN THE

tender, and we request you to omit the under mentioned work at the under mentioned prices, viz.

DATE:

SIGNATURE OF THE ENGINEER-IN-CHARGE.

AND every claim shall be made in the following form:

CLAIM No: _____ CONTRACT No. _____

Contractors claim under and subject to Clause-18 of the General Conditions of Contract for the week ended Saturday the _____ day of _____ in respect of other than contract work.

Work Claimed For		Number Of Engi- neer's Order	Price of Similar Work in Bill of Quantity of Schedule.		Where no Similar Work in Bill of Quantity Of Schedule.	Amount claimed Rs.
Quan- tity in Mtrs.	Des- crip- tion.		Number/ Number of items	Value of Item.	Schedule Price of Labour.	

DATE:

SIGNATURE OF THE CONTRACTOR 'S

The claim shall be delivered to the Engineer-in-charge , for his examination before being transmitted by him to the Chief Engineer and shall be subject in all respect to the consideration, ratification and correction of the Chief Engineer who shall be at liberty to decide whether any such claim entitle the Contractor to any, and if so, what extra charges, according to the true meaning and intention of the specifications, and whether any and what allowance shall be made to the company in respect of any work or obligation to be performed under the contract and from the performance of which the contractor may be or become directly or consequently relived by reasons of any such additional or substituted works.

16. SUSPENSION OF WORK:

The Contractor(s) shall suspend the execution of work or any part or parts thereof whenever called upon in writing by the Chief Engineer to do so and shall not resume work thereon until so directed in writing by the Chief Engineer. The Contractor will be allowed by the Chief Engineer an Extension of time (not less than the period of suspension) for completion of the item or group of items of work for which a separate period of completion is given in the contract and of which the suspended work forms part but not other claims in this respect for completion or otherwise, however, shall

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be admitted. The contractors shall have no claim to any payment of compensation or otherwise, whatsoever on account of suspension of work.

17. WORKS TO BE EXECUTED IN APPROVED MANNER:

The works, the subject of the contract, specified and provided for or that they may be necessary to be done to form and complete any part thereof, shall be executed and completed in the best substantial manner, with materials of the best and most approved quality of their respective kinds agreeable to the particulars contained in or implied by the specification or as referred to and represented by the drawings and memoranda thereon or as referred to by any of the said further drawings and memoranda thereon or as referred to by any of the said further drawings, instructions and directions and shall be to the full satisfaction of the Engineer in charge, . The Engineer in charge, shall have full liberty at all reasonable time to inspect and examine the works, materials and workmanship, and may every such time reject any or all of such works, materials and workmanship which to him/them or either of them may appear defective, unfit or improper for the several purposes to which they are applied, or intended to be applied, or as not in accordance with the specification or the said drawings, memoranda, instruction or directions respectively.

18. WORK TO BE CARRIED ON WITH EXPEDITION FAILING WHICH THE COMPANY MAY EMPLOY OTHER CONTRACTOR WITHOUT VITIATING THE CONTRACT:

The Contractor shall commence to carry on the works with due diligence, and as such expedition as the Engineer in charge, may reasonably expect, having regard to the specified time of completion of the whole of the works. In case the contractor fails to do so, or neglect to provide proper and sufficient materials, or to employ a sufficient number of workmen to execute the work, then the company shall have full power, without vitiating the contract, to take the works wholly or in part out the hands of the contractor to engage or employ any other person or workmen to procure all requisite materials and implements for the due execution and completion of the said works, and the cost and charges incurred by the company in so doing shall be ascertained by the Chief Engineer and be paid for or allowed to the company by the contractor and it shall be competent for the Company to deduct the amount of such costs and charges along with overheads out of any sum or sums due or to become due from the company to the contractor under this or any other contract.

19. INFERIOR MATERIALS OR WORKMANSHIP TO BE AMENDED:

The materials as well as the workmanship and finish of the whole of the contract works shall be best of their kind and should any materials be brought upon the site of works or on any land or property of the company or on the places where the operations are being carried out in connection with the works, which in the judgment of the Engineer in charge, is of an inferior description and improper to be used in works, the said materials shall be removed. All inferior workmanship or finish shall be amended by and at the cost of the contractor forthwith, or within such period or periods as the Engineer in charge, may direct, and the contractor shall pull down, amend and reconstruct any work he may have erected upon an insecure or insufficient foundation or that he may have insufficiently secured and protected against immediate and future injuries, whether arising or likely to arise in future from weight, pressure action of water or otherwise, on being required to do so by the Engineer in

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charge, . In case the contractor neglects or refuses to remove such materials or comply with such directions it shall be lawful for the Chief Engineer, on behalf of the company and by its agents, servants and workmen to remove the materials and amend the workmanship and finish, so objected, to, or any part thereof, and to replace the same with such other materials, workmanship and finish as shall be satisfactory to the company and on the certificate of the Chief Engineer to deduct the expense thereby incurred, or to which the company may be put or be liable or which may be incidental thereto, from the amount of any sum or sums due to or become due to contractor, or to recover the same by action at law or otherwise from the contractor as the company may determine.

When it is apparent to the Chief Engineer that defects exist in the work, or that damage or accident has occurred to the works, or that the works are not upheld or maintained in good sound and water tight conditions, or repair or in working order, but the cause thereof is not apparent, a general requisition in writing by the Chief Engineer to the contractor to amend, make good or maintain the works in sound, perfect and water tight conditions shall be under no obligation to specify the work or repair, but such requisition shall be conclusive evidence against the contractor that he is not performing his obligations under the contract.

20. **EMERGENCY POWERS:**

In the event of any accident or failure occurring in or on the works, which, in the opinion of the Chief Engineer requires immediate attention either during construction or during the period of maintenance the company may by their own or other workmen make necessary repairs at the expenses of the contractor.

21. **OPENING TO BE MADE FOR EXAMINATION OF WORKS:**

Should Engineer-in-charge require it for their more perfect satisfaction, the contractor shall at any period during the continuance of the contract, pull down any part of the work and make such openings, as to such extent through any part of the said work as the Engineer-in-charge, may direct and the contractor shall make such works good again to his or their satisfaction. Should the work be found faulty in any respect, the whole of the expenses thereby incurred shall be defrayed by the contractor but if otherwise by the company.

22. **PRECAUTIONS AGAINST INJURY TO PROPERTY ADJACENT TO THE WORK IN PROGRESS:**

The contractor shall take special care, by the erection of temporary fences and by every other means which circumstances may render necessary, to prevent all injury and damage to or trespass upon the lands, roads, fences or property adjacent to the site of works and shall confine the passage of his workmen to existing public roads, foot paths. He shall likewise pay and satisfy all claims whatsoever and from whomsoever, for temporary occupation, way-leaves, damages, the trespass or otherwise, in reference to the said lands, roads, fences and property adjacent and bear the company harmless from any and all such claims. If any greater extent of land than the site of work be required by the contractor for his operations, he shall obtain and occupy the same at his own cost and charge.

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23. PRECAUTIONS AGAINST ACCIDENTS OR INJURY:

The Contractor shall, at his own expense, shore, sling, protect, support, alter, restore make good and maintain as may be necessary, all buildings, water and gas pipes, sewers, drains, electric cables and other things which may be disturbed, exposed or injured during the execution of works or in consequence of the execution of the works and shall also provide any extra timbering which may be temporarily required and all labour in fixing and removing the same and shall, at his own expenses provide for the continuous use of all buildings, pipes, sewers, drains electric cable, water sources and other things, the use of which may be liable to interruption during the progress of the work. The Contractor shall at his own expense restore all such buildings, water and gas pipes, sewers, drains, electric cables and other things to the satisfaction of the owners thereof and he shall like wise, at his own expense, construct and maintain such works as may be necessary for the due permanent support of all such buildings, pipe, sewers, drains, electric cables and other things met with in the construction of works, and shall indemnify, save, harmless and keep indemnified, the Company and its officers from and against all action, suits, claims, penalties, liabilities, cost, expenses and demands whatsoever, by reasons or on account of damage to such buildings, pipes, sewers, drains, electric cables and other things whether caused by the execution of the contract works or in the insufficiency of the aforesaid permanent support. The Company may deduct the expenses thereby incurred or to which the Company or its Officers may thereby be put or be liable or which may be incidental thereto from, the amount of any sum or sums due or to become due to the contractor or may recover the same by action at law or otherwise from the contractor and the Company may compromise any such action suits or other proceedings, or such terms as it shall see fit and contractor shall thereupon forthwith pay the Company the sum or sums paid by the Company upon the occasion thereof, and shall in every case pay such sum or sums as shall fully indemnify the Company according to the present stipulation.

24. COVERING OF CONSTRUCTION SITE:

The Contractor shall, at his own expense, make arrangements to cover/wrap the construction site in mesh material of green color to prevent the dust from the escaping into the adjoining Properties or premises and atmosphere and also to prevent accidental fall of debris onto the people. The contractor at his own expense should make arrangements to remove the cover after completion of the work.

25. ROYALTIES:

The Contractor shall be liable to pay all royalties chargeable on Government or Company materials required for the work.

26. REJECTED MATERIALS:

All rejected materials will at once be removed from site by the contractor to such distance as may be desired, failing which the company after giving three days notice in writing may do so and recover the cost of removal from the contractor.

27. COMPANY'S PLANT:

No Company's plant, materials or Labour will ordinarily be lent or hired to the contractor. Exceptional cases must have the approval of the company in writing.

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28. SCOPE OF COMPLETION:

Completion includes completion of all work in accordance with the plans and specifications, removal of all yard mess accumulated during construction, levelling and cleaning up the site and generally cleaning the whole building or works.

29. FINAL MEASUREMENTS TIME:

The final measurement must invariably be preceded by a thorough remeasurement of the whole of the work, performed which will be made by the company's authorized representative and at which the contractor or his accredited agent must be present. For this purpose, a written notice will be sent to him at least THREE DAYS before the date fixed for the measurements, appointing the day, hour and place of meeting. Should he not attend to this the measurements will proceed without him, and he will be precluded from making any protest.

30. If a dispute arises between the company and contractor as to the quantity or quality of work, performed, involving sum larger than Rs.500.00, the contractor may appeal in writing to the company for remeasurement or reappraisal, as the case may be. If the company considers that Contractors claim is valid, they may appoint an officer, other than the Officer who made the final measurement and inspection vide Paragraph-28 above, and his report shall be considered as final and binding on the contractor. The Contractor shall have a representative present when the remeasurement or the appraisal is being made.

31. ATTENTION:

- i) Time will be the essence of the contract and the contractor is to complete the whole of the work in the time stated in the tender, subject to the schedule of conditions.
- ii) The contractor is to provide at all times during the progress of work and the maintenance period proper means of access, with ladders, gangways, etc., and the necessary attendance to move and adopt as directed for the inspection of their representative (no separate rate will be allowed).
- iii) The Contractor is to keep all persons under his control and within the boundaries of the site and he will be held responsible for the care of the works generally until their completion including all works executed and materials deposited in the sites by himself or suppliers, together with all risks arising from weather, carelessness of operatives, damages or loss by thefts or by any other cause, and is to allow for all necessary watching and protective lighting.

32. LABOUR ACTS:

- i. The Contractors shall employ labour in sufficient number to achieve the required rates of progress and quality to ensure best workmanship of the degree required under various specifications and to the satisfaction of Engineer-in-charge. The contractors shall remain liable for the payment of all wages or other remunerations to his labourers or employees under the Payment of Wages Act 1936, Minimum Wages Act 1948, Employers liability Act 1938, Workmen's Compensation Act 1923, ESI Act 1948, or any other Acts or enactments relating there to and rules framed there under from time to time.

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In the event, the contractor fails or neglects to pay any amount due by him under the workman's compensation Act, ESI Act or other Labour Laws, the Company is entitled to withhold the same from any other amount payable by it to the contractor and remit the same to the authority concerned and such payment shall be binding on the contractor.

- ii. In the event of contract, the contractor shall be responsible for implementing the provision of the contractor Labour Act in to and also responsible for any repercussions arising there from for non-compliance thereof.
- iii. The intending tenderers should quote their organization registration/code numbers for the registration with ESI/PF Authorities. It may be noted that other things being equal, preference will be given in the acceptance of tender to firms having independent registration with ESI/PF Authorities.
- iv. BEML shall arrange to recover from the contractors bills requisite amounts of both Employer's and Employee's contribution for both ESI and PF calculated on the basis of 25% of the value being taken as the labour cost and recover such amounts from the respective bills and keep the same in suspense account. On production of requisite documentary evidence supporting payment of ESI/PF Authorities/supported by the acquaintance rills, the amount earlier recovered from contractor's bills shall be paid duly adjusting the shortfall in remittance, if any.
- v. In the event of any accident/injury/disablement, the contractor shall arrange to pay the requisite compensation legally payable to the concerned employee/dependents and also indemnify to BEML in case of any claim arising therefore later.
- vi. CONTRACTOR should employ only ESI Registered workmen on any item of work. If contractors have workman who have not yet been Registered under the ESI they should ensure that the workers have been duly registered before employing them in work.
- vii. CONTRACTORS should produce his MUSTER ROLL duly certified by Engineer-in-charge once in a month say before 5th of each month to the Pay roll section, so that the ESI amount can be ascertained and recovered/payment obtained irrespective of the fact whether work order is issued or not.
- viii. If there is any default on the part of the contractor, an estimated amount towards ESI liability including the would-be penalty/damage, will be recovered by the company from the bills of the contractors.
- ix. CONTRACTORS should maintain all registers and records required for ESI, PF Payment of wages, etc., under the statutes and produce them for verification as and when called for by company inspecting Authorities.
- x. THE contractor shall disperse the wages to the workmen in the presence of the authorized representative of the company.

