



INDIAN INSTITUTE OF MANAGEMENT NAGPUR

CONSTRUCTION OF IIM NAGPUR NEW CAMPUS (PHASE-1) AT MIHAN, NAGPUR

BIDDING DOCUMENT

FOR

SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF AUDIO VISUAL EQUIPMENTS FOR IIM NAGPUR NEW CAMPUS (PHASE-1) AT MIHAN, NAGPUR

(BIDDING DOCUMENT No. - IIMN/Project/ICT/2019-20/03)

Prepared & Issued by:

**INDIAN INSTITUTE OF MANAGEMENT
NAGPUR**



MASTER INDEX

NAME OF WORK : **SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF AUDIO VISUAL EQUIPMENTS FOR IIM NAGPUR NEW CAMPUS (PHASE-1) AT MIHAN, NAGPUR**

BIDDING DOCUMENT NO. : **IIMN/Project/ICT/2019-20/03**

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DOMESTIC NOTICE FOR INVITATION FOR BIDS (IFB)
FOR
SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF
AUDIO VISUAL EQUIPMENTS FOR IIM NAGPUR NEW CAMPUS (PHASE-1) AT MIHAN,
NAGPUR
BIDDING DOCUMENT NO. IIMN/Project/ICT/2019-20/03
(DOMESTIC COMPETITIVE BIDDING)

1.0 INTRODUCTION:

- 1.1** Indian Institute of Management Nagpur (IIM Nagpur) is in process of construction of their new Campus (Phase-1) at MIHAN, Khapri Nagpur.
- 1.2** IIM Nagpur invites e-bids through E-Procurement portal www.tenderwizard.com/etenders for Selection of Agency for Supply, Installation, Testing & Commissioning of Audio Visual equipment including projectors, screens, display panels, video conferencing equipment, audio reinforcement equipment, switching & control and Audio Conferencing System, Lecture capture solution etc. and O&M Services for five years for IIM Nagpur campus (Phase-1) at MIHAN, Nagpur under single stage two-part system (Part-I: Techno-commercial Part & Part-II: Price Part) from experienced and competent agencies with sound technical and financial capabilities meeting the Bidder's Qualification (BQC) Criteria as stated under para 6.0 below. The link for bid document is also be available on IIM Nagpur website (www.iimnagpur.ac.in).

2.0 BRIEF SCOPE OF WORK:

The brief scope of work shall generally comprise of but not limited to design, supply, installation, testing & commissioning of Audio Visual equipment including projectors, screens, display panels, video conferencing equipment, audio reinforcement equipment, switching & control and Audio Conferencing System, Lecture capture solution etc. and O&M Services for five years for IIM Nagpur New Campus (Phase-1) at MIHAN, Nagpur.

The detailed Scope of Work is given in Technical Part of the Bidding Document.

3.0 TIME PERIOD:

- 3.1** Time period for completion of works shall be **Six (06) Months (For execution)** from the start date of contract.
- 3.2** Time period for Comprehensive Operation and Maintenance of the works shall be **05 (Five) Years from Completion of Works.**

4.0 SALIENT FEATURES OF BIDDING DOCUMENT:

a)	Biding Document on website	:	16/03/2020
b)	Earnest Money Deposit/ Bid Security.	:	Rs. 30,00,000/- (Rs. Thirty Lakh only)
c)	Pre-bid Meeting	:	1500 Hrs. (IST) on 27/03/2020 at IIM Nagpur
d)	Last Date and Time for Submission of Bids	:	1200 Hrs. (IST) on 07/04/2020
e)	Date and Time for Opening of Bid (Techno-commercial/ Unpriced Bid)	:	1500Hrs. (IST) on 07/04/2020 at IIM Nagpur In the presence of authorized representatives of participating Bidder's.
f)	Date and Time for opening of Bids (Price Bid)	:	Date and time shall be notified to qualified bidders.
g)	Cost of Bid Booklet / Tender Fees	:	Rs.10,000/- + 18% GST
h)	Mode	:	Through e-Procurement portal www.tenderwizard.com/etenders
i)	Contact Person for any query/clarification for this Tender	:	Lt Col Girish Basargekar VNIT Campus, South Ambazari Road, Nagpur, Maharashtra, India 440 010 Phone: 0712-7102381 e-mail: srprojmgr@iimnagpur.ac.in

If any of the days mentioned above happens to be IIM Nagpur holiday, the next working day shall be implied.

The detailed Biding Document can be viewed and downloaded from e-tender website: www.tenderwizard.com/etenders OR www.iimnagpur.ac.in.

All amendments, time extension, clarifications etc. will be uploaded in the website only and will not be published in newspapers. Bidders should regularly visit the above website to keep themselves updated. No extension in the bid due date /time shall be considered on account of delay in receipt of any document by mail.

Bidders to please refer the **Annexure - I to Instructions to Bidders** of Bidding Document regarding E- Tendering guidelines.

5.0 BID SECURITY / EARNEST MONEY DEPOSIT (EMD)

- 5.1 The Bid must be accompanied with Bid Security/ Earnest Money Deposit (EMD) as mentioned above. EMD shall be submitted Online on the tenderwizard portal OR in the form of Crossed Demand Draft/Pay Order/Banker's cheque in favour of "Indian Institute of Management Nagpur" payable at Nagpur OR a Non-Revocable Bank Guarantee in the name of "Indian Institute of Management Nagpur". BG shall be valid for two months beyond the validity of the bids (i.e. Eight months). EMD shall be submitted from any Indian Scheduled Bank or from any Indian Branch of an International Bank in the format included in Bidding Documents. Bids without requisite EMD as mentioned above shall be

rejected.

- 5.2 Indian Central Public Sector Undertakings / Enterprises are exempted from submitting EMD subject to submission of required declaration in this regard.

In case the bidder is a Micro or Small Enterprise registered with District Industries Centres or Khadi and Village industries Commission or Khadi and Village Industries Board or Coir Board or National Small Industries Corporation or Directorate of Handicraft and Handloom or Micro or Small Enterprises (MSEs) having Udyog Aadhar Memorandum or any other body specified by Ministry of Micro, Small and Medium Enterprises, then they shall be exempted from submission of EMD, subject to submission of valid certificate.

If the MSE bidder does not provide the appropriate document or any evidence to substantiate the above, then it will be presumed that he does not qualify for any preference admissible in the Public Procurement Policy, 2012.

Bidders are required to upload the scanned copy of EMD payment/ duly certified MSME Certificate/ Declaration by CPSU on E-Tendering website along with the e-bid.

- 5.3 In case an MSE bidder has submitted NSIC certificate/ Udyog Aadhar Memorandum but authenticated document is not uploaded, the same can be accepted provided a valid MSE certification is available on Government portal (www.nsicpronline.com) or Government Udyog Aadhar portal.

- 5.4 **Bidders are required to submit EMD in original by the due date and time of bid submission, in sealed envelope in case of offline payment.** If the Bidder is unable to submit EMD physically in original within the due date & time for Bid Submission, his bid shall be rejected and not considered for further evaluation, irrespective of their status/ ranking in tender and notwithstanding the fact that a copy of EMD was earlier uploaded by the bidder.

6.0 **BIDDER'S QUALIFICATION CRITERIA (BQC):**

Bidder shall fulfil the following Bidder's Qualification Criteria in order to qualify for subject work:

6.1 **EXPERIENCE /TECHNICAL CRITERIA:**

- 6.1.1 a) Bidder should have completed in previous Seven (7) years ending on the last date of submission of the bid:

ONE similar work of single contract value not less Rs. 12.0 Crore (Rs. Twelve Crore only).

OR

TWO similar works with each of single contract value not less than Rs. 9.0 Crore (Rs. Nine Crore only)

OR

THREE similar works with each of single contract value not less Rs. 6.0 Crore (Rs. Six Crore only).

Similar work(s) means “Supply and installation of Audio visual equipment”.

Note: The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum, calculated from the date of completion to the last date of submission of bid.

6.1.2 DOCUMENTS REQUIRED WITH BIDS

- a) Copies of work orders indicating the activities as defined under “similar work”.
- b) Work completion certificates.
- c) If work order/ completion certificate does not indicate all activities as defined under “similar work” then bidder should either submit a certificate to this effect from the client correlating the work order/ completion certificate number or furnish the detailed Schedule of rates (SOR) pertaining to the work order/AFC drawings approved by client to verify that all the salient works had been undertaken while executing the contract.
- d) Bidder shall complete and submit the Experience Record Proforma (ERP) enclosed with the Bidding Document to establish that the bidder meets the Bidder Qualification Criteria as per Clause No. 6.1 above.