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- xi. CONTRACT Labour (Regulation and Abolition) Act 1970 under section 12 and Rule 21 prescribes that every contractor who employs labour for executing contract works should obtain license from Labour Authorities to carry out any works contract, so that the labourers employed by the contractor are not deprived of the facilities provided under the Act. Such license shall be produced to BEML Authority before commencement of the work.
33. **TRAINING APPRENTICES:**
The CONTRACTOR shall comply with the provision of the Apprentices Act 1961 and the rules and order issued there under from time to time. If he fails to do so his failure will be a breach of contract and the Accepting Officer may in his discretion cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provision of the Act.
34. **FAIR WAGES:**
The Contractor shall not pay less than fair wage to labourers, workmen engaged by him on the work. Fair wages means wage for the various categories of labour, workmen, fixed from time to time by the labour authorities of the area. The contractor shall ascertain the minimum fair wages prevailing in the area before submitting his tender. The Contractor should also abide by labour regulations in regard to the payment of wages, wage period, fines and deductions from wages, maintenance of wage book, wage slip, publication of scales of wage and other terms of employment, inspection and submission of periodical returns and all other matter relating to labour rule in force.
35. **JURISDICTION**
Courts of Bangalore alone shall have jurisdiction to decide any issue / dispute arising out of the Arbitration or this Purchase Order in exclusion of all other Courts. However, jurisdiction of any other court may be accepted by mutual discussion and agreement by and between BEML and the Supplier.
36. **ARBITRATION**
Disputes if any, arising between BEML and the supplier in connection with this Purchase Order or any other matters connected herewith, the same will be mutually discussed and settled, failing which, the disputes shall be referred to a sole arbitrator to be appointed by BEML. The arbitration / proceedings shall be in accordance with the provisions of Arbitration and Conciliation Act 1996 and Rules framed there under. The place of arbitration shall be at Bangalore or any other place mutually decided by and between BEML and the supplier and all arbitration proceedings shall be conducted in English language. The award of the sole arbitrator shall be final and binding on all the parties.
37. **DISPUTE RESOLUTION AND JURISDICTION:**
All disputes or differences whatsoever arising between the parties out of or relating to the construction, meaning and operation or effect of the contract or the breach thereof arising during the progress of work or after completion or abandonment thereof shall be mutually discussed and settled amicably by conciliation Committees/ Councils comprising of independent subject experts constituted by BEML, failing which, the

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dispute shall be settled by arbitration consisting of sole arbitrator appointed by the Company in accordance with the provisions of Arbitration and Conciliation Act 1996 and the arbitration proceedings shall be conducted at the place of awarding of original contract.

The court at the place of awarding of contract only shall have jurisdiction to entertain any dispute/matter relating to the contract

In case of any dispute between the Company and any other Public Sector / Government department relating to the interpretation and application of the provisions of the contract, such disputes / differences shall be referred by either party to the arbitration of one of the arbitrators in the Department of Public Enterprises. The Arbitration and Conciliation Act, 1996 and amendment thereof shall not be applicable to this clause. Any party aggrieved by such award, shall make further reference to the Ministry of Law and Justice, Government of India.

In case BEML challenges the Arbitral Award passed against it, 75% of the award may be paid to the contractor / concessionaire against Bank Guarantee without prejudice to the final order of the Court in the matter under challenge. The payment may be made into a designated Escrow Account with the stipulation that the amount so released will be used, first, for payment of lenders' dues, second, for completion of the project and then for completion of other projects of BEML, as mutually agreed / decided. Any balance remaining in the Escrow Account subsequent to settlement of lenders' dues and completion of projects of BEML, may be allowed to be used by the contractor / concessionaire with the prior approval of the lead banker and BEML.

In case the subsequent court order required refund of the money paid by BEML to the contractor / concessionaire against Bank Guarantee, the amount shall be refunded by the contractor / concessionaire along with appropriate interest. The rate of interest on such refund amount shall be decided by BEML keeping in view the cost of capital to BEML or the rate of interest provided for in the Contract Agreement or the rate of interest awarded under the Arbitral Award under challenge.

SPECIAL CONDITIONS OF CONTRACT

1. The tender shall remain open for acceptance for a period of 90 days from the date on which the tenders are due to be submitted.
2. The contractor shall visit the site to acquaint himself with site conditions and study the drawings and specifications in detail prior to tendering, and no claims will be entertained later on the ground of ignorance or otherwise of the conditions under which the work shall have to be executed.
3. The contractor shall arrange for at least one qualified Engineer with experience in similar construction work to be at the work spot throughout the period of construction to ensure correct undertaking and execution of the work as per drawings and specifications.

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4. The setting of the building shall be done by the contractor himself. All measurements shall comply with the dimensions noted on the drawings if any. The contractor shall construct centre line pillars and Bench Marks wherever necessary at his own cost and the setting out shall be got checked, approved and certified by the Engineer-in-charge before execution of the work.
5. Foundations shall generally conform to the dimension indicated on the drawings, unless the nature of soil after excavation examined by the Engineer-in-charge, of works necessitates modifications. The foundation trenches for RCC columns and walls after excavation indicated on the drawing shall be got inspected, approved and certificated by the Engineer-in-charge of works before laying concrete.
6. Provision shall be made during the progress of work for embedding Electric conduits etc., wherever necessary as directed. Openings shall be left for service lines, machine foundations, as required and as per instructions of the Engineer-in-charge.
7. Care shall be taken in execution of work not to damage service lines etc., coming in the way of construction. If any damage is caused in the lines, the cost of replacing or repairs shall be borne by the contractor.
8. CONTRACTOR(S) shall provide himself/themselves with requisite number of welding sets, mixers with hoppers, vibrators builders hoist, Tools, meters and testing equipments, transport vehicles, etc., required for the complete satisfactory execution of work.
9. **WATER:** Water for construction activities shall be arranged by the Successful contractor at his own cost
10. **POWER SUPPLY :** Power/Electricity for construction activities shall be arranged by Successful Contractor at his own cost.
11. **TAXES:** Shall be as per SEZ norms
12. THE Contractor shall agree to execute the work progressively in co-ordination with the concerned officers or shop supervisors and as directed by Engineer-in-charge.
13. THE specifications contained in the MES Schedule (referred to in the tender) in appropriate sections shall apply to this contract to the extent applicable, cement co-efficient shall also form part of MES Schedule.
14. **VALUATION OF DEVIATIONS:**
Every deviation shall be subject to the limits specified as under:
 - a. The net value of all deviations (additions and deductions) including non-tendered items, of the value of work completed, shall not exceed 20% of the approved contract value and 40% in respect of any individual item, indicated in schedule A-BOQ
 - b. In case of non-tendered items, the total value of such non-tendered items shall not exceed 5% of the approved contract value.

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The basis for ascertaining the non-tendered items shall be as follows:

- (i) The value of all deviations shall be ascertained by measurements, on the basis of the rates or prices for similar work in the bill of quantities of the same contract in so far as such rates or prices apply.
- (ii) Where the rates or prices in Bill of Quantities do not apply, the value shall be based upon rates or prices deduced there from to the extent practicable to do so.
- (iii) The rates for NT items shall be based on the SSR rates after proportionate adjustment in comparison with the tendered rates of like items in the contract. The basis to be adopted for working out the NT rate is the comparison of the NT item with similar trade item in the bill of Quantity for which the contractor has quoted.
- (iv) wherever NT items cannot be deduced from the like items quoted in the tender or SSR rates, market rate shall be allowed based on vouchers/invoices as per the actual including transportation, labour etc., plus 10% overheads and the labour rate shall be taken as per minimum wages in force, based on the recommendations of the Chief Engineer.
- (v) As a last resort a tender shall be floated to ascertain the rate for NT items. All Deviations in contracts for works including non-tendered items shall be approved by the Competent Authority as per DoP within the limits prescribed in the contract. The deviations and NT items shall be technically checked and processed by the respective "Engineer-in-charge " in concurrence with Finance Department of the respective division.

15. **PROVISION OF FITTING/FIXTURES OF DIFFERENT MAKE:**

The contractor shall provide the same make of fittings/fixtures specified in the tender documents unless he has quoted for other equivalent for genuine reasons. In case due to exigency of the work and difficult market conditions, the contractor is not able to provide the same make, he shall be allowed to provide equivalent approved make subject to his obtaining the concurrence of the Chief Engineer for the price adjustment as between the quotation and the purchase price for the item involved. The base for reckoning shall be the date of purchase. The contractor shall produce purchase invoice as a proof of expenditure for the items other than those specified in the tender documents allowed for incorporation in the work. Construction Department in respective Divisions/Regional/District Offices shall ensure the reasonableness of the rate in the purchase bill produced by the contractor. The price adjustment shall be the difference between the two makes on the date of purchase.

16. The Company reserves the right to accept the tender in parts i.e. on the basis of lowest quotation in each part or as a whole, at its own discretion and hence it is important that the tenders take sufficient care and quote reasonable rates in each part, so that if one part only is separated and entrusted to one Contractor he should be able to do it without difficulty. The rates quoted for similar items should be consistent. THE company also reserves the right to accept the lowest or any other tender at its discretion without assigning any reasons whatsoever.

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17. EXTENSION OF TIME:

Time is the essence of the contract. The contractor is bound to complete the work within the stipulated time. The Chief Engineer has to assess the delay arising out of default of the contractor. Where the delay is due to default of the contractor, and if there is no financial loss due to such delay, the Chief Engineer can recommend for grant of extension of time by the same authority who accepted the tender/awarded the contract, subject to recording the reasons for granting such extension of time.

Where the delay is due to default of the contractor, and if there is a financial loss due to such delay, the extension of time requires the approval of Competent Authority. In the absence of Competent Authority approval, Liquidated Damages for delay in completion of the work shall become enforceable.

Where the delay is not due to default of the contractor, for example: - a) not providing clear work front to the contractor by the Company, b) Company's delay in decision making for changes relating to original work., etc necessary extension of time shall be granted with the approval of Competent Authority, as per DoP without sanctioning escalation claimed by the contractor except statutory levies.

Extension of time when granted with the approval of the Competent Authority as per Company's Delegation of Powers shall have the effect of rendering the clause 'Liquidated Damages for delay in completion work' inoperative upto the period of extension of time so granted unless otherwise specifically stated.

18. LIQUIDATED DAMAGES FOR DELAY IN COMPLETION OF WORKS

In case the Contractor fails to complete the works and clear the site on or before the stipulated time mentioned in the Work order he shall without prejudice to any other right or remedy of the Company in this behalf pay, as agreed Liquidated Damages and not as penalty, pay sum equal to 0.5% of the Contract sum (excluding non tendered/extra items, if any) for every week's delay subject to maximum of 10% of the total final bill value of the Contract.

Liquidated Damages shall be applicable in the following cases:

- a) where the contractor fails to complete the work within the stipulated time;
- b) where the extension of time is granted with levy of LD;
- c) Where extension of time is granted without levy of LD but the contractor has failed to complete the work within the extended period.

The amount of Liquidated Damages shall be adjusted or set off against any sum payable to the contractor under this or any other contract/s awarded by the Company.

In case where the contract is subjected to levy of LD, the Chief Engineer shall be the authorized person to issue 'Work Completion Certificate', which shall be final and binding the Company as well as the Contractor concerned.

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19. FORE-CLOSURE OF CONTRACT:

It shall be noted that at any time after acceptance of the tender, the Company can decide to abandon or reduce the scope of work for any reason whatsoever, the Chief Engineer shall give notice in writing to that effect to the contractor. The compensation, if any, payable for such foreclosure of work shall be discussed mutually between the Company and the contractor and settled after taking into consideration the loss suffered by the contractor on account of foreclosure of the contract. The contractor shall have no claim for any compensation whatsoever on account of any profit or advantage which he might have derived consequent to foreclosure of the whole or part of the works. The Company shall have the option to take over the contractor's materials or any part thereof, either brought to the site. The amount of compensation payable to the contractor due to foreclosure shall be decided by the authority one level above the level of the authority competent to award the contract, or by the CMD.

20. BEML revised General Conditions together with BEML specifications will form part of the contract. Should there be any discrepancy between the provision in the Bill of quantities and drawings, the former shall be deemed to take precedence there over.

21. No modification or change of specifications in the bill of quantities shall normally be accepted and such changes are to be rejected. Acceptance of such deviations shall be at the discretion of the Engineer-in-charge.

22. EARNEST MONEY DEPOSIT:

TENDERES should submit their tender accompanied by EMD of value indicated in the tender. It should be paid by bank draft or Bankers Cheque drawn in favour of the Company along with tenders. Tender without Earnest money deposit will be rejected. On finalization of the tender, Earnest money deposit will be refunded to unsuccessful tenderers under proper acknowledgement.

In case, the contractor/firm after quoting, withdraws from the tender or refuse/delay in commencing the work or stop the work abruptly, their EMD/ SD, as the case may be, will be forfeited. No interest amount is payable on EMD.

23. SECURITY DEPOSIT:

The successful tenderer shall be required to furnish security deposit for the fulfillment of contract and amount shall be 10% of the value of the contract, to be paid by the contractor. No waiver can be allowed in this regard. Such security deposit shall not entail any interest payment on refund.

The contractor shall choose any one of the following options for payment of security deposit in writing as under:

(i)The contractor shall within 30 days of acceptance of the contract deposit the difference between Earnest Money and full Security Deposit by Demand Draft/Banker's cheque drawn on any of the commercial bank made in favour of Company. PEMD held with BEML cannot be considered for such adjustment in the Security Deposit payable by the contractor.

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(ii) Bank guarantee from any commercial bank equivalent to the amount of security deposit valid for a period required by BEML shall also be accepted.

(iii) Security Deposit amount shall be deducted from the running bills of the contractor at the rate of 10% or higher of the gross value of each bill. However, the entire security deposit amount shall be deducted before completion of 90% of work.

The above deposit shall be held by the Company as security for the satisfactory performance of the contract. All compensations or other sums or money payable by the contractor to the Company under the terms and conditions of this contract shall be deducted from this security deposit or from any other sums that shall be due, or shall become due to the contractor by the Company on any account whatsoever and in the event of the security deposit being reduced by reasons of any such deductions the contractor shall within ten days thereafter make good these deductions.

23.1 REFUND OF SECURITY DEPOSIT

The above deposit, as the name itself signifies, shall be held as Security for performance of the contract. One half of the Security Deposit i.e. 50% shall be refunded to the contractor on completion of the contract based on the recommendations of the Chief Engineer in writing that the work has been physically completed in all respects.

The balance 50% of the security deposit shall be refunded to the contractor on written demand from the contractor after the expiry of the DEFECT LIABILITY PERIOD or on payment of final bill whichever is later, with the recommendation of the Chief Engineer, provided the Chief Engineer is satisfied that there are no dues outstanding against the contractor.

If the Security Deposit is in the form of Bank Guarantee, on completion of the contract, the BG already with BEML will be returned to the contractor. The contractor has to then submit a fresh Bank Guarantee for 50% of the security deposit value valid for a period of 1 year from the actual date of completion of the entire contract shall be deposited by the contractor.

Any refund of security deposit shall be made only with the recommendation of the Chief Engineer.

24. RUNNING ACCOUNT REMITTANCE: (RAR) – As per schedule of payments

As per Expenditure Management Commission, Government of India, in large projects above Rs.10.0 Crore, 50% of running bill amount shall be released within 7 days of submission without a detailed check on the claim. The balance 50% shall be released within another 7 days after the claim is scrutinized as per procedure in order to get more competitive bids and for speedy execution as cash flow is a critical requirement in a project.

The contractor shall also be paid 'Material Advance' for the material brought to site for incorporation in the work duly certified by the Engineer-in-charge. For such materials brought inside by the contractor, the contractor has to produce necessary test certificates from reputed Testing Laboratories for steel and hypothecation deed duly executed by the contractor in favour of the Company on a non-judicial stamp paper of requisite value.