6.2 FINANCIAL CRITERIA:

6.2.1 Annual turnover

Annual Turnover of the Bidder shall not be less than Rs. 15.0 Crore (Rs. Fifteen Crore only) as per audited annual financial results in at least one of the immediate preceding three financial years as on the due date for submission of bids. (2016-17 / 2017-18/ 2018-19)

6.2.2 Net Worth

The Net worth of the bidder as per the immediate preceding year’s audited financial results should be **positive**.

6.2.3 Working Capital

Bidder should have minimum working capital equal to Rs. 1.0 Crore (Rs. One Crore only) as per the immediate preceding year’s audited financial results.

In case Bidder is unable to meet the working capital requirement as above, the Bidder can supplement the working capital with a fund based line of credit from any scheduled bank in India or a commercial bank having Net worth more than equivalent INR 100 Crore. In such a case, bidder shall furnish a declaration from the bank (dated any date between the tender floatation and bid due date) for availability of unutilized fund based line of credit for the shortfall in working capital below Rs. 1.0 Crore, in the format enclosed in the Bidding Document (**Form A-1**).

7.0 GENERAL

- 7.1 Bidder should not be on Holiday / Negative list of IIM Nagpur.
- 7.2 Bidder shall not be under liquidation, court receivership or similar proceedings.
- 7.3 Unincorporated Joint Venture/ Consortium Bids/ Bids from Wholly Owned Subsidiary relying on Parent company's experience shall not be accepted.
- 7.4 Experience of only the bidding entity shall be considered unless otherwise specified in the bidding document. A job executed by a bidder for its own plant/projects shall not be considered as experience for the purpose of meeting requirement of experience criteria of the Bidding Document. However, jobs executed for Subsidiary/ Fellow Subsidiary / Holding company will be considered as experience for the purpose of meeting experience criteria subject to submission of tax paid invoice(s) duly certified by Statutory auditor of the bidder towards payments of statutory tax in support of the job executed for Subsidiary / Fellow Subsidiary / Holding company. Such bidders shall submit these documents in addition to the documents specified in the Bidding Documents to meet 'Experience Criteria'.
- 7.5 For composite works, in the event the qualifying requirement cannot be ascertained from the work order/ completion certificate submitted by bidder, Copy of Schedule of Rates (SOR), relevant pages of Contracts, Copy of relevant pages of final bill certified by OWNER for establishing requirement of BQC or written letter from their Owner specifying the nature of work with quantities and values can be submitted for qualification.
- In case of composite works (i.e. works comprising of more than one discipline) which included the qualifying work stated above, then such qualifying work out of completed composite work, shall be considered for the purpose of evaluation.
- 7.6 A job completed by a bidder as a sub-contractor shall be considered for the purpose of meeting the experience criteria of BQC subject to submission of following documents in support of meeting the "Bidder Qualification Criteria":
- a) Copy of work order along with schedule of rates issued by main contractor.
 - b) Copies of completion certificates from the end user/ Owner/PMC and also from the main Contractor. The Completion Certificates shall have details like work order no./ date, brief scope of work, ordered & executed value of the job, completion date etc.
 - c) However, in case bidder is not able to furnish the completion certificates from the end user/ Owner/PMC in his name then completion certificate issued in the name of main Contractor shall also be considered as proof of completion.
- 7.7 Bidder shall submit the all relevant documents towards meeting the experience criteria. Bidder shall also furnish complete audited annual financial year statements including audit report, balance sheet, profit & loss account statement with all other schedules for the immediate three preceding Financial Years or a letter from the statutory auditor or CA (*) (as per **Annexure – II A** to ITB) or a letter from the bidder duly certified by statutory auditor or CA (*) (as per **Annexure – II B** to ITB), in support of meeting the financial criteria as mentioned above.
- (*)CA - (not being an employee/Director and not having any interest in the bidder's company) certificate is acceptable where audited accounts are not mandatory as per law (in line with the present system).

The above financial details, as per **Annexure- II A** to ITB or **II B** to ITB, shall be submitted without any reservation/ qualification remarks. In case of any qualification remarks, Audited Balance Sheet and Profit & Loss Account alongwith the schedules referred therein and the Auditor's report, shall also be submitted with the bid.

For working capital in case Bidder opts for supplementing the working capital with a fund based line of credit as per requirement specified in Financial Criteria above, the Bidder shall furnish the declaration letter from the Bank for availability of line of credit.

- 7.8** In case the last financial year closing date is within 9 Months of Bid Due Date and audited annual report of immediate preceding financial year is not available, bidder has the option to submit the financial details of the three previous years immediately prior to the last financial year. Otherwise, it is compulsory to submit the financial details of the immediate three preceding financial years.

Example, In case, audited annual report of immediate preceding financial year (year ending 31st March) is not available and where bid closing date is upto 31ST December, the financial details of the three previous years immediately prior to the last financial year may be submitted. However, in case the bid closing date is after 31ST December, it is compulsory to submit the financial details of the immediate three preceding financial years only.

- 7.9** In case a Bidder (a parent company) is having wholly owned subsidiaries but only a single consolidated annual report is prepared and audited which includes the financial details of their wholly owned subsidiaries, consolidated audited annual report shall be considered for establishing the financial criteria subject to statutory auditor of the bidder certifying that separate annual report of Bidder (without the financial data of subsidiaries) is not prepared and audited.

Further, in case a Bidder is a subsidiary company and separate annual report of the Bidder is not prepared and audited, but only a consolidated annual report of the Parent company is available, consolidated audited annual report shall be considered for establishing the financial criteria subject to statutory auditor of the Parent Company certifying that separate annual report of the Bidder is not prepared and audited.

- 7.10** Bidder shall furnish the required documents in support of qualification criteria, in the first instance itself. Bidder are required to submit all such past experience (s) (PTR) meeting the BQC along with relevant supporting documents in the first instance itself, along with the bid. Accordingly, only such past experience (s) shall be considered for qualification, details of which are provided in the bid by the bidder and subsequently no additional past experience (PTR) shall be sought from the Bidder.

IIM N reserve the right to complete the evaluation based on the details furnished without seeking any additional information.

- 7.11** All documents furnished by the Bidder in support of meeting the BQC & MSE Certificate shall be accepted based on certification by CEO/CFO/Company Secretary or any member of the board of Directors in case of limited companies (Private/ Public Limited) along with Self-Certification as per the annexure attached in Bidding Document.

CEO/CFO/Company Secretary or any member of the Board of Directors can either sign all the pages of the documents or submit a certificate signed by them, listing out all the BQC documents / MSE documents submitted in the bid along with basic details, duly referenced along with self-certification as per the annexure attached in Bidding Document.

However, in case of Proprietorship/ Partnership firms, the authentication by notary public on all pages of the documents shall only be acceptable.

If the above supportive documents are not in English language, then the English translation copy of the same shall also be furnished duly certified, stamped and signed by Local Chamber of Commerce or Indian Embassy in their country or their Embassy in India or any translator in India recognized/authorized by their Embassy.

- 7.12** In addition to above requirement, verification of the documents submitted by the L1 Bidder (the bidder whose total evaluated price is lowest) and used for qualification shall be done immediately after establishing L1 Bidder. On intimation, bidder shall produce the original documents at designated place/ office within the specified time period. Any failure on part of bidder may lead to rejection of the Bids / termination of the Contract, as the case may be. The first payment to the Contractor shall be released only upon completion of verification.
- 7.13** Subsequent to the submission of bid, bidders are not allowed to change the price or substance of the bid i.e. scope of work, specifications, delivery schedule, completion period etc. including modification of the bid to meet the BQC.
- 7.14** Submission of authentic documents is the prime responsibility of the bidder. Wherever IIMN has concern or apprehension regarding the authenticity/ correctness of any document, IIMN reserves a right of getting the document cross verified from the document issuing authority.
- 7.15** IIMN reserve the right to assess bidder's capability and capacity to execute the work using in-house information.
- 7.16** Time and date of opening of Price Bids shall be notified to the qualified and acceptable bidders at a later date.
- 7.17** IIMN shall not be responsible for any expense incurred by bidders in connection with the preparation & delivery of their bids, site visit, participating in the discussion and other expenses incurred during the bidding process.
- 7.18** IIMN reserves the right to reject any or all the bids received and to annul the bidding process at its discretion without assigning any reason whatsoever.
- 7.19** Canvassing in any form by the bidder or by any other agency on their behalf may lead to disqualification of their bid.
- 7.20** In case any bidder is found to be involved in cartel formation, his bid will not be considered for further evaluation / placement of order. Such bidder's EMD will be encashed & also debarred from bidding in future for IIM Nagpur.
- 7.21** For detailed specifications, terms and conditions and other details, refer Bidding Document.

8.0 SUBMISSION OF BID

- 8.1** E-Bids are required to be submitted through Procurement portal www.tenderwizard.com/etenders only, on or before the Bid-Submission Date & Time.
- 8.2** No Manual Bids/Offer shall be permitted. The offers submitted through the designated e-tendering system shall only be considered for evaluation & ordering.

- 8.3** Bids submitted in physical form or sent in any other form such as through Fax / Email /CD/DVD/Pen Drive etc. shall not be accepted.
- 8.4** E-Tender processing Fee payable to KEONICS through e-Payment mode using Credit/Debit/Net banking mode shall be submitted online only at www.tenderwizard.com/etenders.
- 8.5** Refer **Annexure - 1** to Instructions to Bidders of Bidding Document regarding E-Tendering guidelines.
- For further details on e-Tender participation, please contact KEONICS Help desk on Ph: 080 - 49352000/ 49352002 / 9686196765
- E-mail: sridevi.m@antaressystems.com, mohan@etenderwizard.com
- 8.6** E-Bid shall be submitted in the following manner with file names as per the details given below:
- Part-I – Techno-commercial / un-priced bid including Scanned copies of Bid security and Power of Attorney and other documents in case specified elsewhere.
- Part-II - Priced Bid shall be uploaded as per the requirement of e-Procurement Portal www.tenderwizard.com/etenders.
- In case of offline payment - Original Bid security/EMD shall be submitted in physical form within final bid due date & time.**
- 8.7** Bid Security (EMD) in physical form: Original bid security shall be submitted in sealed envelope clearly super scribing “Bid Security- Original”. Scanned copies of the same shall be uploaded in the e-bid along with un-priced bid with file name “Bid Security/Earnest Money Deposit”.
- 8.8** Bids must be received online by Owner through - Procurement Portal www.tenderwizard.com/etenders.
- Original Bid Security / EMD must be received by Owner within final bid due date & time at the following address:
- Chief Administrative Officer
Indian Institute of Management Nagpur
VNIT Campus, South Ambazari Road
Nagpur 440010**
- 8.9** Envelope containing documents in physical form shall indicate Bid Document No., Name of work, Name & address of the bidder to enable the bid to be returned unopened, if required.
- 8.10** If the envelope is not sealed and marked as above, the Employer will assume no responsibility for the misplacement or premature opening of the bid.
- 8.11** Bidder may note that Bid shall be submitted on the basis of “ZERO DEVIATION” and shall be in full compliance to the requirements of Bidding Document, failing which bid shall be considered as non-responsive and may be liable for rejection.
- 8.12** OWNER reserves the right to accept or reject Bid and to annul the Bidding process and reject the Bid without assigning any reason thereof at any time prior to award of contract, without thereby incurring any liability towards the Bidder.

8.13 In view of tight project schedule, Bidders are requested not to seek any extension in due date of submission of bids.

**Chief Administrative Officer
Indian Institute of Management Nagpur
VNIT Campus, South Ambazari Road
Nagpur 440010**

PROFORMA FOR ACKNOWLEDGEMENT LETTER

(Please e-mail to cao@iimnagpur.com within three days on receipt of this Bid document)

**Chief Administrative Officer
Indian Institute of Management Nagpur
VNIT Campus,
South Ambazari Road
Nagpur 440010**

Kind Attention:

Bidding Document No. :

Name of Work: SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF AUDIO VISUAL EQUIPMENTS FOR IIM NAGPUR NEW CAMPUS (PHASE-1) AT MIHAN, NAGPUR

Bid Due Date: upto 1200 Hrs. (IST)

Dear Sirs,

We acknowledge with thanks receipt of your above cited Bidding Document along with enclosures. We undertake that the contents of the above Bidding Document shall be kept confidential including all the drawings, specifications and documents and the said documents shall be used only for the purpose, for which they are intended.

Further, our response is as under:- (Bidders to put a tick \surd , as applicable).

1. We will submit the bid within due date.
2. We regret to submit our offer/quote because of the following reasons:
 - a. _____
 - b. _____

Thanking you,

Very truly yours,

Name of Bidder:

Contact Person:

Contact Person Mobile No:

Bidder's Address:

Bidder's Phone No. :

Bidder's Fax No. :

Bidder's E-mail:

LETTER FOR SUBMISSION OF BID
(To be submitted by bidders on their letter head)

Our Ref. : ----- dated -----

To
Chief Administrative Officer
Indian Institute of Management Nagpur
VNIT Campus, South Ambazari Road
Nagpur 440010

**NAME OF WORK: SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF
AUDIO VISUAL EQUIPMENTS FOR IIM NAGPUR NEW CAMPUS (PHASE-1) AT MIHAN,
NAGPUR**

BIDDING DOCUMENT NO. :

ATTN. :

Dear Sir,

Please find herewith our bid in line with requirement of Bidding Document. We confirm that:

1. We have downloaded the full document from the website.
2. Earnest Money Deposit is submitted by UTR No./BG /Demand Draft/ Pay Order as follows:

EMD Amount	UTR No./DD/BG No. & date	Drawn on Bank
Rs. (Rupees Only)		

3. Offer is in complete compliance with technical as well as commercial requirements of the Bidding document and there is no technical or commercial deviation in the offer.
4. We understand that any technical or commercial deviation in the offer shall render our offer liable for rejection.
5. Our offer shall remain valid for a period of 6 months from the date of opening of Bids.
6. Bid security in the form of Bank Guarantee shall be valid for two months beyond Bid validity date.

We declare that the statement made and the information provided in our bid is true and correct in all respect. In case, it is found that the information/ documents provided by us are incorrect/ false, our application shall be rejected by IIM Nagpur without any reference to us.

Thanking you,

Yours faithfully,
(Signature of Authorized person)
Full Name:
Designation:
Company Seal:

**PROFORMA FOR LETTER OF AUTHORITY FOR ATTENDING UNPRICED / PRICED BID
OPENING
(TO BE SUBMITTED IN BIDDER'S OWN LETTER HEAD)**

Date :

To
Chief Administrative Officer
Indian Institute of Management Nagpur
VNIT Campus, South Ambazari Road
Nagpur 440010

Bidding Document No.:
Subject: **SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF
AUDIO VISUAL EQUIPMENTS FOR IIM NAGPUR NEW CAMPUS (PHASE-1) AT MIHAN,
NAGPUR**

Dear Sir,

We _____ hereby authorize following
representative(s) to attend Un-priced /Price bid opening against your Bidding Document
No.....

1. Name & Designation _____ Signature _____

We confirm that we shall be bound by all commitments made by aforementioned authorized
representatives.

Yours faithfully,

Signature

Name & Designation
For and on behalf of

NOTES:

- A. This letter of authority should be on the letterhead of the bidder and should be signed by a person competent and having the power of attorney to bind the bidder.
- B. Not more than one person is permitted to attend techno –commercial un-priced and price bid opening.
- C. Bidder's authorized executive is required to carry a copy of this authority letter while attending the un-priced bid opening and price bid opening and submit the same to IIMN.