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Payment of 'Material Advance shall be recommended by the Engineer-in-charge for materials required to be used in the works as per the planned progress of work. However, payment of material advance against materials brought to site by the contractor ahead of scheduled progress of work shall be considered not exceeding 75% of the value of such material in exceptional cases with the approval of Competent Authority, with justification recorded in writing.

RAR payments shall be regulated to the extent of the value of work done, with due adjustments for recoveries and other payments (including material advance/adhoc payments made if any) effected so far against the contract.

RAR Payments will be released within 20 working days after the work has been completed, submission of Bill & recommendations by the BEML Engineer-In-Charge. The Work Schedule should not to be linked to the release of the RAR payment at any juncture of the contract.

25. PRE-FINAL RARs

Pre-final RAR is raised only when the work is completed and the complete measurement is recorded in the MBs by the Engineer-in-charge designated by Chief Engineer duly accepted by the contractor.

Pre-final RAR shall be sent to the Accounts Department by the Engineer-in-charge Only after Technical check of the measurements and endorsement in the MBs by the Chief Engineer.

The Engineer-in-charge, shall recommend for payment not exceeding 90% of the value of work completed with due adjustments for recoveries and RAR payments (including Material advance if any) effected so far against the contract.

Such bills shall be paid within 2 weeks from the date of their receipt in the Finance Department after scrutiny and check for the correctness of the bill duly linking up with the MBs.

The recommendation of Pre-final RAR is based on the discretion of the Chief Engineer/ Engineer-In-Charge on case to case basis.

26. ADHOC PAYMENTS:

If payment for final bill could not be arranged within 5 months from the date of the completion of the contract for genuine reasons other than undue delay in submitting the final bill by the contractor, an Adhoc payment not exceeding 90% of the value of the work done after making all necessary deductions for statutory dues, RAR payments, Material advances if any paid, shall be recommended by the Chief Engineer with the approval of respective Complex chief/ respective Business Group Director. Such Adhoc payment can be recommended only if the contractor is having concurrent running contracts in the Complex.

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The following guide-lines shall be adopted while making such adhoc payment;

- Such payment shall not exceed 90% of the final bill value.
- All conditions of contract and recoveries to be effected shall be taken care before effecting Adhoc payment.
- If a contractor has no other contract concurrently running in the Complex, adhoc payment need not be made. Instead, final bill shall be expedited and paid atleast within six months from the date of completion of the contract.

27. **COMPLETION CERTIFICATE:**

As soon as the Contractor completes the work assigned to him the same shall be inspected and if found satisfactory shall be taken over by the Chief Engineer. A "Completion Certificate" shall be issued to the contractor within 30 days from the date the contractor has given request for the same. If there are minor defects which can be rectified even after the building has been taken over, the defects shall be listed out and the contractor shall be asked to rectify the same before the final bill is submitted. The final bill along with the completion certificate duly certified by the Engineer in charge, shall be submitted to Finance Department for payment. The completion certificate shall have the following details:

- a) Particulars of the work and Contract Number,
- b) The date of work order to commence the work,
- c) Date of completion as per original contract agreement,
- d) Actual work done value.
- e) Extension of time if any, granted,
- f) Date on which contractor was required to complete the work,
- g) Actual date of completion and taking over by BEML.

28. **FINAL BILL:**

On completion of the work and the recording of measurements in the MBs, a final bill shall be submitted by the contractor. On receipt of the final bill duly signed by the contractor, the same shall be scrutinized by the Engineer-in-charge to see that the claim is in order.

The final bill prepared by the Department and accepted by the contractor, shall be accompanied with the following documents:

- Original Completion certificate
- A statement showing stores issued for incorporation in the work, stores actually incorporated by the contractor, theoretical quantity of stores required for work and whether there has been any over issue/under issue of the stores to the contractors.
- No claim certificate duly signed by the contractor
- Original Contractor's All Risk Insurance Policy covering up to the actual date of completion of work.
- Contract Agreement
- Revised estimate as duly approved by Competent Authority.
- ESI & PF statement duly co-ordinated by Welfare Section.
- Measurement books duly technically checked by Engineer in charge.
- Any other documents which are specified by the Management from time to time.

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The Engineer-in-charge has to certify in the work Completion certificate as well as in the Measurement Book, that the work is executed in conformity with the contract specification, drawings and other conditions. The final bill duly checked and coordinated by the Engineer-in-charge shall be sent to the Finance Department through Chief Engineer along with the documents stated above.

29. **DEFECT LIABILITY PERIOD:**

The period of maintenance for the subject work shall be **ONE YEAR**.

During this period, the contractor shall be responsible to rectify all the defects noticed and attributable to the work done by him in respect of works executed by him. As soon as any defect in the work come to the notice, the Chief Engineer shall inform the contractor, in writing, to rectify the defect and inform him that in case he fails to do so within a reasonable time, the Company would rectify the defects at his risk and expense as per the conditions of the contract.

If the contractor does not attend to the rectifications in spite of repeated requests, the Company shall proceed at his risk and expense and get the work completed. The cost incurred by the Company shall be recovered from the defaulting contractor. The Company shall forfeit the balance 50% of the Security Deposit retained and adjust this amount against the expenses so incurred. The balance amount, if any, after recovering the expenses incurred shall be refunded to the contractor. In case the amount available is insufficient to cover the expenses in full, that portion of the expenditure still remaining unadjusted shall be recovered from any of the subsequent bills due for payment to the contractor against any other contract.

Even after such adjustments, the amount available is insufficient to cover the expenses in full, the Company reserves the right to take legal course of action to recover such unadjusted amount.

30. **CONTRACTORS LIABILITY AND INSURANCE:**

From commencement to completion of the works, the contractor shall take full responsibility taking precautions to prevent loss or damage. He shall be liable for any damage or loss that shall happen to the works or any part thereof.

In addition, the contractor shall indemnify and keep the Company indemnified against all losses and claims for injuries or damages to any person or any property whatsoever which shall arise out of or in consequence of the construction works. For this purpose, the contractor shall take an insurance policy-"**Contractors All Risks Insurance**"- to cover the risks, as per the Conditions of the Contract. The insurance policy has to be kept valid till the work is completed and the possession handed over to the Company. The policy shall be taken at his cost showing the Company as the 'principal' to simplify the work in the matter of raising claims and settlement thereof.

31. MATERIALS obtained from demolition/dismantling work shall remain with the Contractor at his own risk till such time the Contractor removes them to BEML stores or as directed within 10 days from the date of completion. If he fails to remove such dismantled materials to BEML stores or as directed within 10 days from the date of completion, the Engineer-in-charge will be entitled to remove them at the risk and cost of the Contractor.

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32. THE various provisions in this special condition shall be deemed to take precedence over those in General conditions/specifications to the extent applicable.
33. The quoted rate is deemed to include for execution of work in a phased manner/part by part if necessary and as directed by BEML and no extension of time nor extra claims shall be entertained in the regard.

I/WE AGREE TO EXECUTE THE ABOVE AS PER DRAWINGS AND SPECIFICATIONS OF BEML WITHIN THE STIPULATED TIME FROM THE DATE OF ISSUE OF WORK ORDER. I/WE ARE ENCLOSING HERewith A RECEIPT/DRAFT NO. _____ DTD. _____ FOR RS. _____ TOWARDS EARNEST MONEY DEPOSIT, ADHERING TO THE REVISED SPECIAL CONDITIONS (1987) AND REVISED CONDITIONS MENTIONED.

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PARTICULAR SPECIFICATIONS

1. GENERAL:

These particular Specifications are to be read in conjunction with the specifications contained in the MES Standard Schedule of Rates 2020, i.e. PART I - Specifications and PART II-Rates, including errata (here-in-after referred to as the MES Schedule) and specifications given hereunder and the drawings mentioned in these documents, rates and specifications thereon shall be deemed to apply to the works unless mentioned otherwise in the tender documents. In case of discrepancy between the documents, viz., Bill of Quantities, Particular specifications and Drawings, the following order of precedence shall be followed:

- (a) Bill of Quantities
- (b) Particular specifications
- (c) Drawings

2. SCOPE OF THE CONTRACT:

THE contract comprises full, final and entire completion of Subject Work all as shown in Schedule-A and as described in these Particular Specifications and detailed in the drawings given in the list of drawings enclosed hereto and also subject to the General and Special Conditions of Contract. The work shall be completed in stipulated period.

THE time for completion is to be reckoned from the date of commencement mentioned in the Purchase Order.

3. SAMPLES OF MATERIALS:

THE contractor shall produce samples of all materials and shall obtain approval of Engineer-in-Charge in writing before he places bulk order for the material for incorporation in the works. In respect of materials for which samples are not kept or detailed specifications are not given herein-after, such materials shall comply with the latest relevant Indian Standard Specifications as published upto the date of issue of this tender.

- 3.1. THE contractor shall on demand produce original receipted vouchers / invoices in respect of materials supplied by him.

4. PROPRIETARY MATERIALS:

THE contractor shall ensure that proprietary materials like paints etc., are brought to site in original sealed containers / packing and bear the manufacturer's markings.

5. CLEANING DOWN:

THE contractor shall clean all the floors, walls, glass panes, fittings and fixtures, etc., touch up all painter's works and carryout all other necessary items of work in connection therewith and leave the whole premises clean and tidy before handing over the buildings.

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6. ATTENDANCE UPON BUILDING:

THE contractor shall permit free access and generally afford facilities and usual convenience to other agencies and or departmental workmen to carryout works under separate arrangements.

THEREFORE, the rates quoted by the contractor shall be deemed to include for all such costs as consequence for having to work in the circumstances described above and no claim shall in any event be entertained on this account.

7. EXCAVATION AND EARTH WORK:

THE earthwork, excavation, filling etc., in ordinary/hard soil shall be carried out to the extent ordered/indicated in the drawings. Excavation inadvertently made deeper than what is ordered or indicated in the drawings shall be made good by the contractor with PCC 1:4:8 using not larger than 40mm graded granite aggregate with out extra cost to the company.

The earth obtained from excavation shall be filled, spread, watered and well rammed in layers not exc. 20 cm thick around foundations, under floors and in other situations to make up levels / slopes as directed/shown in drawings. Use of vegetable soil, turf, peat and black cotton soil in filling shall not be permitted. No lead whatsoever shall be allowed extra for earth obtained from excavation and reused for filing around foundation and under floors. If on the actual excavation, hard rock or ordinary rock is met with the contractor shall intimate the Engineer-in-charge in writing for making necessary price adjustment. Excavation done in ordinary/hard rock will be priced as an authorized extra item.

8. CONCRETE MATERIALS

8.1 **CEMENT:** Cement used in the work shall be ordinary PORTLAND/PUZZOLANA cement and shall be stored by the contractor in a dry place under proper cover and stack. Stacks shall not be more than 10 bags high.

8.2 **FINE AGGREGATE:** Fine aggregate (sand) for concrete shall be of approved quality natural sand. Fine aggregate shall be clean, free from any admixture of clay, loam, silt, organic matter and other impurities.

8.3 **COARSE AGGREGATE:** Coarse aggregate for concrete shall be of approved broken granite stone and shall conform to IS-383-1963.

8.4 **WATER:** Water used in concrete shall be clean, fresh and non-saline.

Rate: Rate quoted for cement concrete works in Schedule-A shall include the cost for the use and waste of formwork as necessary.

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Unless otherwise specified, the rates quoted against various items of schedule 'A' shall not include for plastering. The various concrete surfaces shall be finished as under:

- a) All concrete surfaces occurring in conjunction with wall and the like: Immediately after the formwork is removed all irregularities shall be removed and air holes shall be stopped with CM 1:3 so that the surface is ready for application of plaster which is paid for separately.
- b) Soffits & edges of roofs, soffits & edges of chajjas, facias, soffits and sides of beams and columns, exposed surfaces of shelves, not occurring with conjunction of walls: These shall be finished as described above to receive plastering which is paid for separately.
- c) Exposed surfaces of concrete members other than those specified above and tops and edges of chajjas and the like, independent columns and other concrete surfaces not specified to be plastered: These surfaces shall be finished fair and smooth. On account of any reason whatsoever, if fair and smooth surface cannot be achieved, the contractor is permitted to plaster these surfaces with CM 1:3, to obtain a fair, uniform and smooth finish. However, he shall ensure that the thickness of plaster is kept to a minimum. The contractor shall not be paid anything extra for the application of this CM 1:3 plaster.
- d) The rate quoted for pre-cast concrete shall include for cost involved in the cutting of grooves, etc., in walls, etc, and fixing as specified.

8.5 **Mixing concrete:**

All concrete shall be mixed in mechanical concrete mixers with hopper. The mixing drum shall be washed and cleaned on completion of work, every day and on every stoppage of work, if the stoppage exceeds 30 minutes. If the total quantity of concreting proposed to be carried out in any one day does not exceed 0.25 cum hand mixing may be adopted for such concrete.

9. **FORM WORK**

All form work shall be as mentioned in MES schedule 2009, Part I, section 7, Where concrete is to be finished smooth, the forms shall be wrought on the inside surface. Contractor may at his discretion use steel or plywood form work in lieu of timber formwork at no extra cost to the Company.

10. **COMPACTING CONCRETE**

The compacting of concrete shall be done all as specified in SSR Part I – Specifications. The mechanical vibrator shall be used to compact the concrete in footing, columns and beams etc., and vibrator shall be used to compact the PCC 1:2:4 in flooring and shop irrespective of the fact whether the thickness of concrete exceeds 30 cm or not.

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11. CONCRETE CUBES AND TESTING

Test cubes shall be taken from the important concrete works for testing purpose at the sole discretion of the Engineer-in-charge. Such tests shall be performed at the expense of the contractor.

12. HOLLOW CONCRETE BLOCKS:

Hollow Concrete blocks shall conform to the requirements of IS-2185 specifications for hollow concrete blocks. Hollow blocks shall be sound, free from cracks, broken edges, honey combing and other defects that would interfere with the proper placing of blocks or impair the strength or performance of construction. The water absorption shall not exceed 240 kg./Cum.

TOLERANCE: The maximum variation in the dimensions shall be not more than +/- 1.5mm for height and breadth and +/- 3.0mm for length.

The total width of cavity in any block measured horizontally at right angles to the face of the block as laid in the wall, shall not exceed 65% of the total breadth (that is the overall dimensions of the block at right angle to the face of the block as laid in wall) of the block. The volume of the cavity in the block shall not exceed 50% of the gross volume of the block.

Surface characteristics of blocks intended to be plastered or rendered, shall be such as to provide a satisfactory bond with the plaster.

Faces of blocks shall be flat and rectangular, opposite faces shall be parallel and all arises shall be square. The ends of the blocks which form the vertical joints may be plain butt unless tongue and grooved or double grooved ends are indicated.

The block shall be cured in an immersion tank or in a curing yard and shall be kept continuously moist for atleast 21 days. When the blocks are cured in an immersion tank, the water of the tank shall be changed atleast every four days.