INSTRUCTIONS TO BIDDERS

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A GENERAL

1.0 INTRODUCTION

- 1.1 Indian Institute of Management Nagpur (IIM Nagpur) proposes to construct new Campus (Phase-1) at MIHAN, Khapri Nagpur.
- 1.2 IIM Nagpur invites e-bids (Through Procurement portal www.tenderwizard.com/etenders) for Selection of Agency for “Supply, Installation, Testing & Commissioning of Audio Visual Equipment for IIM Nagpur New Campus (Phase-1) at MIHAN, Nagpur”

2.0 DEFINITIONS

- 2.1 With respect to this document, the following definitions shall apply:
 - i) “Owner” means Indian Institute of Management Nagpur (IIM Nagpur)
 - ii) “Engineers India Ltd.”, a company incorporated in India and having its registered Office at El Bhawan, 1, Bhikaiji Cama Place, New Delhi-110066 (India) and shall include its successors and assigns is the Project Management Consultant (PMC) appointed by IIM Nagpur.
 - iii) “Instructions to Bidders” shall mean the documents describing the manner in which Bidder shall prepare and submit his bid.
 - iv) “Letter Inviting Bid” (LIB)/ “Invitation for Bid” (IFB) shall mean IIM Nagpur’s request to Bidder for a Bid/ Tender together with the Bidding Document.
 - v) “Tender” or “Bid” shall mean Bidder’s offer to perform the Work, in accordance with Bidding Document.
 - vi) “Tender Document” or “Bidding Document” shall mean the documents issued to the bidder including any subsequent addenda to enable bidder submit his Bid.
 - vii) “Bidder” or “Tenderer” shall mean the person or company who receives the Tender Document or Bidding Document and submits Tender or Bid to IIM Nagpur.
 - viii) “Day” means calendar day.

- 2.2 It shall be bidder's responsibility to have thorough understanding of the reference documents and specifications included in the Bidding Document.

3.0 ELIGIBLE BIDDERS:

- 3.1 Bidder shall, as part of their bid, submit a written Power of Attorney authorizing the signatory of the Bid to commit the bidder.
- 3.2 The invitation of bid is open to any Indian bidder meeting the Bidder Qualification Criteria (BQC).
- 3.3 Bidder should not be under liquidation, court receivership or similar proceedings.
- 3.4 The bidder shall not be on Holiday / negative list/ Suspension / banning list of IIM Nagpur as on the due date of submission of bid. If the documents were issued inadvertently / downloaded from website, offers submitted by such bidders shall not be considered for opening / evaluation / award.
- 3.5 If the bidder is on holiday / negative list/ Suspension / banning list of OWNER on

due date of submission of bids / during the process of evaluation of the bids, the offer of such a bidder shall not be considered for bid opening/evaluation/ award.

4.0 COST OF BIDDING

- 4.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, including costs and expenses related to visits to the site and the Owner will in no case be responsible or liable for these costs regardless of the outcome of the bidding process.

5.0 ACKNOWLEDGEMENT & CONFIRMATION

- 5.1 After downloading of Bidding Document, Bidder shall immediately acknowledge and confirm his intention to bid for the tendered work as per proforma “**Acknowledgement-Cum-Consent Letter**” enclosed in the Bidding Document. Bidder also must intimate their intention of not quoting if they are not submitting the Bid.

6.0 SPLIT-UP OF WORK

- 6.1 No Split up of work is envisaged. Total work shall be awarded to one bidder only.

7.0 SITE VISIT

- 7.1 The site of work is located at MIHAN, Khapri, Nagpur, Maharashtra.
- 7.2 Bidder is advised to visit and examine the site, its surroundings and familiarise himself with the existing facilities and environment, and collect all other information which he may require for preparing and submitting the bid and entering into the Contract for execution of the Works. Claims and objections due to ignorance of existing conditions or inadequacy of information will not be considered after submission of the Bid and during implementation.
- 7.3 Bidder and any of its personnel will be granted permission by Owner to enter upon its premises and lands/ Project Site for the purpose of such visit, but only upon the express condition that the bidder and its personnel will relieve and indemnify Owner and its personnel from and against all liability in respect thereof, and will be responsible for death or personal injury, loss of or damage to property, and any other loss, damage, costs, and expenses incurred as a result of the inspection.
- 7.4 Any loss to the property / life of the visitor due to visitor’s negligence shall be the visitor’s responsibility. Visitor shall keep Owner indemnified from any legal consequences arising there from.
- 7.5 Bidder may contact Lt Col Girish Basargekar, Phone No. : 0712-7102381 for site visit purpose.

B BIDDING DOCUMENT, CLARIFICATIONS AND AMENDMENT

8.0 BIDDING DOCUMENT

- 8.1 The Bidding Document can be downloaded from designated website(s) given in LIB/IFB.

Bidder shall submit the Master Index of the bidding document duly signed and stamped in token of having received, read and complied to all parts of Bidding Document. The Bidding Document shall be read in conjunction with any Amendment.

- 8.2 The Bidder is expected to examine the Bidding Document, including all

instructions, forms, terms, specifications in the Bidding Document. Failure to furnish all information required as per the Bidding Document or submission of a bid not substantially responsive to the Bidding Document in every respect may result in the rejection of the Bid.

- 8.3 Bidding documents once downloaded are non-transferable in other name and shall at all times remain the exclusive property of Owner with a licence to the Bidder to use the Bidding Documents for the limited purpose of submitting the bid.
- 8.4 Bidder shall treat the Bidding Document and contents thereof as confidential. If at any time, during the bid preparation stage, Bidder decides to decline to Bid, all documents must be immediately returned to Owner.

9.0 CLARIFICATION OF BIDDING DOCUMENT

9.1 The Bid/enquiry is issued on “**Zero Deviation Bidding**” basis wherein no post bid correspondence of any nature shall be entertained. Bidders in their own interest are advised to take part in the pre-bid meeting seriously by issuing their genuine queries and also by attending the pre-bid meeting by their competent personnel. This will help bidder not only to cut short of the evaluation time leading to requirement of shorter bid validity. This will enable the bidder to submit their best prices based on the clear techno-commercial scope.

9.2 Bidder shall submit their queries strictly within cut-off date after which, Owner shall reserve the right not to entertain any queries.

9.3 Bidder’s authorized representative(s) shall attend the pre bid meeting on the prescribed day at the given venue specified in IFB/ LIB. During the pre-bid meeting, all the technical and commercial issues shall be discussed and concluded to ensure that the bid received subsequent to pre bid meeting shall be without any deviations to terms and conditions. Hence, bidders shall treat the pre bid meeting as utmost important and depute competent & senior person capable of taking on the spot decision to sort out all the technical and commercial issues.

However, in case any bidder does not attend the pre bid meeting, it shall be understood that the bidder has a clear understanding of the scope, terms & conditions of the bidding document and does not have any comments/ deviations to the requirements of the bidding document.

9.4 Conclusion agreed in this meeting shall be uploaded as “Reply to Pre-bid Queries” on tendering website/ sent through e-mail. Any modification/ amendment or any clarification leading to modification to the commercial or technical part of the bidding document shall be issued through amendment/addendum/corrigendum only. Record Notes of Pre-bid Meeting/Reply to Pre-bid Queries shall not be considered as part of enquiry document.

9.5 The offer of the bidders who have not participated in the pre-bid meetings, shall be considered for evaluation only if their offer is in line with the bid requirement without any deviations.

9.6 Although the details presented in this Bidding document have been compiled with all reasonable care, it is the Bidder’s responsibility to ensure that the information provided is adequate and clearly understood and it includes all documents as per the Index.

9.7 In order to ensure fruitful discussions during pre-bid meeting, the bidder is requested to submit any queries / clarification / information pertaining to Bidding Document, as per the proforma enclosed as **Form-F** to ITB to the contact person

mentioned in the Notice, in writing delivered by hand or by fax / e-mail as per format enclosed in the Bidding Document so as to reach cut-off date/two days prior to Pre-bid meeting. These queries shall be replied during pre-bid meeting. The editable soft copies of the queries shall also be e-mailed to enable OWNER to prepare replies to the queries against each query in the same format expeditiously.

- 9.8 The bidders are required to participate in the pre-bid meeting with the following essential documents, so that the same can be reviewed & discussed during the meeting to avoid any techno-commercial clarifications / discussions post bid :
- i. Technical details, documents, design, filled datasheets as per Scope of Work document (if applicable).
 - ii. Any other relevant document / details.
- 9.9 Any modification to the Bidding Document, which may become necessary as a result of the pre-bid discussions shall be intimated to all the bidders through the issue of an Addendum / Amendment.
- 9.10 Based on the pre-bid discussions, a no-deviation form / techno-commercial compliance (**Form-C to ITB**) shall be signed and uploaded by the bidders as part of their offer. After pre-bid meeting, no deviation shall be accepted and if any deviation is found in the bid of any bidder, the offer shall be liable to be rejected without raising any technical / commercial queries.
- 9.11 Technical / Commercial queries (TQ / CQ) shall not be issued once the bid have been opened. However, wherever CQ / TQ are unavoidable, the same shall be raised only once and the cut-off date given for CQ / TQ replies shall be adhered to. Offers shall be evaluated based on the information available upto cut-off date for CQ / TQ replies. Bidder shall not submit any Price against TQ/ CQ raised unless specifically sought in writing.
- 9.12 Extension in bid due date shall not generally be granted.
- 9.13 Bidder's queries related to E-Tendering system will be answered during the meeting.