After curing, the blocks shall be dried in shade before being used on the work. They shall be stacked with voids horizontal to facilitate through passage of air. The blocks shall be allowed to complete their initial shrinkage before they are laid in the wall.

Construction of Masonry:

For single storeyed buildings, the hollows of blocks in the foundation and basement masonry shall be filled up with sand and only the top foundation course shall be of solid blocks. But for two or more storeyed buildings solid concrete blocks shall be used in foundation courses, plinth and basement walls unless otherwise indicated. The hollow blocks are used, their hollows shall be filled up with cement concrete 1:3:6 using 12.5 mm nominal size aggregate.

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Wetting of Blocks:

Blocks need not be wetted before or during laying in the walls. In case of the climatic condition so required, the top and the sides of the blocks may only be slightly moistened so as to prevent absorption of water from the mortar and ensure the development of the required bond with the mortar.

Laying:

Blocks shall be laid in mortar, as indicated and the roughly bedded in mortar, spread over the entire top surface of the previous course of blocks to a uniform layer of not less than 10mm in thickness and not more than 12mm.

All courses shall be laid truly horizontal and all vertical joints made truly vertical. Blocks shall break joints with those above and below for not less than quarter of their length pre-cast half length closers (and not cut from full size blocks) shall be used for battered faces; bedding shall be at right angles to the face unless other-wise directed. Care shall be taken during construction to see that edges of blocks are not damaged.

INTERSECTING WALLS:

When two walls meet or intersect and courses are to be held up at the same time, a true masonry bond between atleast 50 percent of the units at the intersection is necessary. When such intersecting walls are laid up separately pockets with 20mm maximum vertical spacing shall be left in the 1st wall laid. The corresponding course of the 2nd wall shall be built into these pockets.

Fixtures, fittings, etc., shall be built into the masonry in cement and sand mortar 1:3 while laying the blocks where possible. Hold-fasts shall be built into the joints of masonry during laying.

Holes, chases, sleeves, openings, etc., of the required size and shape shall be formed in the masonry with special blocks while laying, for fixing in pipes, service lines, passage of water, etc. After service lines, pipes, etc., are fixed voids left, if any, shall be filled up with cement concrete 1:3:6 type and neatly finished. Construction details specified for block masonry which have not been specified herein shall apply to hollow blocks masonry to the extent applicable.

FINISHES:

Renderings shall not be applied to the walls when these are wet. Joints for plastering or pointing, as specified shall be raked to a depth of 12mm. Joints on internal faces, unless otherwise indicated shall be raked for plastering.

13. SIZE STONE MASONRY IN CEMENT MORTAR IN FOUNDATIONS

Face work shall be hammer dressed with no stone to tail into a point. No face stone to be narrower or shorter than its height. Thickness of mortar in beds and joints shall not exceed 20mm. HEIGHT OF COURSES 150mm to 230mm but no course shall be greater in height than any course below.

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- 13.1 BOND OR THROUGH STONES: Bond or through stones shall be provided at 1.5m in every course and are to be staggered. No stone shall tail into a point. Bond stones shall extend from the front to the back of walls. For walls 600mm thick and under, bond stones shall be in one piece. For walls over 600mm thick they shall either be in one piece (if available locally) or be in series of headers, each header overlapping the adjoining one by not less than 150mm. No header shall preferable be less than 600mm in length.
- 13.2 Quoins and jambs to be squared back in beds and joints are faced as ordered.
- 13.3 HEARTING Stone to be not less than 150mm in any direction, carefully laid hammered down into place with wooden mallet and solidly bedded with mortar. The hearting must not be brought to same level as the facing stones with spalls or pinning, which are only to be used as wedges in the hearting.
- 14. SIZE STONE MASONRY IN PLINTH AND SUPER STRUCTURE**
- Facing stone shall have hammer dressed faces with no stone tailing into a point. No face stone shall be narrower or shorter than its height. Face beds shall be squared back at least 50mm and joints 25mm. No spalls or pinning shall show on face. All other details shall be as detailed herein before for foundations.
- 15. BRICK MASONRY IN CEMENT MORTAR**
- Brick shall be table moulded / clamp burnt bricks locally available of approved quality having a minimum compressive strength of 50kgs/Sq.cm from the local kilns and shall be used in bonds as specified in MES schedule 2009 Part I, Section – 5.
- 16. WOOD WORK JOINERY**
- 16.1 TIMBER: Unless otherwise specified the timber used in all situations shall be of good quality of wood as detailed in relevant items of schedule ‘A’. The timber shall be well kiln seasoned and free from defects of any sort. The contractor should particularly note that all timber required for the work should be brought to site, cut to required sizes and properly stacked and stores well ahead of actual use as directed by the Engineer-in-charge.
- 16.2 FINISH: Unless otherwise specified timber surfaces shall be wrought and sand papered smooth. However, backs of chowkats can be left clean saw and shall be tarred and sanded before erecting in position.
- 16.3 TOLERANCE: Tolerance for wrought faces of joinery is as specified in MES schedule SSR Part I, Section 7, except in the case of practical board panel shutter/boarding/planking wooden beads which shall hold the full thickness/sizes shown in drawings. The overall dimensions of door etc., as shown in drawing shall be maintained.
- 16.4 PLUGGING: Wooden plugs for fixing timber fixtures and fittings and the like in walling or concrete shall be cut to size, tapered and built into walls. ‘PHIL’ plugs made out of asbestos cement powder where specified in the drawings or as directed shall be used wherever raw plugs are specified in the drawings or as directed the same shall be fixed after punching holes of the correct size.

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- 16.5 JOINERY: Provide timber doors and other joinery all as per details shown in drawings and as specified in schedule 'A'. All door shutters shall be fixed so that there is a clearance of 3mm between the finished floor level and the bottom edge of shutter. The chowkats size is as shown in the drawings/described in Schedule 'A'.
- 16.6 Nails and spikes shall not be used in joinery works. Bamboo wood pins of proper sizes only shall be used. All joiner's works chowkats shall be cut and framed together soon after commencement of building operations, but shall not be wedged up until required and passed. Any portion that may warp or develop shakes or other defects shall be replaced with new ones before being placed in position. Timber chowkats shall be fixed in position all as directed and shown on drawings.
- 16.7 Paneled and battened doors/flush shutters/glazed doors : Styles and rails of skeleton frames for shutters shall be out of well kiln seasoned timber of the species specified in Schedule 'A' and panels shall be as specified in Schedule 'A'. The flush shutters shall be having solid core type with well seasoned block board and commercial veneered face and approved by the Engineer -in-charge. All flush shutters shall be provided with internal lipping to a total depth of 25mm. The width of lapping shall be equal to the thickness of core.

17. STEEL WINDOWS / VENTILATORS:

- 17.1 Steel windows / ventilators shall conform to IS-1038 / IS-1361 and of approved make. The fittings such as handles etc., shall be as specified and in Schedule- A & shall be fixed as per manufacturers instructions.
- 17.2 For steel windows, steel hold fasts of size shown in drawings and fabricated all as per "DETAILS of lugs for brick or concrete" shown in the leaflet of manufacturer shall be provided. The number of hold fasts/lugs shall be as indicated in the above leaflets.
- 17.3 Glass panes using standard anodized aluminium beads fixed with chromium plated flat head steel screws or as specified in schedule 'A'. Glazing to windows shall be of selected quality as specified in schedule-A. MS guard bars/weld mesh to the windows, wherever indicated shall be provided as specified and shown in drawings.

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18. STEEL AND IRON WORK

Steel and iron work shall be executed all as indicated in the drawings and as per standard practice in the best workmanship like manner and shall conform to IS-1786 and IS-226.

- 18.1 The rate quoted by the contractor against structural steel items of Schedule 'A' shall be applicable for various steel sections required and used for the work. Bolts and nuts required for the work shall be procured by the contractor.
- 18.2 The preamble under structural steel work of SSR Part I and other relevant notes and specification of SSR shall apply to this work. One coat of red oxide shall be coated to the structural steel surfaces before erection and two coats of approved enamel paint shall be done after fabrication and hoisting on all exposed surfaces and before fixing the sheets. No deductions shall however be made for the two coats of painting in respect of structural steel surfaces of columns, trusses, etc., which are embedded in brick or stone or concrete after erection and fixing in position is complete.
- 18.3 STEEL bars incorporated in the reinforcement concrete work shall be all as per details shown on the drawings.
- 18.4 LAPS and crossings shall be tied with mild steel wire annealed of size not less than 0.9mm conforming to IS 280, to be procured by the contractor.
- 18.5 Welding of bars shall be done where indicated or directed by Engineer in charge in lieu of lapping in accordance with IS-2751. Welding in general shall be done as described for structural work. Bars upto and including 20mm shall be lap welded and those larger than 20mm dia shall be butt welded. IN case of lap welds, the length of lap shall be five times the dia or 100mm whichever is greater. The throat thickness shall not be less than 3m for bars upto 16mm dia and 5mm for bar over 16mm dia and upto 20mm dia.
- 18.6 All structural steel shall be fabricated and fixed at site as and where shown in the drawings. Welding should be of arc welding and shall conform to IS-823-1692. Electrodes used for welding should conform to IS-814-1963. Welding design and welded fabrication of standard steel shall conform to IS-816-1956 and IS-800-1962 respectively.
- 18.7 The contractor shall be responsible for accurate fixing of reinforcement shown in drawings and shall not place any concrete until the reinforcement has been inspected in position, and passed (one day prior to concreting) by the Engineer-in-charge ,. The contractor shall take necessary precautions to prevent any displacement of reinforcement bars during concreting.
- 18.8 The weight of all types of steel/bars shall be calculated from the weight conversion given in the relevant ISI tables and the sections for which conversion is not available in the ISI tables; the actual weight conversion of such sections shall be arrived at for the same. The alignment shall be made carefully to suit the operation of EOT cranes all as directed by the Engineer in charge.

Flat/sloped RCC roof shall be provided all as shown on drawings and as specified and directed complete.

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19. WATER PROOF COURSE

Water proof course with lime concrete and machine made pressed clay tiles: The roof surface shall be wire brushed and cleaned of all dust and foreign matter before laying the coba. Lime and brick aggregate coba shall be made out of good quality fat lime and brick aggregate 20mm size mixed in preparation of 1:3 by volume and allowed to cure for 3 days. The cubed brick bat coba shall be spread over the roof slab to the required thickness and slopes etc. and consolidated with wooden mallets using beal fruits and gur all as specified of section 11 of SSR Part I, and finished rough. Over the coba, one course of machine made tiles or other equivalent and approved make shall be laid all as specified in Bill of Quantities.

20. AC RAIN WATER PIPES

Rain water pipes and accessories shall be as manufactured by approved make. The rain water pipe and the accessories shall be fixed in position as per the code of Practice published by M/s. Asbestos Cement Pvt. Ltd., and as directed. The rate quoted includes cost of accessories like bends, shoes, painted MS clamps etc., and fixing. The centre line length of the accessories shall be added to the length of pipes for purpose of measurements. The rain water pipes shall conform to IS-1626-1960.

Unplasticised PVC rain water pipes

Unplasticised PVC pipes shall conform to IS-4985. The pipes shall be reasonably sound. Internal and external surfaces of the pipes shall be smooth and clean, and free from other defects. Pipes shall be of pressure ratings as indicated in Schedule-A- Bill of quantities.

21. FLOORING

Floors shall be provided all as shown in drawings and as detailed in Schedule-A. Floors shall be laid to level and/or to slopes as shown in drawings or as directed. Slopes shall be achieved by giving required slope to earth filling under floors. Floors shall be sunk wherever shown in drawings. Floors shall be carried through all doors and other openings. Exposed edges of floors shall be finished in the same manner as for the top surface.

- 21.1 Concrete floors: Sub-floors with PCC 1:4:8 PCC 1:4:8 sub-floor shall be laid over well consolidated sub-base. The surface shall be left rough to receive the screeding/floor finish. Concrete floors shall be laid as and where indicated in drawings/as directed.
- 21.2 PCC floors/ramps: PCC 1:2:4 shall be laid over in alternative bays system all as described in MES schedule2009, part I, Section 13. The top surface shall be finished as specified in schedule 'A'.
- 21.3 Vacuum Concrete the concrete flooring with vacuum treatment to be done by M/s. Authorized firms, or other equivalent reputed agency. The concrete should be designed for medium workability and should not be dry. Surface vibrators should be used after laying the concrete. If necessary, poker

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vibrators should precede surface vibrators. The top layer must be leveled with surface vibrators and then vacuum processing should start after placing top cover and filter pads. Cleaning with skim floater using planning disc should be done immediately after vacuum processing. Blade polishing should be done after the concrete has hardened sufficiently.

- 21.4 Flooring/Skirting with Terrazo tiles Terrazo tiles for floor shall conform to IS-1237-1959 and shall be laid over cement mortar, screed, etc., all as specified and detailed in Schedule 'A'.
- 21.5 Glazed Tiles Glazed tiles shall conform to relevant IS and shall be laid all as per SSR Part I and all as specified/detailed in Schedule 'A'.

22. PLINTH PROTECTION

Plinth protection 75mm thick shall be provided. Plinth protection need not be provided where portions are covered by steps and ramps and shall be laid to slope as directed and in bays of length not exc. 3M adopting alternate bay system. The top surface shall be finished smooth using extra cement.

23. PLASTERING GENERAL

The surface to be plastered shall be prepared by raking out joints and wetting the surface thoroughly. Curing of plastering work shall be properly done by means of stirrup pumps or similar devices. The contractor shall take every precaution right from the commencement of plaster work to prevent any defect that may appear on the surface of plaster and shall be responsible to make good any portion of plaster, which in the opinion of the Engineer -in-charge requires removal and re-doing.

- 23.1 Sand for plastering and pointing work shall be as specified herein before for RCC works.
- 23.2 The thickness specified in relevant Schedule 'A' item is the thickness above the proudest part of brick/concrete/stone surface and is exclusive of dubbing coat. Any dubbing coat that may be necessary to bring the surface to uniform level shall be provided by contractor and shall be of the same mix specified for the plastering. The rate quoted for Schedule 'A' items shall be deemed to be inclusive for the dubbing coat also.
- 23.3 No rounding off of external and internal angles or corners of plaster shall be done. The junction/arises shall be made true and square.
- 23.4 Plastering on walls, dados and skirting shall be returned along with the jambs of opening in walls and cills of windows.
- 23.5 Plastered surfaces shall be finished fair and even.
- 23.6 Cement Mortar Plastering: Plain cement plaster or ordinary cement plaster where shown in drawings/schedule of finishes shall be of mix/proportion and

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thickness as specified in Schedule 'A' finished fair and even without using extra cement.