10.0 AMENDMENT OF BIDDING DOCUMENT

- 10.1 Owner may, for any reason whether at his own initiative or in response to the clarification requested by the bidder(s), issue amendment in the form of Addendum during the bidding period or subsequent to receiving the bids. Any Addendum thus issued shall become part of Bidding Document and Bidder shall submit a copy of the Addendum duly signed and stamped in token of his acceptance. Any addendum issued shall be part of the Bidding Documents and shall be uploaded on e-tender website: www.tenderwizard.com/etenders.
- 10.2 In case Addendum is issued during the bidding period, Bidder shall consider its impact in his bid. In case Addendum is issued subsequent to receipt of bids, Bidder shall follow the instructions issued along with Addendum with regard to submission of impact on quoted price / revised price, if any.

11.0 CONFIDENTIALITY OF BIDDING DOCUMENT

- 11.1 The Bidding Document is and shall remain the exclusive property of the Owner without any right to Bidder to use them for any purpose except for the purpose of Bidding.
- 11.2 On no account will any agency to whom Bidding Documents is issued, part with possession thereof or copy or take copies or tracings of any drawing, plan etc.

It should be understood that the information therein is confidential, and that the Bidding Documents are therefore being issued to bidders in the strictest confidence.

C PREPARATION OF BID

12.0 LANGUAGE OF BID

- 12.1 The Bid prepared by the Bidder, all correspondence and documents relating to the bid exchanged by the Bidder and Owner shall be written in the English language. Any printed literature/certificate/any other document furnished by the Bidder may be in another language, provided they are accompanied by an accurate translation of the relevant passages in the English language, in which case, for purpose of interpretation of the Bid the English translation shall prevail.
- 12.2 In the event of submission of any document/certificate by the bidder in a language other than English, the bidder shall get the same translated into English and submit the same after getting the translation duly authenticated by Local Chamber of Commerce.

13.0 COMPLIANCE TO BID REQUIREMENT

13.1 ZERO DEVIATION:

- 13.1.1 Bidder to note that this is a ZERO deviation bidding document. Owner will appreciate submission of offer based on the terms and conditions in the enclosed Bidding Document to avoid wastage of time and money in seeking clarifications on technical / commercial aspect of the offer.
- 13.1.2 Accordingly, Bidder must submit format for “Compliance to Bid requirement” as per **Form-C** duly filled in along with Unpriced part of Bid.
- 13.1.3 Notwithstanding to the above, bids with the following deviation(s) to the bid conditions shall be summarily rejected without any post bid reference to the bidder:
- (a) Time Schedule
 - (b) Schedule of Prices / Schedule of Rates
 - (c) Defect Liability Period/ Warranty Period
 - (d) Arbitration / Claims and Dispute Resolution
 - (e) Scope of Work / Scope of Supply
 - (f) Contract Performance Bank Guarantee (CPBG)
 - (g) Termination of Contract /Suspension of work
 - (h) Force Majeure
 - (i) Bid Security/EMD
 - (j) Bid Validity
 - (k) Bank Guarantees
 - (l) Compensation For Delay/ Liquidity Damages/ Penalty/ Price Reduction due to delay in completion
- 13.1.4 Any other condition specifically mentioned in the tender documents elsewhere that non-compliance of the clause lead to rejection of the bid.
- 13.1.5 In case Bidder stipulate deviations, Owner have the right to reject such bid at its absolute discretion without giving any opportunity for such Bidder to make good such deficiency.

14.0 DOCUMENTS COMPRISING BID

- 14.1 Bidders should submit their bid through e-Procurement portal

www.tenderwizard.com/etenders only. Bidder shall follow the guidelines as given in **Annexure-1 to ITB** of the Bidding Document for submission of their bid in the above e-Procurement portal.

14.2 The e-Bid should be prepared by the Bidder and shall be submitted on the aforesaid website in two parts as per the following details:

- i) PART- I Earnest Money Deposit / Bid Security & Techno-Commercial / Unpriced Bid
- ii) PART - II Price Bid

14.3 PART- I

14.3.1 This Part shall contain scanned copies of Earnest Money Deposit / Bid Security, as per provisions of the bid document. In case of exemption of EMD as per provision given in IFB/LIB, the relevant document as per provisions of IFB (Invitation for Bids) / LIB (Letter Inviting Bids) is required to be uploaded on e-procurement portal.

14.3.2 Further this part shall also contain scanned copies of Technical and Unpriced Commercial bid, which shall comprise the following, and shall be serially numbered and arranged in the order:

- i) Covering letter of Bid on bidder's letter head as per the proforma enclosed as **Form-B** in the Bidding document.
- ii) Master Index and copies of all technical and commercial amendments/addendums issued (if any), duly e-signed as a token of having received and read all parts of the bidding document and having accepted and considered the same in preparing their bid.
- iii) Scanned copy of Power of Attorney in favour of Authorized signatory of the bid. For proprietorship agency, it should be clearly specified in the Bidder's letter head that it is a proprietary firm and the Bidder is the sole owner. For partnership firm, power of attorney by all other partners in the name of the partner who will sign their offer.

Note: - All documents/files of the bid shall be signed and uploaded by using the digital signature issued in the name of the person having valid Power of Attorney at the time of bid submission.

- iv) Bidders General Information as per **Form-I** of Proposal Forms.
- v) Details of experience meeting the Experience Criteria of BQC by the Bidder along with copies as mentioned in IFB/NIT.

Only such past experiences (PTR) shall be considered for qualification, details or documents of which are enclosed in the bid.

Bidders are required to submit all such past experience(s) (PTR) meeting the BQC along with relevant supporting documents in the first instance itself, alongwith the bid. Accordingly, only such past experience(s) shall be considered for qualification, details of which are provided in the bid by the bidder and subsequently no additional past experience (PTR) shall be sought from the bidder.

In case, a Bidder does not meet the BQC based on experience documents submitted by bidder in support of meeting the BQC, bids shall be rejected however, in CQs/TQs are issued to the bidder, bidders can be allowed to submit additional documents for any of the work out of the past experience(s) (PTR) list already submitted along with the bids, to support their meeting the BQC.

- vi) Details of Financial Capability as per **Form-A** of Proposal Forms along with financial documents required as per IFB/LIB.

For working capital in case Bidder opts for supplementing the working capital with a fund based line of credit as detailed in IFB, the Bidder shall upload the declaration letter from the Bank for availability of unutilized fund based line of credit for shortfall in working capital, as per **Form-A1** of Proposal Forms in their unpriced bid.

Note: All the documents submitted towards meeting the bidder's qualification criteria (including the documents against MSE, if any) shall be authenticated in line with provisions of IFB enclosed with the Bidding Document. In case of certification by CEO or CFO or Company Secretary or any member of the board of Director (in case of Private / Public Limited Company only) of the Bidder the declaration shall be submitted as per **Form-B** of Proposal Forms.

- vii) Compliance to Bid requirement as per **Form-C** of Proposal Forms.
viii) Check List of submission of bid as per **Form-D** of Proposal Forms.
ix) Commercial Questionnaire as per **Form-E** of Proposal Forms.
x) Declaration by Bidder as per **Form-G** of Proposal Forms.
xi) Details of P.F. and ESI Registration as per **Form-H (1)** of Proposal Forms.

In case Bidders establishment is not registered with PF & ESI Authorities, the Bidder shall furnish an undertaking, as per **Form-H (2)** of Proposal Forms, that in the event their establishment falls under the purview of PF & ESI Act during the execution of Contract then the Bidder shall get their establishment registered under PF & ESI and they shall also be solely responsible to fulfil the obligation of PF & ESI at no extra cost to Owner.

- xii) Bank Account Particulars as per **Form-J** of Proposal Forms.
xiii) Organization details:
In case of a proprietorship firm, the name and address of proprietor, and self-declaration.
In case Bidder is a partnership firm, certified copy of the partnership deed.
In case of company (whether private or public), certified copy of the '**Certificate of Incorporation**' together with certified copy of Memorandum/ Articles of Association.

- xiv) As a token of confirmation that prices are quoted in the requisite format strictly complying to the requirement, unpriced copy of Schedule of rates/ Prices, as uploaded in the price bid, with prices/rate/percentage being replaced by word "quoted", shall be uploaded along with the unpriced bid.
xv) Any other information required in the Bidding Documents or considered relevant by the bidder.
xvi) In addition to above, MSE bidder shall also upload the following:

- a) Documentary evidence that the Bidder is a Micro or Small Enterprises registered with District Industries Centers or Khadi and Village Industries Commission or Khadi and Village Industries Board or Coir Board or National Small Industries Corporation or Directorate of Handicrafts and Handloom or Micro or Small Enterprises having Udyog Aadhar Memorandum or any other body specified by Ministry of Micro, Small and Medium Enterprises.
- b) If the MSE is owned by SC/ST Entrepreneurs, the bidder shall furnish appropriate documentary evidence in this regard.

If the MSE bidder does not provide the appropriate document or any evidence to substantiate the above, then it will be presumed that he does not qualify for any preference admissible in the Public Procurement Policy, 2012.

14.4 PART - II - PRICE BID

14.4.1 This Part shall contain duly filled in Schedule of Rates/Price at the designated place of e-Procurement portal www.tenderwizard.com/etenders only.

14.4.2 Rate/Amounts must be filled in excel file of the Schedule of Rates/Price after downloading the 'Schedule of Rates/Price' file uploaded in the website of www.tenderwizard.com/etenders as RAR file.

14.4.3 Bidder to note that the Schedule of Rates/Prices (SOR/SOP) file uploaded on the website www.tenderwizard.com/etenders contain the following Forms:

➤ Schedule of Rates/Prices

Bidder shall download the SOR/SOP file available as a RAR file, fill these forms and then shall upload the SOR/SOP file (after conversion into RAR format) at the designated place of the Portal www.tenderwizard.com/etenders in their Price bid.

14.4.4 The format of the files uploaded by bidder in RAR-file of Schedule of Rates/Prices should be the same as the format of the files available in the website www.tenderwizard.com/etenders

14.4.5 If any file(s) of the price part is not provided in Excel format, the print out of the given files shall be duly filled, signed and stamped and scanned copies of the same shall be uploaded at the place designated for price bid.

14.4.6 If scanned copies are submitted, then there shall not be any overwriting in Price Part of the Bid.

14.4.7 Deviation to terms and conditions, presumptions, overwriting etc. shall not be stipulated in Price part of bid. In case of any conditions stipulated in price bids, the bids of such bidders shall be summarily rejected and shall not be considered for further evaluation. Evaluation shall be carried out excluding such bidder(s).

14.4.8 If a bidder submits prices in un-priced part of bid, such prices shall not be considered. The prices uploaded at the designated priced folder of the etendering website shall only be considered for evaluation and ordering, if any. If prices are not found in the price part and even if mentioned elsewhere, the bid shall be rejected.

15.0 BID PRICES

15.1 Unless stated otherwise in the Bidding Documents, the Contract shall be for the total works as described in Bidding Document, based on the Schedule of Rates submitted by the Bidder and accepted by Owner.

- 15.2 Rates/Amounts must be filled in the `Schedule of Rates' after downloading the file uploaded in e-Procurement Portal website. In case separate file is uploaded, and any variation in item description, unit & quantity are noticed; the bid is liable to be rejected. In any case, Bidder shall be presumed to have quoted against the tendered description of work and the same shall be binding on the Bidder.
- 15.3 Bidder shall quote for all the items of Schedule of Rates after careful analysis of cost involved for the performance of the complete item considering all parts of the Bidding Document. In case any activity though specifically not covered in description of item under `Schedule of Rates' but is required to complete the work as per Scope of Work, Scope of Supply, Specifications, Standards, Drawings, General Conditions of Contract, Special Conditions of Contract or any other part of Bidding Document, the prices quoted shall deemed to be inclusive of cost incurred for such activity.
- 15.4 The quoted price shall be deemed to be inclusive of all taxes, duties including "Goods and Services Tax" (hereinafter called GST) (i.e. IGST or CGST and SGST/UTGST, applicable in case of interstate supply or intra state supply respectively and GST compensation cess if applicable) and labour cess in line with provisions of Special Conditions of Contract.
- It is for the bidder to assess and ascertain the rates of applicable Taxes & Duties for the tendered work. It is clearly understood that Owner will not have any additional liability towards payment of applicable Taxes & Duties as a result of Bidder's wrong assessment / interpretation of applicable taxes & duties.
- 15.5 Prices quoted by the bidder, shall remain firm and fixed and valid until completion of the Contract, unless otherwise mentioned elsewhere in the Bidding Document, and will not be subject to variation on any account except as otherwise specifically provided in the Contract documents.
- 15.6 Alternative bids shall not be considered.
- 15.7 Discount, if any, must be indicated in the space provided in Schedule of Rates (Summary of Prices) only. Conditional discount, if offered, shall not be considered for evaluation.

16.0 CURRENCIES OF BID & PAYMENT

- 16.1 The Bidder shall quote in Indian Rupees and shall be paid in Indian Rupees only.

17.0 BID VALIDITY

- 17.1 Bid submitted by Bidder shall remain valid for a minimum period of **06 months** from the date of opening of Bid Security and Techno-Commercial (Part-I) Bids. A bid with shorter validity shall be rejected by OWNER as non-responsive. Bidders shall not be entitled during the bid validity period, without the consent in writing of the Owner, to revoke or cancel their Bid or to vary the Bid given or any term thereof. In case of Bidders revoking or cancelling their Bid or varying any terms in regard thereof without the consent of Owner in writing, Owner shall forfeit EMD paid by them along with their bids. Such Bidder may also be put on Holiday list/Negative list.
- 17.2 In exceptional circumstances, prior to the expiration of the bid validity period, Owner may solicit the bidders consent to an extension of the period of validity of bid. The request and the responses there to shall be made in writing. If the Bidder agrees to the extension request, the validity of Bank Guarantee towards EMD shall also be suitably extended. A bidder may refuse the request without forfeiting its bid security. However, bidders agreeing to the request for extension

of validity of bid will not be permitted to modify the bid.

18.0 BID SECURITY / EARNEST MONEY DEPOSIT (EMD)

- 18.1 The Bid must be accompanied by Earnest Money (interest free) as per provisions mentioned in IFB.
- 18.2 If a bidder submits more than one bid either directly (as a single bidder or as a member of consortium) or indirectly (as a sub-contractor), EMD, if any, submitted by the bidder shall be forfeited.
- 18.3 If the Bidder, after submission, revokes his Bid or modifies the terms and conditions thereof during the validity of his Bid except where Owner has given opportunity to do so, the earnest money shall be liable to be forfeited. Owner may at any time cancel or withdraw the Bidding Process without assigning any reason and in such cases the earnest money submitted by Bidder will be returned to him.
- 18.4 Owner shall not pay any Interest on Bid Security furnished. Further, in case bank guarantee submitted is found to be fake, bid of such bidder shall be rejected and may initiate action as deemed necessary as per Owner Policy.
- 18.5 In case the successful Bidder, fails to accept arithmetical corrections as given in ITB, EMD submitted by them shall be forfeited.
- 18.6 The successful Bidder shall be required to submit Contract Performance Bank Guarantee (CPBG) and execute the Contract Agreement with Owner in the manner and within the time period indicated in Conditions of Contract. Should the successful Bidder fail or refuse to sign the agreement or furnish the Contract Performance Bank Guarantee (CPBG) within the specified period, the earnest money shall be liable to be forfeited without prejudice to his being liable to any further loss or damage incurred in consequence by Owner.
- 18.7 EMD/ Bid Securities of unsuccessful bidders will be returned upon placement of order/ award. Also EMD of late bids/ where unpriced bids not opened, shall be returned after priced bid opening. In case of the successful Bidder the same will be returned after the order/ contract is effective and Contract Performance Bank Guarantee is submitted. However, in case Owner decides to cancel/ annul the Enquiry/ Bidding Document at any stage during the bidding process but before the award of work, EMD of the bidders shall be returned at the earliest from the date of such decision.
- 18.8 The bid Security shall be forfeited:
- a) If a bidder withdraws its bid during the period of bid validity, or any extension thereto provided by the bidder; or submits multiple bids/alternative bids.
 - b) Does any breach of tendering terms and conditions; or
 - c) On his own modifies his bid during the period of bid validity; or
 - d) If the successful bidder fails to;
 - i) Sign the Contract in accordance with Clause 34.0 of ITB; and/or
 - ii) Furnish a Contract Performance Bank Guarantee in accordance with Clause 35.0 of ITB.
 - iii) To accept arithmetical corrections pursuant to clause 29.0 of ITB.
 - e) If the Information/documents forming basis of evaluation submitted by the bidder in the bid is found to be false/forged in accordance with relevant provisions provided in Bidding Document

19.0 FORMAT AND SIGNING OF BID

- 19.1 The bidder shall submit e-bid as per the provisions given in this bidding document in e-Procurement website www.tenderwizard.com/etenders as per the guidelines given in the bidding document.
- 19.2 The e-bid shall be signed (e-signed) by the person duly authorised to sign on behalf of the bidder and having valid POA for the same at the time of bid submission. The digital signature used for signing the bid shall be issued in the name of such authorised person and the certificate details, available from the e-signed documents, should indicate the details of the signatories. All documents/files of the bid shall be signed by using the digital signature issued in the name of the person having valid Power of Attorney (POA) at the time of bid submission. Any consequences resulting due to such signing (e-signing) shall be binding on the bidder.