- 23.7 Keyed pointing: Keyed pointing to size stone masonry shall be in CM 1:4 all as MES SSR, part I.
- 23.8 Rough cast plastering : Provide rough cast plastering of thickness over and including cement mortar screeding as specified in Schedule A. The mixing laying of rough cast plastering shall be as specified in SSR Part I 2009.

24. WHITE COLOUR WASH

Before application of white wash/colour wash etc., the surface shall be prepared, to a clean and fair surface.

- 24.1 White wash: White wash shall be carried out to surface as indicated in drawings/schedule of finishes and all as directed by the Engineer -in-charge. White wash shall be carried out in three coats.
- 24.2 Distemper: Provide two coats of approved oil bound washable distemper over a coat of primer (cement primer) all as specified in Schedule 'A'. Shade/tint shall be as directed by the Engineer -in-charge. The surface to be distempered shall be prepared with a coat of full putty.
- 24.3 Cement based paint: Two coats of cement based paint such as Snowcem or Surfacedem or other equivalent and approved make & colour, shall be applied on surfaces all as directed and as per manufacturer's instructions.

25. BUILDER'S HARDWARE

Builder's hardware of sizes shall be provided and fixed as specified in Bill of Quantities and detailed in drawings. Sample of fittings shall be first got approved by the Engineer -in-charge before placing bulk orders for the same.

- 25.1 Butt hinges for doors shall be MS cold rolled steel butt hinges all as specified in Bill of Quantities and as shown on drawings.

26. GLAZING:

Unless otherwise specified, glazing for doors, windows, ventilators etc., shall be with not less than 3mm thick plain glass and of the best quality. The glass shall be free from bubbles, scratches and other imperfections. The glass shall not be wavy.

27. PAINTING

Paint shall comply with the relevant IS and shall be of approved manufacture. Paints for priming coat, under coat and finishing coat shall be of the same manufacture. The colour and the manufacture shall be approved by Engineer-in-charge.

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- 27.1 Painting to steel surfaces with Enamel paint: Where painting to steel surface with enamel paint is indicated drawings/schedule of finishes, the surface shall be prepared, cleaned with sand paper to remove scales and rust. Apply a coat red oxide primer followed by two coats of synthetic enamel paint of approved make, and finish the surface so as to have a highly glossy appearance. Tints/shade of paint shall be superior tint and shall be approved by Engineer-in-charge. The tint for under and finishing coat shall be same.

Painting to Timber surfaces: Where painting to timber surfaces with approved synthetic enamel paint is indicated in drawings/schedule 'A' the surface shall be prepared and given a priming coat using approved primer. The surface shall then be bodied in with liquid wood filler of approved make, allowed to dry and rubbed with sand paper, after moistening the surface with water. Clean the surface and then apply two coats of paint of approved quality. Tint/shade of paint shall be superior tint and shall be approved by Engineer-in-charge. The tint for under and finishing coat shall be the same.

- 27.2 Unless otherwise specified, the rate quoted for relevant items of Schedule 'A' such as doors, windows, etc, shall include for two coats of painting (one under coat and one finishing coat) over a coat of primer all as specified hereinbefore.

28. SOLING

The stone for soling shall be hard granite sound and free from decay. Stones shall be clean and of height equal to the thickness of soling and as described in MES schedule SSR, Part-I, Stones shall not be laid flat on the sub-grade. The soling stones shall be hand packed to the proper width and to the profile as directed and by laying correct to the template placed 5M apart, soling stones shall be laid resting on their broad bases with their height equal to the thickness of soling & the largest dimensions at right angles to the centre line. Stones shall be laid breaking joints in close contact with each other not leaning against each other. Larger size stones shall be arranged at the edges and centre. All interstices between stones shall be wedged on by smaller size stones of suitable size, well driven by crowbars, hammers to ensure tight packing. After hand packing and checking of high and low spots by templates is complete the soling shall be consolidated by power roller of 10 tones weight all as specified in Part-I, section-20 of MES schedule A, covering up the surface during rolling by blinding with stone spalls and gravel, high and low spots being corrected by removing or adding the soling respectively as the case may be. Over the consolidated soling, moorum shall be spread to a thickness of 50mm, to proper levels, watered and rolled all as specified in Bill of Quantities.

29. WATER BOUND MACADAM

Water bound macadam shall be provided with granite stone aggregate conforming to the grading given in the table, for granite or trap of SSR Part I, under section 20, SSR part-I. The rolling shall be done with 8/10 tonne power roller. Over the consolidated surface, moorum shall be spread to a thickness of 25mm to proper level, watered and well rolled/consolidated all as per Bill of Quantities and as directed.

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30. FERRO CEMENT WATER TANKS : MATERIALS : CEMENT :

- 30.1 Ordinary Portland cement shall be in accordance with IS-269-1976
- 30.2 Fine aggregate: Aggregate shall generally conform to IS-383-197
- 30.3 Reinforcement: Shall be in accordance with following specification
- a) Weld Mesh – IS 412 or 1962
 - b) Chicken Mesh IS 1566 of 1967
 - c) 6mm MS Rods IS 432-1966, Part I
- 30.4 Fabrication: A weld mesh and mild steel rod cage shall be cut and bent and covered either side using chicken mesh/square woven mesh all as shown in drawings. Both meshes and main mild steel rods shall be tied together using binding wire along with fittings such as drain off pipe, inlet pipe outlet pipes, over flow pipe connections and fittings hooks in correct position.
- 30.5 Casting Platform: Tank will be cast on leveled masonry platform and before casting it shall be lubricated in advance by mould oil.
- 30.6 Mixing and casting: Cement and fine river sand shall be mixed dry in proportion 1:2 by weight. Water cement ratio shall be 0.5 for preparing the wet mortar. Bottom slab shall be cast first then vertical walls can be plastered with cement mortar. Small pieces of plywood shall be used on opposite side as a back up and mortar shall be forced into cage from outside and finished to required thickness by following the same process from either side. Both inside and outside surfaces should be finished fine after initial setting of mortar. Cover shall be casted separately and finished fine.
- 30.7 Curing: The tank shall be cured by gunny bags after 24 hours of casting for 7 days. The water shall be slowly filled and leakages observed shall be made good.
- 30.8 Painting: The tank shall be painted by using tar mastic paint IS-158/8 grade by giving one coat internally after positioning the tank, 2 coats of snowcem of approved colour shall be given for external surface.
- 30.9 Testing: The contractor shall fill the tank initially in three days after painting and ensure that water level shall not fall 3mm in the 24 hours.

31. ROLLING SHUTTERS

Rolling shutters shall be of standard or other equal and approved make and shall be provided all as specified latest SSR. The rolling shutters shall be painted with two coats of paint over one shop coat of red oxide primer.

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32 ALUMINIUM DOORS

Aluminum doors shall be fabricated and fixed in position all as shown in drawings and as described in Schedule 'A'. The rates quoted is deemed to include the cost of fixtures, locking arrangements etc., all as shown in drawings/directed.

SLIDING DOOR WITH TRACK: Providing sliding doors with track and other joinery all as per details shown in drawings and as specified in Schedule 'A'. All categories of steel required for the work shall be of contractors supply. Other conditions as given in Clause 'STEEL AND IRON WORK' shall be applicable in this case also.

32.1 MS Sheet gutters: MS sheet gutters shall be fabricated and fixed in position including all the necessary accessories in accordance with the relevant IS and as directed by the Engineer -in-charge. MS sheets required for the work shall be arranged by the contractor.

33. WATER SUPPLY

Water supply (General) Work shall be carried out by licensed plumber and layout of the pipes shall be as directed by the Engineer -in-charge. All pipes shall be truly vertical/horizontal and bending of pipe shall not be permitted. Appropriate specials shall be invariably used at bends, junctions and connections.

33.1 Materials: Water tubing with all accessories shall be of mild steel tubes, galvanized, screwed, medium quality or light quality (conforming to IS1239) as specified in Schedule 'A'. Stop cocks shall be screw down, high pressure pattern, heavy quality and shall conform to IS 731, stop cocks shall be of brass. Bib cocks, shall be of brass chromium plated suitable for high pressure, conforming to IS-1795-1961.

33.2 Laying and Fixing of pipes :Pipes running on walls/floors/roofs inside the building shall be fixed on surface of walls/roofs all as specified in Section-18, of MES 2004, Part I. However, where pipes are shown through the floors the same shall be laid in position before laying the concrete floors. Where pipes are laid underground, trenches, shall be excavated as and where directed.

33.3 In jointing the pipes, the inside of the socket and the screwed end of the pipes shall be smeared with red lead and few turns and hemp yard wrapped round the screwed end of the pipe, which shall then be screwed in the socket with a pipe wrench.

33.4 Making Good: Unless otherwise specified all holes cut in floors/walls, chases cut in walls, etc., for providing pipes etc., shall be made good by the contractor in the same manner and mix as specified for that portion of wall and or floor. Cutting in to wall or floors shall be restricted to the bare minimum extent practicable for the finished sizes of holes required. The cost involved in these items are deemed to be included in the contractors quoted rates of respective items of Schedule 'A'.

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34. MIRRORS

Mirrors shall be as per specification

35. SANITARY WORKS:

- 35.1 European type water closet: Provide and fix white European type water closet all as specified.
- 35.2 Indian type squatting pattern water closet: Provide and fix squatting pattern (Indian type) water closet, white with a pair of foot rests, all as specified.
- 35.3 Wash Basin / Urinal: Provide wash hand basin and flat back urinals all as specified. The wash hand basins and squatting pattern shall be fixed all as per manufacturers' instructions.
- 35.4 Testing: All sanitary fittings, waste pipes, vent pipes and SWG pipes etc., shall be tested as approved in MES schedule. The rate quoted for the respective items are deemed to include for cost of testing also.
- 35.5 Sanitary and plumbing: General: The contractor shall employ approved licensed plumbers for installation of sanitary fittings and for executing the necessary plumbing works.
- 35.6 Nahani Traps: Where Nahani Traps are indicated in the drawings provide 100mm (Internal) dia cast iron nahani trap with hinged gratings and without let for 75mm dia. pipe. Nahani traps shall be firmly embedded in concrete floors all as directed.
- 35.7 Gully trap: Where gully traps are indicated in drawings standard gully trap salt glazed stoneware, with rebated top, strong make, square body, with 150x150mm CI gratings and 100mm dia. outlet shall be provided. Gully trap shall be fixed all as specified in MES schedule and as shown on drawings. The rate quoted for gully trap shall be included for excavation and concrete. PCC type C-1, etc., complete all as specified.
- 35.8 SWG PIPE: SWG pipes shall be class-A conforming to is-651 of 1965, SWG pipe shall be laid as directed and shall be jointed all as specified in section – 18, of MES schedule 2004, part I.
- 35.9 Cast iron soil and waste pipes with fittings: CI soil and waste pipes with fitting shall conform to IS-1729-1964. CI soil and waste pipes shall be laid as directed and shall be cement jointed all as specified in Schedule A.
- 35.10 Manholes: Manholes independent shall conform to IS 1742 1960 and all as shown on drawing. Brick work shall be in well burnt bricks in cement mortar 1:4 all as specified in MES Schedule And to the thickness shown on drawing. Foundation shall be in PCC 1:3:6 type C-2 with 40mm graded granite stone aggregate for manholes. Benching and channels shall be in PCC 1:2:4 type B-

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1 using 20mm graded granite stone aggregate, steel trowelled to a smooth and even surface using extra cement. Plastering to brick walls shall be in CM 1:3 15mm thick finished even and fair. All internal surfaces of walls shall be plastered. The external surfaces of walls shall also be plastered to a depth of 150mm from top. The rates quoted by the contractor for manholes shall include for the cot of reinforcement of the Precast cover slab and fixing precast PCC cover slabs of PCC 1:2:4 type B1 for manholes and inspection chamber including PCC 1:2:4 type B-1 bed below the slab removal of surplus spoil to a distance not exc. 50M and any extra excavation and earth work for working space as required.

- 35.11 Testing: All sanitary fittings, waste pipes, vent pipes and SWG pipes etc., shall be tested as provided in MES schedule. The rates quoted for the respective items of Schedule A are deemed to include for cost of testing also
- 36. AC NORTH LIGHT CURVE**
- AC North light curve shall be of approved make and shall be fixed as per manufacturers' instructions and as directed. The net length only shall be measured for payment purpose.
- 37. NORTH LIGHT GLAZING**
- 6mm thick wire cast glass shall be fixed in position with aluminium glazing bars as directed and as per manufacturers' instructions. The overall size of north light glazing including the aluminium glazing bars shall be taken into consideration for payment purpose.
- 38. AC RADIAL EXHAUST**
- AC radial exhaust shall be of 'EVEREST' make or other equivalent and approved make and shall be fixed all as per manufacturer instructions and all as shown on drawing/directed.
- 39. EXPANSION AND CONTRACTION DUMMY JOINTS**
- Provide expansion and contraction (Dummy) joints to the width and lengths specified in Schedule 'A'. These shall be straight and the slab edges adjacent to the joints shall be formed truly vertical. The top edges of the slab at joints shall be bull nosed to 10mm radius. The joint shall be thoroughly cleaned, sides brushed before filling the filler. The molten bituminous charge before incorporation.

Note:

- a) All concrete work should be strictly done according to the description and specifications given in the tender. If the same is to adhered to in respect of any concrete items by the contractors the Engineer in charge shall have the power to reduce the quoted rates in respect of such schedule items and the decision of the Engineer in charge is final and binding on the contractors.
- b) Contractor should note that only the relevant clauses of particular specifications attached to the tender documents are applicable to Schedule A – Bill of quantities.

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CONTRACT AGREEMENT FORMAT

PURCHASE ORDER NO: HQ00/CPC/59000xxxxxxxx/xx dated xx/xx/xxxx

CONTRACT FOR: XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.

THIS AGREEMENT is made and executed on this xxxxxxxxx

BETWEEN

M/s BEML Limited, a Government Company coming within the meaning of Sec 617 of Companies Act, 1956 having its Corporate Office at "BEML SOUDHA", 4th Main Road, S.R. Nagar, Bengaluru-560 027 through its Chief General Manager – Corporate Materials Department at BEML Limited, BEML Soudha, Bengaluru- 560 027 represented by Shri. Sunil Kharad (Hereinafter referred to as 'BEML' which expression shall, unless repugnant to context means and includes its successors and permitted assigns) of the First Part.

AND

M/s. XXXX a Partnership Firm registered under GST No: xxxxxxxxxx having its Registered Office at xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx. represented by Shri. xxxxxxxxx (hereinafter referred to as 'Contractor', which expression shall unless repugnant to the context means and includes its successors and permitted assigns) of the Second Part

Hereinafter, "BEML" and the "Contractor" shall individually be referred to as 'Party' and collectively as 'Parties'.

WHEREAS BEML is a multi-technology heavy engineering company having four manufacturing divisions at Bengaluru, KGF, Mysore and Palakkad and Marketing/Regional/District offices across the Country.