20.0 CHECK LIST FOR SUBMISSION OF BID

- 20.1 To assist Bidder in ensuring the completeness of bid, a checklist for submission of various documents/details in un-priced commercial part of bid has been enclosed.
- 20.2 Bidder is required to fill the checklist and submit along with the bid for ready reference.

D BID SUBMISSION

21.0 ONE BID PER BIDDER

- 21.1 A bidder (i.e., the bidding entity) shall, on no account submit more than one bid either directly (as a single bidder or as a member of consortium) or indirectly (as a sub-contractor) failing which following actions shall be initiated:
- a) All bids submitted by such bidder (say 'A') directly & indirectly, shall stand rejected and EMD, if any, in case of direct bid submitted by bidder 'A' shall be forfeited.
 - b) If another bidder (say 'B') has proposed bidder 'A' as a sub-contractor, then bidder 'B's bid shall also be rejected. However, in case the bidder 'B' has also proposed an alternative sub-contractor who is other than the bidder 'A', then bidder 'B's bid shall be evaluated with the proposed alternative sub-contractor only. Hence, every bidder shall ensure in his own interest that his proposed sub-contractor is not submitting alternative/ multiple bids.

Note: However, in case Owner has proposed a list of sub-contractors/ sub-vendors in the enquiry document itself which shall be common for all the bidders, the provision at (b) above shall not be applicable as long as only the sub-contractors/ sub-vendors are common in case of various bidders. However, if any of such sub-contractors/ sub-vendors happens to be a bidder also, clause (b) above shall be applicable.

22.0 MARKING AND SUBMISSION OF BIDS

- 22.1 E-Bid shall be submitted in the following manner with file names as per the details given below:
- Part-I – Techno-commercial / un-priced bid including Scanned copies of Bid security, Power of Attorney.

Part-II - Priced Bid shall be uploaded as per the requirement of e-Procurement Portal www.tenderwizard.com/etenders.

Original Bid security shall be submitted in physical form within final bid due date & time.

22.2 Bid Security (EMD) in physical form: Original bid security shall be submitted in sealed envelope clearly super scribing "Bid Security- Original". Scanned copies of the same shall be uploaded in the e-bid along with un-priced bid with file name "Bid Security/Earnest Money Deposit".

22.3 All the certified documentation against BQC (including valid MSE certificate/ Declaration by CPSU, if any) shall be uploaded by the bidder at the designated place in the www.tenderwizard.com/etenders in a sequential manner with an index in a separate folder titled as "Documentation against Bidder Qualification Criteria (Technical & Commercial)".

Bids must be received online by Owner through e-Procurement Portal www.tenderwizard.com/etenders.

Original Bid Security / EMD must be received by Owner within final bid due date & time at the following address:

Attn :,
Chief Administrative Officer
Indian Institute of Management Nagpur
VNIT Campus, South Ambazari Road
Nagpur 440010

22.4 Envelope containing documents in physical form shall indicate Bid Document No., Name of work, Name & address of the bidder to enable the bid to be returned unopened, if required.

22.5 If the envelope is not sealed and marked as above, the Employer will assume no responsibility for the misplacement or premature opening of the bid.

23.0 DEADLINE FOR SUBMISSION OF BID

23.1 The bid must be submitted online at e-Procurement portal www.tenderwizard.com/etenders within due date and time for bid submission as specified in LIB/ IFB. All envelopes containing the documents in physical form should also be submitted within the bid due date & time.

23.2 OWNER may, in exceptional circumstances and at its discretion, on giving reasonable notice by e-mail / fax or any written communication to all prospective bidders who have downloaded the bid document extend the deadline for the submission of bids in which case all rights and obligations of the Employer / Owner and bidders, previously subject to the original deadline will thereafter be subject to deadline as extended.

23.3 Bidders in their own interest are requested to register on e- tendering portal and upload their bid well in time.

23.4 Bidders should avoid the last hour rush to the website for registration of user id & password, enabling of user id and mapping of digital signature serial number etc. In the event of failure in bidder's connectivity with Owner/Service Provider during the last few hours, bidder is likely to miss the deadline for bid submission. Due date extension request due to above reason may not be entertained.

24.0 UNSOLICITED BIDS / BID SUBMISSION AT OTHER PLACE

- 24.1 E-system of Owner shall close immediately after the deadline for submission of bid prescribed in the LIB/ IFB.
- 24.2 Unsolicited bids or bids being submitted in physical form / to address other than one specifically stipulated in the bid document will not be considered for opening / evaluation / award and will be returned to such bidders.
- 24.3 In the event the Bid Security in original are not submitted within the deadline for submission of bids, the bids shall not be considered for opening, notwithstanding the fact that the bid has been submitted in electronic form within the deadline.

25.0 MODIFICATION AND WITHDRAWAL OF BIDS

- 25.1 The bidder may modify, re-submit or withdraw its e-bid after the bid submission, but, before the due date of submission as per provision of e-tendering system of Owner. No bid can be modified after the deadline for submission of bid.
- 25.2 No bid shall be allowed to be withdrawn or modified in the interval between the deadline for submission of bids and the expiration of the period of bid validity or any extension thereof. Withdrawal or modification of a bid during this interval shall result in the bidder's forfeiture of its bid security in line with the provision of the bidding document.

E BID OPENING AND EVALUATION

26.0 BID OPENING

- 26.1 Owner will open the un-priced techno-commercial bids in the presence of bidders' designated representatives at date & time as stipulated in LIB/ IFB at the address given in the bidding document. The bidder's representatives who are present shall sign bid-opening statement evidencing their attendance.
- 26.2 Bidder's names, the presence (or absence) and amount of bid security, and any other such details as OWNER may consider appropriate will be announced during un priced bid opening.
- 26.3 In case bidder has not complied with Bid Security requirement, such bidder's offer is not proceeded for further opening and rejected out rightly.

27.0 EVALUATION OF BIDS

- 27.1 Prior to detailed evaluation of bids, the Owner will determine whether each bid (i) is accompanied by required EMD (ii) totally comply to the requirement of bidding document.
- 27.2 The Owner will examine the bids to determine whether they are complete and whether the bids are generally in order. Prior to detailed Bid evaluation, the Owner will determine the qualification of bidder with respect to the qualification criteria as stated in the Notice for Invitation for Bids.

27.3 DEVIATIONS, RESERVATIONS, AND OMISSIONS

During the evaluation of bids, the following definitions apply:

- a) "Deviation" is a departure from the requirements specified in the Bidding Documents;
- b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Documents; and

- c) "Omission" is the failure to submit part or all of the information or documentation required in the Bidding Documents.

27.4 DETERMINATION OF RESPONSIVENESS

Owner's determination of a bid's responsiveness is to be based on the contents of the bid itself, as defined in Clause 14.0 of ITB.

A substantially responsive bid is one that meets the requirements of the Bidding Documents without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that,

(a) if accepted, would:

- i) affect in any substantial way the scope, quality, or performance of the Works specified in the Contract; or
- ii) limit in any substantial way, inconsistent with the Bidding Documents, Owner's rights or the bidder's obligations under the proposed Contract; or
- iii) Would unfairly affect the competitive position of other bidders presenting substantially responsive bids.

- 27.5 No stipulation, deviation, terms & conditions, presumption, basis etc. shall be stipulated in the bid. Any conditions, if stipulated, shall be treated as null and void and shall render the bid liable for rejection.