Whereas Contractor is a partnership firm takes up XXXXXXXXXXXXXXXXXXXXXXXX works having its Registered Office at XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.

WHEREAS BEML, floated tender Ref: xxxxxxxxxx dated xx/xx/xxxx (Hereinafter referred to as the Tender) for -----, Bangalore. (Hereinafter called the "WORK").

WHEREAS the Contractor submitted his offer in response to the Tender floated by BEML as above and become the successful tenderer and has agreed to execute the Work as per the terms and conditions of the Tender. Consequently, BEML issued Purchase Order No: XXXXXXXX xx/xx/xxxx (hereinafter the Purchase Order) to the Contractor.

WHEREAS the Contractor has duly accepted the Purchase Order and agreed to execute the Work strictly in accordance with the purchase order and on the terms and conditions herein for a total sum of Rs. xxxxxx/- (Rupees xxxxxxxxxxxxxxxxxxxxxxxxxxx only) exclusive of all Taxes, cess and duties as consideration for the Work being carried out.

In consideration of the above, 'BEML' and the 'Contractor' agreed to reduce the terms and conditions in to writing as hereinafter mentioned.

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SCOPE OF WORK:

The Scope of Work to be executed by the Contractor is as mentioned in the Tender Document.

CONTRACT PERIOD:

The contract period shall be the period mentioned in the purchase Order i.e XXXXXXXXX. Time is the essence of the contract. The Contractor shall strictly adhere to the Time Schedule for commencement and completion as stipulated in the Purchase Order and shall complete the Work in all respect to the complete satisfaction of BEML on or before the Completion date.

PENALTY:

In case the work is not completed in the manner mentioned above to the complete satisfaction of BEML in every respect within the time limit stipulated in the Purchase Order, then the Contractor shall become liable for payment of compensation/penalty for delay in completion of work, in accordance with Clause XXX of 'Revised Special Conditions' of the Tender Document irrespective of whether extension of time granted or not unless otherwise specifically stated.

The said Penalty payable by the Contractor shall be without prejudice to any other right or remedy available to BEML on account of such delay in completion of work. The amount of compensation might be adjusted or set-off against any sum payable to the Contractor under this or any other contract with BEML. The XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX shall be the authorized person to certify whether the Work has been completed within stipulated time and his certification shall be final and binding on the parties.

PAYMENT

BEML shall make the payment to the contractor in the sums, proportions and manner from time to time in accordance with the Clauses XXXXXXXX of 'Special Conditions' of the Tender Document. The payment shall be made after all the statutory deductions as may be applicable.

SECURITY DEPOSIT/BANK GUARANTEE:

The Contractor has furnished non-interest-bearing Security Deposit in accordance with Clause XX of 'Revised Special Conditions' of the Tender document by way of Deduction in RAR Bills. The Contractor agrees to extend the validity of the Security Deposit, wherever required like extension of period of contract or as may be required by the Company. The Company shall have the full power to enforce the Security Deposit in case of non-performance or violation or breach of any of the terms of this Agreement by the Contractor.

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COMPLIANCE OF STATUTORY PROVISIONS:

The contractor shall comply with all requirements under various administrative orders and statutes including but not limited to Contract Labour (Regulation and Abolition) Act, 1970 and Rules 1971, Minimum Wages Act, 1948, Payment of Wages Act, 1936, Employers' Liability Act 1938, Shops & Establishments Act (relevant to the State), Factories Act, 1948, Employees' State Insurance Act, 1948, Employees Provident Fund and Misc. Provisions Act, 1952, Payment of Bonus Act, 1965, Payment of Gratuity Act, 1972, Employees Compensation Act, 1923, Industrial Disputes Act, 1947, Child Labour (Prohibition & Regulation) Act, 1986, Sexual Harassment of Woman at Workplace (Prevention, Prohibition and Redressal) Act, 2013 or any other relevant Acts or enactments relating thereto and its amendments (State/Central) and rules framed there under from time to time as may be relevant while executing the Work and performing the obligations under this Agreement. The Contractor agrees to indemnify BEML for any loss or damage caused to it due to violation/non-compliance of any administrative orders or statutory provisions in respect of/in connection with the Execution of the Work.

All claims arising at the instance or on account of the persons employed by the contractor including but not limited to on account of wages, allowances, PF, ESI, Gratuity or Compensation under the Employee Compensation Act, or otherwise shall be met by the contractor on his own account and the Company shall be kept fully indemnified. BEML shall have no liability whatsoever in that behalf.

SEZ NORMS

The bidders to know that, the company will be execute bond cum legal undertaking (BLUT) with development commissioner and custom authorities for purchase/import of duty-free material to be used in SEZ unit for authorized operation. Contractor needs to comply with Rule of special economic zone for movement of material for job work/repair/testing/calibration etc Successful contractor have to submit monthly reconciliation of material purchased and used (as per input: output norms) inside the SEZ unit for authorized operations in specified format to the satisfaction of 'Authorized Officer' for Aerospace SEZ, Devanahalli, Bangalore. Any shortage/ wastages/ misuse/pilferage of material in monthly reconciliation sheet will be dealt with as per SEZ rules and regulations at the cost of the contractor, by paying duty foregone on such material and /or other associated/related cost, if any as decided by the 'Authorized Officer' for Aerospace SEZ, Devanahalli, Bangalore as per SEZ rules and any such payment will be settled/recovered from the amount payable to the Contractor,

As per Special Economic zone (SEZ) act and rules , concerned party is bound to comply with certain procedures with reference to:

(a). Receipt/safety/security of Material & complete documents with -material purchased during transit/send on returnable basis for job work or repair/assembly /fabrication

(b) Intimation & permission of specified officer /authorized officer of material received/ or other movement of material necessary for the execution of work, making available to officers all necessary documents and record to their satisfaction and

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- (c) Procedural compliance of bringing duty free material under bond to be followed.
- (d) Procedure for bring returnable material with in permitted time of 120 days otherwise duty foregone to be paid immediately.
- (e) Full quantity of the material send on returnable basis must be received after value addition otherwise duty on short material to be paid.

The successful contractor hereby unconditionally undertake to comply with the following;

- (a). The contractor shall take care of all compliances mentioned at sl no: (a) to (e)
- (b). The contractor shall make available documents/records for inspections/refund of taxes to the company (with proper acknowledgement)
- (c). Any loss/claim due to no-compliance of SEZ rules and regulations as far as receipt of materials/loss of duty free materials/movement of materials/noncompliance of intimations and permissions of Authorized officer will be borne by the contractor.
- (d). The contractor undertakes to indemnify the company for any losses caused/to be caused to the company due to the noncompliance/violation of any of the above by the company/contractor.

NON COMPLIANCE OF TERMS:

Non-compliance of any of the terms of this Agreement shall amount to breach leading to cancellation of contract, besides other legal actions, including but not limited to recovery of losses to BEML.

FALLS CLAUSE:

If the contractor fails to Execute the Work as per Tender Document, Purchase Order and the Terms and Conditions herein contained, at any time during the currency of the contract or if the BEML has reasons to believe that the Contractor's work is not satisfactory and that the interest of BEML is thereby affected in any way, BEML shall have the right to Execute the Work by itself or through any other agency, in which case the contractor shall make good the loss to BEML including cost and expenses which arises there from. The extra cost being incurred by BEML in this regard should be to the account of the Contractor, which may be adjusted against security deposit and/or deducted from any pending bills or any payment to be made to the contractor or otherwise.

INDEMNIFICATION :

In the event of the non-fulfilment of any of the covenants, terms, agreements, obligations and conditions mentioned in the Tender Document or Purchase Order or in this Agreement, the Contractor shall pay to BEML all losses, damages, costs, charges and expenses incurred by BEML Limited as result of the Non-fulfilment of the obligations under the contract. The decision of BEML shall be final in this regard and the Contractor shall pay the same without any demur and protest.

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The Contractor shall be responsible for all or any kind of losses/damages caused to or suffered by BEML or its employees/officers due to any act or negligence of the labour deployed by the Contractor and the Contractor shall make good the said loss same. BEML shall have the absolute right to recover such losses/damages from any and all amounts payable to the Contractor, including pending Bills. The Contractor will ensure that there are no thefts or loss of property/properties by the labourers deployed by the contractor.

CAR POLICY:

Contractor shall take 'Contractor All Risk Coverage Policy' (CAR Policy) to cover all risks, losses, claims for injuries or damage to any person or any property as per the Tender Document more specifically stipulated in clause XX (Contractors liability and insurance) of 'Revised Special Conditions' of the Tender Document. The insurance policy has to be kept valid till the Work is completed in accordance with the Tender Document and to the complete satisfaction of BEML. The contractor has to take policy at his own cost showing BEML as the "Principal" to enable BEML to make the settlement of claims at the earliest.

LICENSES AND PERMISSIONS:

Contractor shall procure all the Licenses, Permissions, Sanctions, etc. as may be required for/in the course of performance of the contract /execution of the Work or as required under statutes. Any lapse in this regard shall be solely attributable to the Contractor and BEML shall in no way responsible for the same. The Contractor undertakes to indemnify BEML in this regard.

SUB-CONTRACT:

The contractor shall not sub-contract, assign or make over the contract to any third party either in full or partially without prior written consent of BEML.

CONFIDENTIALITY:

The Contractor or his employees or agent or anybody engaged by the Contractor to execute the Work shall maintain utmost faith and confidentiality of all information and documents come into their possession or knowledge and shall not divulge such information to any third parties, in any case, without prior written consent of BEML. The Contractor undertakes to indemnify BEML for any loss caused to it by reason of breach of the above obligation by the Contractor or his employees or agent or anybody engaged by the Contractor

ENTIRE CONTRACT:

Tender Document and Purchase Order dated XXXXXX shall form part and parcel of this Agreement and in case of inconsistency, the order of precedence will be as follows:

- (a) This Agreement;
- (b) Work Order; and
- (c) Tender document.

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TERMINATION:

BEML can terminate the contract by giving thirty days written notice in case of the following reasons and if the Contractor fails to rectify the same within the notice period;

Failure of the contractor to commence the work within a stipulated period.

If the performance of the contractor is found to be unsatisfactory or if he fails to give the desired progress of the work or there is breach of terms of the agreement. In this regard, non-performance in whole or in part by the contractor of any obligation due to the reasons with his control shall be treated as breach of the contract.

However, BEML shall have right to terminate the Agreement at any time by giving 15 Days notice in writing, with or without mentioning the reasons.

The Contractor shall have the right to terminate the Agreement in case of breach of the terms and conditions by BEML.

The termination shall not prejudice the rights and obligations accrued on the parties till the effective date of termination.

JURISDICTION & DISPUTE RESOLUTION:

Disputes, if any, between the Parties arising out of or in connection with this Agreement or any matters connected therewith, shall be discussed and amicably settled by the parties through Conciliation by subject experts appointed by BEML.

The unresolved disputes shall be referred to a sole Arbitrator to be appointed by BEML. The arbitration proceedings shall be in accordance with Arbitration and Conciliation Act, 1996 and Rules framed there under, as may be amended from time to time. The courts at Bengaluru alone shall have jurisdiction to try and adjudicate any matter in connection with this Agreement. The language of arbitration shall be English.

SEVERABILITY AND WAIVER:

If any provision of this Agreement is held to be invalid or unenforceable for any reason, the remaining provisions shall continue in full force without being impaired or invalidated in any way. The Parties shall replace any invalid provision with a valid provision, which must closely approximate the intent and economic effect of the invalid provision.

NOTICES :

All Notices and communications shall be sent to the following addresses of the Parties or any other address duly notified in writing from time-to-time by the parties:

BEML : XXXXXXXXXXXXXXXXXXXX,
Contractor : M/s. xxxxxx

The Notices issued other than as above shall not be considered as effective notice.

Signature of the Contractor(s) with seal

**BEML LIMITED**

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ASSIGNMENT:

The obligations under this Agreement shall not be assigned by either Party to any third party without prior written consent of the other Party.

AMENDMENT:

No Amendment or variation of this Agreement shall be valid unless it is in writing and signed by or on behalf of each of the Parties.

MISCELLANEOUS:

This agreement further witnesses that the Contractor is responsible for any accident or other compensation payable to the workers employed by and working under the control of the Contractor and that the Company SHALL HAVE no sort of liability in the matter, and that any payment would have to be made by BEML, the same shall be reimbursed by the Contractor or otherwise the same shall be recovered from the Bills payable to the Contractor.

The employees/agents of the Contractor in no case will be treated as the employees of BEML and there shall not be any master and servant relationship whatsoever between BEML and labour/employees being deployed by the Contractor for the Work. Further, discharging obligations under the Agreement by labour shall not be construed to believe that they are the employees of BEML and shall at all times be the employees of the contractor only. The contractor will be individually and entirely responsible for all and any liabilities in that regard.

All the agreements, letters, documents exchanged between parties, if any, have been merged with this agreement and shall have no effect from the effective date of this agreement.

IN WITNESS WHEREOF, the parties hereto, have set their hands and seal, on this day, month and year herein above mentioned in the presence of the following witnesses.

For BEML

For CONTRACTOR

Signature of the Contractor(s) with seal

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Bid Ref No:

Annexure-‘B’

Special Conditions arising out of implementation of GST (Which is to be signed and submitted along with the offer)

Tax Indemnity clause

1. The supplier of Goods / Services shall comply with all the procedural requirements and relevant provisions under GST Law so as to enable BEML Limited (BEML) to avail Input Tax Credit (ITC) in a timely manner. BEML has the right to recover tax loss along with consequential interest and penalty suffered by BEML due to any non-compliance of tax laws by the supplier. Any GST liability arising on the supplier on account of loss of GST credits for reasons such as failure of the supplier to provide the details for raising invoice with necessary particulars, delay in payment of consideration beyond stipulated time period and the interest thereon would be on the suppliers themselves and BEML shall not be liable to compensate the same.
2. The supplier shall ensure that the Taxes which have been collected / with-held on behalf of BEML have been duly paid / will be paid to the Government account within the due dates specified under various Tax Laws in India and Rules made there under. It may please be noted that if BEML is not able to avail any tax credit due to any short coming on the part of the supplier (which otherwise should have been available to BEML in the normal course), then the supplier at his own cost and effort will get the short coming rectified. If for any reason the same is not possible, then the supplier will make ‘good’ the loss suffered by BEML due to the tax credit it lost in that transaction.
3. Under the GST Law, any economic or tax benefit arising out of the implementation of GST is mandatory and required to be passed on to BEML by the supplier. Similarly, the benefits enjoyed by the supplier and other players in the supply chain are also required to be passed on to the supplier by them, which in turn shall be passed on to BEML by way of price reductions. The suppliers shall indemnify BEML against any direct or indirect loss arising out of not passing on the aforesaid benefits. As responsible suppliers of BEML, the responsibility to pass on the above benefits vests with the supplier and BEML reserve the right to seek the manner in which such benefits is passed on to BEML.
4. Any amount paid to the suppliers including job-workers / sub-contractors shall be first attributable to the GST Tax charged in the invoice and the balance shall be considered towards the ‘value’ of supply of goods / services.
5. Timely provision of invoices / Debit Note / Credit Note: The supplier has to timely provide invoice / Debit Note / Credit Note to enable BEML to claim tax benefit on or before stipulated time period as per GST Law. All necessary adjustment entries (Credit Note, Purchase Returns, Debit Notes) shall be made before September of the succeeding Financial Year.
6. HSN for goods shall be specifically included to avoid disagreement on classification at a later stage.
7. BEML shall identify the Place of supply to enable to avail the GST credit at right location.
8. Advance payment if any made before supply of goods/services or raising of invoices, would attract GST. In case of receipt of advance, the supplier undertakes to raise the necessary statutory document. Further the supplier declares to raise the prescribed documentation governing the movement of goods.
9. Any known discount shall form part of terms of the agreement to enable Supplier / BEML to claim tax adjustment.

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10. THREE copies of the invoices are mandatory and need to be provided by the suppliers and **wherever the law requires, an Electronic Reference Number for each invoice should be provided.** Further, the invoices for supplies shall clearly bear the GSTIN No. / UID No. along with purchase order number and date accompanied by despatch advice and date of packing list.
11. Wherever applicable, BEML has the right to deduct “Tax deducted at source” at the rate prescribed under the GST law and remit the same to the Government of India.
12. Any local levies and or other charges levied by any Central / State / Local authorities wherever applicable shall be extra and supplier shall be liable to discharge the same.
13. The supplier shall be responsible to issue documents required for movement of goods and the logistic partner shall not be liable for any loss arising due to confiscation of goods by government agencies on account of lack of proper documents, deficiencies in documentation or any wrong declaration.
14. Any Liability arising out of dispute on the tax structure, computation and payment to the Government will be to the Supplier’s account.
15. Where the supply of goods / services are liable to GST under reverse charge mechanism, then the supplier should clearly mention the category under which it has been registered and also that “the liability of payment of GST is on the Recipient of Service”.
16. The invoice should be clearly specified with any abatement, if any claimed or otherwise from the Taxable Value, while calculating the GST.
17. The Bid evaluation criteria will include but not limited to ‘GST Compliance rating’ when introduced and operational by GSTN. The Purchase Order shall be void, if at any point of time the supplier is found to be a blacklisted dealer as per GSTN rating system and further no payment shall be entertained.

Place:

Date:

for
M/s.....

Signature of the Contractor(s) with seal

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Annexure-C

Technical Response by Bidders to Tender Ref No.

SL No	Description	Supporting documents to be uploaded along with bid / Remarks	Compliance Yes / No
1	Activity: Design, Plan Approvals from local authorities, Cleaning of Land, Construction of PEB Hangar, Road, Security cabins, Electrical work and associated works in EPC Mode (Design and Build basis) at BEML Plot, SEZ, KIADB, Devanahalli, Bangalore” as per the specifications indicated in the tender.		
2	The work shall be executed on EPC Mode (Design & Build) which includes soil testing, structural design & drawings, construction & commissioning of hangar/buildings & structures for required related services and liaisoning work to facilitate BEML for getting all local body clearances viz., obtaining commencement certificate, completion/occupancy certificate in accordance with the approved layout plan and architectural/structural drawings.		
3	Firm's details on Company Letter Head	To be uploaded along with bid as specified in the tender	
4	Experience of the Bidder: Experience of having successfully completed similar Design & Build projects in SEZ during last Seven (07) years ending last day of month previous to the one in which applications are invited should be either of the following: (Note: Experience of construction in Non-SEZ area will not be considered during technical evaluation of the bid)		
(i)	Three similar completed works costing not less than the amount equal to Rs. 12,64,00,000/- OR	Contract copies and work completion certificate attested by contracting agency such as Government/Public Sector Undertakings/Large Private Organizations	
(ii)	Two similar completed works costing not less than the amount equal to Rs. 15,80,00,000/- OR		
(iii)	One similar completed work costing not less than the amount equal to Rs. 25,28,00,000/-)		

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SL No	Description	Supporting documents to be uploaded along with bid / Remarks	Compliance Yes / No
5	Earnest Money Deposit (EMD): EMD amount of Rs.64,00,000/- (Rupees Sixty four Lakhs Only).	EMD can be paid online or can be submitted in the form of Account Payee Demand Draft / Banker's Cheque along with the bid. Bidders exempted from Earnest Money Deposit (EMD) shall submit exemption certificate issued by competent authority.	
6	The bidders are required to mention and submit copies of the following:		
(a)	Quote your PAN/GIR No. (shall be scanned and uploaded along with the technical bid)	Registration Certificate of PAN/PAN Card/GIR issued by the IT Authorities	
(b)	Quote your ESI No. (shall be scanned and uploaded along with the technical bid)	Registration Certificate issued by the ESI Authorities	
(c)	Quote your PF No. (shall be scanned and uploaded along with the technical bid)	Registration Certificate issued by the PF Authorities	
(d)	Quote your GST No. (shall be scanned and uploaded along with the technical bid)	Registration Certificate issued by the GST Authorities	
7	Firm agrees to participate for the complete "Scope of Work" indicated in the tender. (Note: Partial scope of work or subletting, is not acceptable and the offer will be technically rejected)		
8	Agreement to all the General terms & conditions of the tender		

Signature with date of Authorized signatory

Name: _____

Designation: _____

Firm's Seal: _____

Signature of the Contractor(s) with seal

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Annexure (D)

(To be executed on plain paper and applicable for all tenders of value _ Rs. 1 Crore and above)

INTEGRITY PACT

Between

BEML Limited (BEML) hereinafter referred to as “The Principal”

And

..... hereinafter referred to as “The Bidder/Contractor”

Preamble

The Principal intends to award, under laid down organizational procedures, contract/s for

The Principal values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness / transparency in its relations with its Bidder(s) and / or Contractor(s). In order to achieve these goals, the Principal will appoint an independent External Monitor (IEM), who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 1 – Commitments of the Principal

- (1) The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:
 - a) No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
 - b) The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/ additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
 - c) The Principal will exclude from the process all known prejudiced persons.
- (2) If the principal obtains information on the conduct of any of its employees which is a criminal offence under the IPC/PC Act, or it there be a substantive suspicion in this regard, the Principal will inform the Chief Vigilance Officer and in addition can initiate disciplinary actions.

Section 2 – Commitment of the Bidder(s)/ contractor(s)

- (1) The Bidder(s)/ Contractor(s) commit themselves to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.
 - a) The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal’s employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.
 - b) The Bidder(s)/ Contractor(s) will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
 - c) The Bidder(s)/ Contractor(s) will not commit any offence under the relevant IPC/PC Act; further, the Bidder(s) / Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or documents provided by the Principal

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- as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
- d) The Bidder(s)/ Contractor(s) of foreign origin shall disclose the name and address of the Agents/ Representatives in India, if any. Similarly, the Bidder(s)/ Contractor(s) of Indian Nationality shall furnish the name and address of the foreign Principals, if any. Further, as mentioned in the “Guidelines on Indian Agents of Foreign Suppliers” shall be disclosed by the Bidder(s)/Contractor(s). Further, as mentioned in the Guidelines all the payments made to the Indian agent/representative have to be in Indian Rupees only. Copy of the “Guidelines on Indian Agents of Foreign Suppliers”
 - e) The Bidder(s) / Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- (2) The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section 3 – Disqualification from tender process and exclusion from future contracts

If the Bidder(s)/Contractor(s), before award or during execution has committed a transgression through a violation of Section 2, above or any other form such as to put his reliability or creditability in question, the Principal is entitled to disqualify the Bidder(s)/Contractor(s) from the tender process or act as per the procedure mentioned in the “Guidelines on Banning of business dealings”.

Section 4 – Compensation for Damages

- (1) If the Principal has disqualified the Bidder(s) from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit/ Bid Security.
- (2) If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to Section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages of the contract value or the amount equivalent to Performance Bank Guarantee.

Section 5 – Previous Transgressions

- (1) Bidders to disclose any transgression with any other public / government organisation that may impinge on the anti-corruption principle. The date of such transgression, for the purpose of disclosure by the bidders in this regard, would be the date on which cognizance of the said transgression was taken by the competent authority. The period for which such transgression (s) is / are to be reported by the bidder shall be the last three years to be reckoned from date of bid submission. The transgression(s), for which cognizance was taken even before the said period of three years, but are pending conclusion, shall also be reported by the bidders
- (2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or action can be taken as per the procedure mentioned in “Guidelines on Banning of business dealings”.

Section 6 – Equal treatment of all Bidders /Contractors /Sub-contractors

- (1) The Bidder(s)/ Contractor(s) undertaker(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact, and to submit it to the Principal before contract signing.
- (2) The Principal will enter into agreement with identical conditions as this one with all Bidders, Contractors and subcontractors.
- (3) The Principal will disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

Section 7 – Criminal charges against violating Bidder(s) / Contractor(s) / Subcontractor(s)

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or of the Principal has substantive suspicion in this regard, the Principal will inform the same to the Chief Vigilance Officer

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Section 8 – Independent External Monitor / Monitors

- (1) The Principal appoints competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement
- (2) The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. It will be obligatory for him to treat the information and documents of the Bidders/Contractors as confidential. He reports to the CMD, BEML.
- (3) The Bidder(s)/ Contractor(s) accepts that the Monitor has the right to access without restriction to all Project documentation of the Principal including that provided by the Contractor. The Contractor will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/ Contractor(s) / Subcontractor(s) with confidentiality.
- (4) The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.
- (5) As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or take corrective action, or to take other relevant action. The monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
- (6) The Monitor will submit a written report to the CMD, BEML, within 8 to 10 weeks from the date of reference or intimation to him by the Principal and, should the occasion arise submit proposals for correcting problematic situations.
- (7) If the Monitor has reported to the CMD, BEML, a substantiated suspicion of an offence under relevant IPC/PC Act, and the CMD, BEML has not, within the reasonable time taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the Monitor may also transmit this information directly to the Central Vigilance Commissioner.
- (8) The word 'Monitor' would include both singular and plural.

Section 9 – Pact Duration

This pact begins when both parties have legally signed it. It expires for the Contractor 12 months after the last payment under the contract, and for all other Bidders 6 months after the contract has been awarded. If any claim is made/lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/ determined by CMD of BEML

Section 10 – Other provisions

- (1) This agreement is subject to Indian Law. Place of performance and jurisdiction is the Corporate Office of the Principal, i.e. Bangalore.
- (2) Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
- (3) If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
- (4) Should one or several provisions of this agreement turn out to be invalid, the reminder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- (5) The bidder shall not approach the Courts while representing the matters to IEMs and he/ she will await their decision in the matter.

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- (6) In case of joint venture, all the partners of the joint venture should sign the Integrity Pact. In case of sub-contracting, the Principal contractor shall take the responsibility of the adoption of IP by the sub-contractor. It is to be ensured that all sub- contractors also sign IP.
- (7) In the event of any dispute between the management and the contractor relating to those contracts where Integrity Pact is applicable, in case, both the parties are agreeable, they may try to settle dispute through mediation before the panel of IEMs in a time bound manner. If required, the organization may adopt any mediation rules for this purpose.
- In case, the dispute remains unresolved even after mediation by the panel of IEMs, the organization may take further action as per the terms and conditions of the contract.
- The fees / expenses on dispute resolution shall be equally shared by both the parties.
- (8) In the event of any contradiction between the Integrity Pact and its Annexure, the Clause in the integrity pact will prevail

(For & On behalf of the Principal)

(For & On behalf of Bidder/Contractor)

(Office Seal)

(Office Seal)

Place-----

Place-----

Date -----

Date -----

Witness 1:
(Name & Address)

Witness 1:
(Name & Address)

Witness 2:
(Name & Address)

Witness 2:
(Name & Address)

Signature of the Contractor(s) with seal

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Bid Ref :

Annexure-E

Bid Security Declaration

We hereby submit a declaration that the bid submitted by the undersigned, on behalf of M/s _____ {Name of the bidder}, either sole or in JV, shall not be withdrawn or modified during the period of validity i.e. not less than 180 (one hundred eighty) days from the bid due date.

I, on behalf of the bidder, M/s _____ {Name of the bidder}, also accept the fact that in case the bid is withdrawn or modified during the period of its validity or if we fail to sign the contract in case the work is awarded to us or we fail to submit a performance security before the deadline defined in the Letter of Invitation (LOI)/ PO/Contract , then all the members of the JV/ consortium will be blacklisted for participation in the tendering process for the works of M/s BEML Limited and works under other Centrally Sponsored Schemes, for a period of two years from the bid due date of this work

Signature with date of Authorized signatory

Name: _____

Designation: _____

Firm's Seal: _____

Signature of the Contractor(s) with seal



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Annexure - F

FORMAT FOR UNDERSTANDING THE PROJECT SITE (on Bidder Letter Head)

To,

The General Manager – Corporate Purchase,
BEML Limited, BEML Soudha No. 23/1, 4th Main,
S.R. Nagar,
Bengaluru – 560027.

Subject: Undertaking of the Site Visit for “Construction of 2nd PEB Hangar, Road, Electrical work and associated works in EPC Mode (Design and Build basis) at BEML Plot, SEZ, KIADB, Devanahalli, Bangalore.”

Sir,

I/we hereby certify that I/we have examined & inspected the site & it's surrounding satisfactorily, where the project is to be executed as per the scope of works. I/ We are well aware about the Location of the Building and existing utilities to connect to the system, conditions prevailing at site, availability of materials, availability of land and transport facilities, weather condition at site, the extent of leads and lifts involved in execution of work etc.

I / We hereby submit our BID considering above all facts gathered during site visit and each & every aspect have been considered in the Quoted cost of the project as per BOQ.

Yours faithfully,

Date: (Signature, name and designation of the Authorized signatory)

Place: **Name and seal of Bidder**

Signature of the Contractor(s) with seal

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Annexure - G

SOLVENCY CERTIFICATE

REF NO:.....

DATE:.....

To,

The General Manager – Corporate Purchase,
BEML Limited, BEML Soudha No. 23/1, 4th Main,
S.R. Nagar,
Bengaluru – 560027.

Subject: Submission of bids for the work of “**Construction of 2nd PEB Hangar, Road, Electrical work and associated works in EPC Mode (Design and Build basis) at BEML Plot, SEZ, KIADB, Devanahalli, Bangalore.**”

This is to certify that to the best of our knowledge and information, M/s. _____ (Bidders name with complete address), a customer of our Bank, is respectable, and is capable of executing orders to the extent of Rs _____ (Rupees _____). M/s _____ have been our customer since to date and has been granted the following limits, at present, against various facilities granted by the Bank:

.....

This certificate is issued without any guarantee, risk or responsibility on behalf of the Bank or any of its officials.

This certificate is issued at the specific request of the customer.

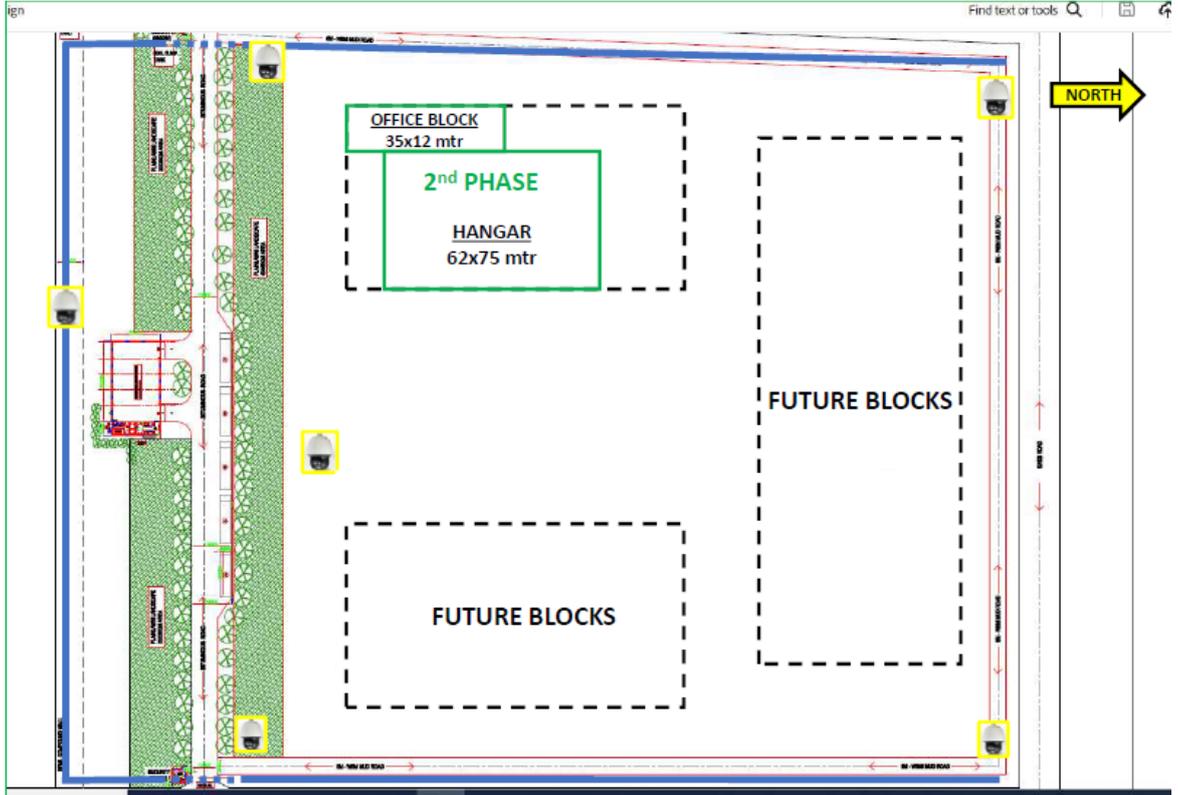
Yours faithfully,
(Bank Official’s signature & stamp)

Signature of the Contractor(s) with seal

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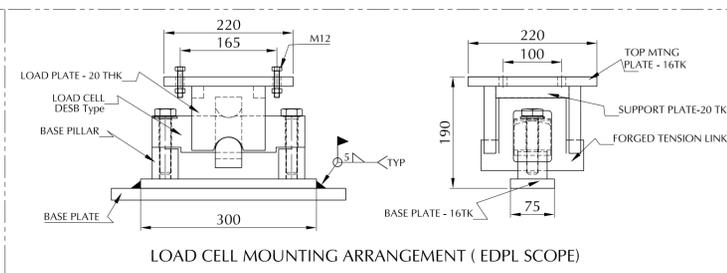
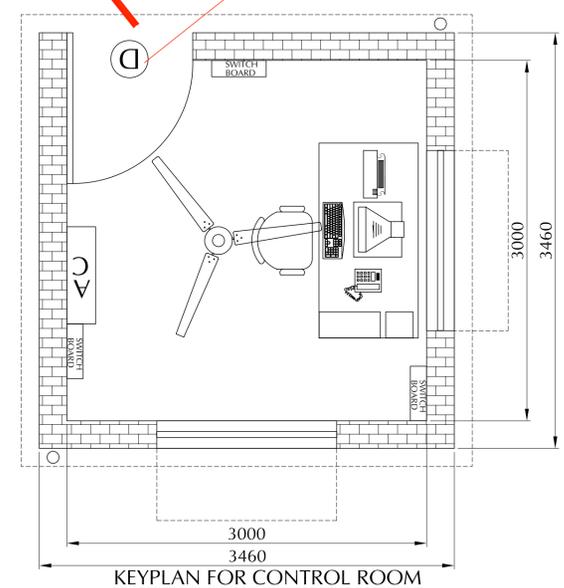
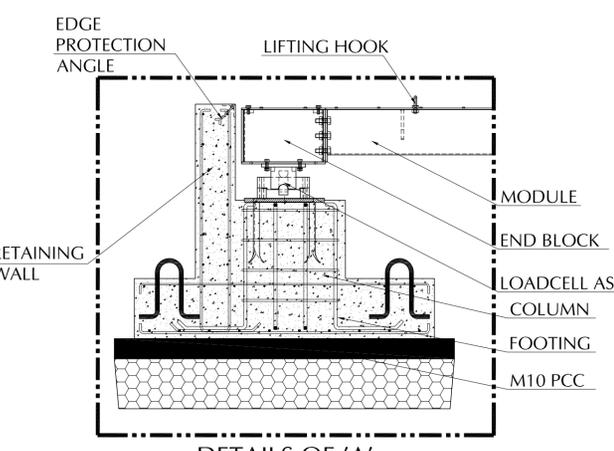
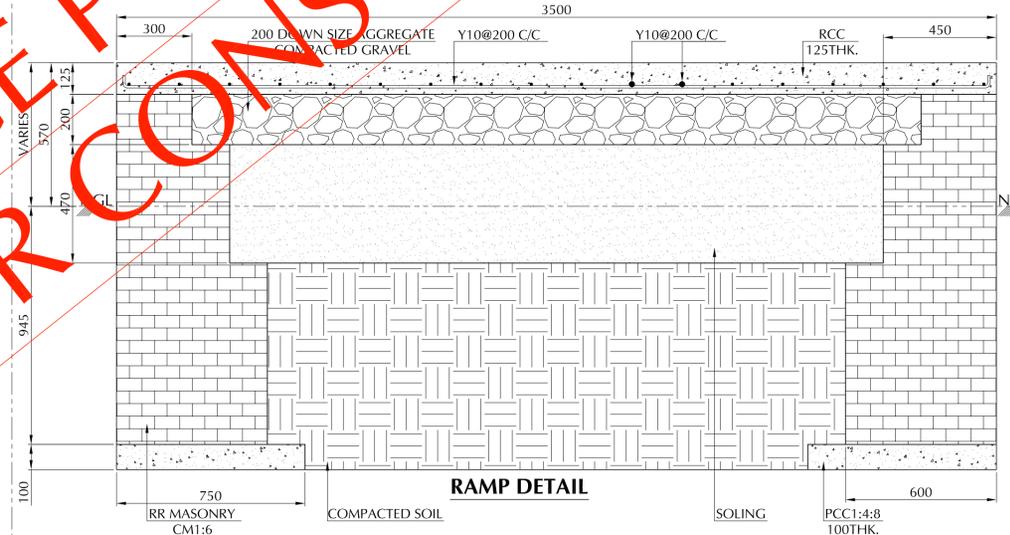
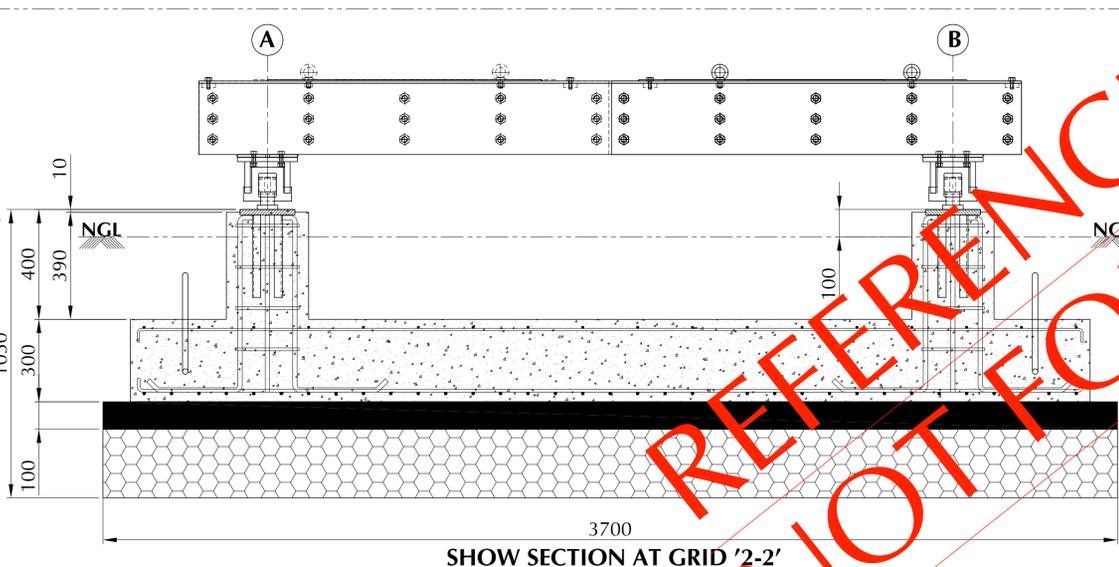
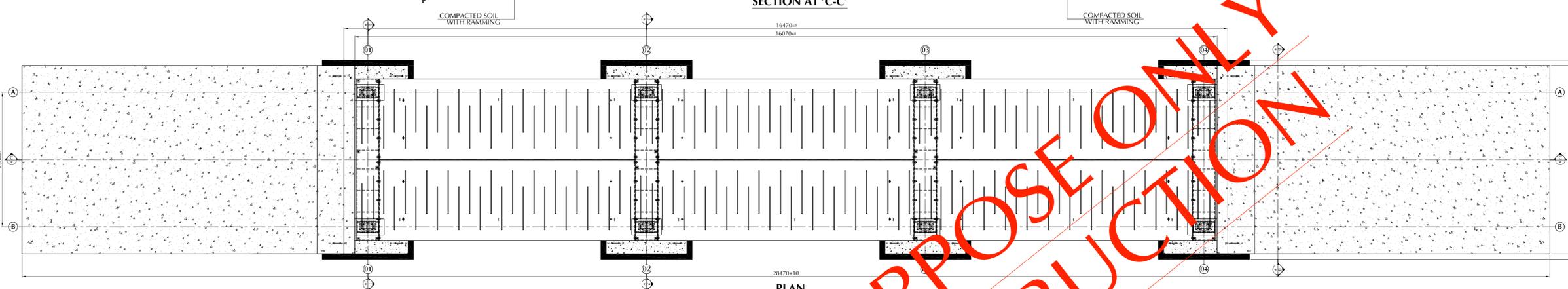
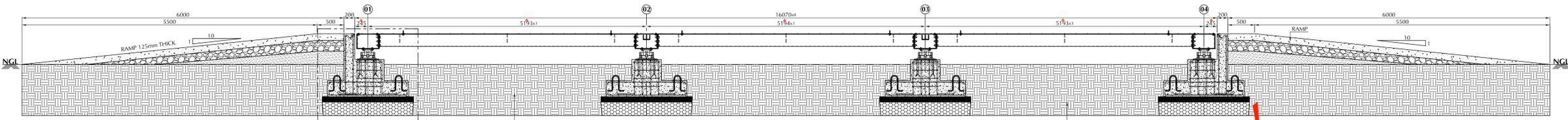
Layout of CCTV installation

Annexure-I

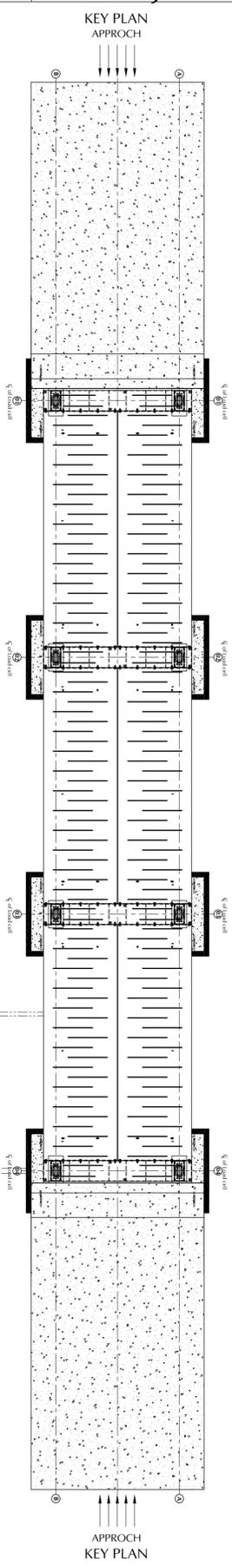


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NOT FOR REFERENCE PURPOSE ONLY
NOT FOR CONSTRUCTION



- GENERAL NOTE:**
- 1) All dimensions are in mm and levels in m
 - 2) EL±0.00m Corresponds to NGL.
 - 3) SBC is considered to be 10t/m² at 0.9m depth
 - 4) Concrete grade shall be M20 for foundation.
 - 5) All reinforcement shall be HYSD denoted as "Y" which confirms to IS:1786 Fe 415 grade.
 - 6) Sturcutral steel shall confirm to IS:2062.
 - 7) Laps for reinforcement shall be 50d.
 - 8) Min size of weld shall be 5mm UNO.
- ** Tie beams, foundation plates, curb angles and other miscellaneous steel shall be in the scope of customer.**
- ** All foundation plates to be checked to tube level and spirit levels within 1.5mm variation after positioned in RCC.**



Rev No	Date	Drawn	Checked	Approved	Description of Revision	Drawn	Checked	Approved
		NAVEEN	DESIGN					
		DESIGN						

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Essae Digitechs Pvt Ltd
 No. 34 & 35, Bommasandra Industrial Area, Bangalore - 560 099.
 Ph: 080-40834600 email: engineering@essae.in

Reference Drawing: TITLE: General Arrangement Drawing For Tu/Dek 16x3-50t Pitless Type Truck Scale SCALE: NTS SHEET NO: 1/1 Rev: 00

Dwg No: REFERENCE ONLY Form No: T-05-001-R1