27.6 CLARIFICATION OF BIDS

Bidders should ensure that the Bid submitted is substantially responsive Bid in the first instance itself. Evaluation may be completed based on the content of the Bid itself without seeking any subsequent additional information which may result in rejection of Bid. However, Owner may, at its discretion, may request bidder to submit the necessary information or documentation, within a reasonable period of time, to withdraw material deviation, reservation, or rectify omission in the bid related to documentation requirements. Requesting information or documentation on such account shall not be related to any aspect of the price of the Bid. Owner's request for clarification and the response shall be in writing.

No change, including any voluntary increase or decrease, in the prices shall be sought, offered, or permitted. Bidder shall not be allowed to submit any price implication or revised price after submission of Bid unless the same is called for by Owner in writing.

Failure of the bidder to comply with the request may result in the rejection of its Bid.

If a bidder does not provide clarifications of its bid by the date and time set in Owner's request for clarification, its bid shall be evaluated with available information which may result in rejection of their bid.

All responses from the Bidders shall be in writing, and no change in the price shall be permitted unless specifically sought by Owner.

No revision/implication in quoted price shall be allowed should the deviations stipulated by the Bidder are considered not acceptable and are required to be withdrawn by the Bidder in favour of stipulations of Bidding Document. Bids retaining unacceptable deviations will be rejected.

- 27.7 Owner reserve the right to assess Bidder's capability and capacity to execute the work using in-house information including taking into account other aspects such as past performance etc.

27.8 UNSOLICITED POST TENDER MODIFICATIONS

Bidders are advised to quote strictly as per terms and conditions of the bidding document and not to stipulate any deviations/exceptions. Once quoted, the bidder shall not make any subsequent price changes, whether resulting or arising out of any technical / commercial clarifications sought on any deviations or exceptions mentioned in the bid. Similarly, no revision in quoted price shall be allowed should the deviations stipulated by him are not accepted by Owner and are required to be withdrawn by him in favour of stipulation of the bidding document. Any proposed price changes is likely to render the bid liable for rejection.

In case of unsolicited price increase, such offer(s) of the Bidders shall be rejected. In case of unsolicited price decrease, the Bidder(s)'s offer shall be compared as per originally quoted prices and if the Bidder happens to be the recommended Bidder, the decrease in prices shall be taken into account for ordering.

27.9 COMPLETE SCOPE OF WORK

The complete scope of work has been defined in the bidding document. Only those bidders who take complete responsibility for the complete scope of work as contained in the bidding document shall be considered as acceptable.

28.0 OPENING OF PRICE BID

28.1 Priced commercial part of only those bidders who meets the qualification criteria and whose bids is determined to be technically and commercially acceptable to the Owner shall be opened. Bidders selected for opening of their price bids shall be informed about the date of price bid opening. Bidders may depute their authorised representative to attend the opening. During price bid opening, only total price and rebate, if any, as quoted by the bidders shall be read out.

29.0 ARITHMETIC CORRECTIONS

29.1 The price quoted by bidders shall be checked for arithmetic correction, if any, based on rate and amount filled by the bidder in the SOR/price schedule formats. The same shall be dealt as follows:

29.1.1 RATE AND AMOUNT IN FIGURES AND WORDS

- a. When there is a discrepancy between the rate in figures and in words for an item, the rate which corresponds to the amount shall be taken as correct.
- b. When the rate quoted by the bidder in figures and words tallies but the amount is incorrect, the rate quoted by the tenderer shall be taken as correct.
- c. When it is not possible to ascertain the correct rate as detailed above, the rate quoted for the item in words shall be adopted as the quoted rate.

29.1.2 RATE AND AMOUNT IN FIGURES ONLY

When rate and amount are in figures only, in case of discrepancy the rate quoted by bidder shall be taken as correct.

29.1.3 LUMPSUM AMOUNT ONLY IN FIGURES AND WORDS

When a lumpsum amount is quoted in figures and words but not unit rates are not required to be quoted, amount quoted in words shall be taken as correct.

29.1.4 PERCENTAGE TENDERS

- a) In case bidder has quoted percentage increase or decrease and the total amount in the summary of prices, but there is discrepancy in total amount quoted and the amount arrived at after calculating the percentage increase/decrease quoted by the bidder over Owner estimate, then the total

amount shall be corrected based on the Owner estimate and the quoted percentage.

- b) In case bidder has quoted the percentage and the total amount in the summary of prices, but increase or decrease (“+”or “-“) has not been indicated by the bidder against the % figure, then the amount quoted by bidder shall be considered and the percentage increase/decrease shall be calculated based on the total amount quoted by the bidder & Owner estimate.
 - c) In case bidder has quoted the percentage in the summary of prices, but the total amount has not been quoted and increase or decrease (“+”or “-“) has not been indicated against the % figure, than the ‘+’ shall be considered for the % figure.
 - d) In case the bidder left the % & amount Blank, % increase/decrease shall be considered as NIL.
- 29.2 Bidder shall be requested to accept correction of arithmetic errors. Failure to accept the correction in accordance with clause 29.1 above of ITB, shall result in rejection of the Bid and Bid Security shall be forfeited.

30.0 EVALUATION OF PRICE BIDS

- 30.1 The rate /prices quoted by the Bidders shall be checked for arithmetic correction, if any, based on rate and amount filled by the Bidder in the SOR formats. If some discrepancies are found between the rate/ amount, the total amount shall be corrected as per the provisions of Clause at Sl. No. 29.0 above
- 30.2 The price bids of the Bidders shall be rejected if, in the SOR, they do not quote rates for certain items and Owner estimate for such items is more than 10% of their total quoted price for the subject work. In case a Bidder does not quote for any items of Schedule of Rates and the Owner estimate for such items is less than 10% of their total quoted price, then for the purpose of comparison, the unquoted items shall be loaded by price impact calculated on the basis of highest of the rates quoted by other bidders. If such Bidder happens to be the selected Bidder, the lowest of the rates quoted by other bidders shall be considered for award.
- 30.3 Work shall be awarded to the bidder whose total evaluated price, as mentioned above, is the lowest.
- 30.4 Any uncalled for lump sum / percentage or adhoc reduction / increase in prices, offered by the Bidders after submission of price Bid, shall not be considered. However, if reduction is from the recommended Bidder, such reduction shall be taken into account for arriving at the contract value.
- 30.5 In case, prices etc. are not filled up in the Priced Bid (Schedule of Rates/Prices) and are not as per the requirements of the Bidding document, the same shall not be considered for evaluation.
- 30.6 Optional items shall not be considered for the purpose of arriving at the total cost. However, in case the rates quoted by the selected Bidder for optional items are considered high, the same shall be negotiated.

31.0 CONTACTING THE OWNER

- 31.1 Bidders are advised not to contact Owner on any matter relating to its bid from the time of Bid opening to the time Contract is awarded, unless requested to in writing. Any effort by a Bidder to influence Owner in any of the decision in respect of Bid evaluations or Award of Contract will result in the rejection of Bid.

32.0 AWARD OF CONTRACT

32.1 OWNER'S RIGHT TO ACCEPT OR REJECT ANY BID

The Owner reserves the right to accept or reject any Bid and to annul the Bidding process and reject all Bids at any time prior to award of contract, without thereby incurring any liability to the affected Bidder or Bidders or without any obligation to inform the affected Bidder or Bidders of the grounds or the reasons for the Owner's action.

33.0 NOTIFICATION OF AWARD

33.1 The Owner will notify the successful Bidder in writing by Letter of Acceptance that their bid has been accepted. The Letter of Acceptance will constitute the formation of a Contract until the Contract agreement has been signed.

34.0 CONTRACT AGREEMENT

34.1 The Contractor shall execute a formal contract with Owner within specified period from the date of issue of Detailed Letter of Acceptance on a non-judicial stamp paper, purchased from Maharashtra state, of appropriate value. The cost of non-judicial stamp paper shall be borne by the Contractor.

34.2 Contract documents for agreement shall be prepared after the acceptance of bid. Until the final contract documents are prepared and executed this bid document together with the annexed documents, modifications, deletions agreed upon by Owner and bidder's acceptance there of shall constitute a binding contract between the successful Bidder and Owner based on terms contained in the aforesaid documents and the finally submitted and accepted prices.

34.3 The Contract document shall consist of the following:

- i) Original Bidding Document along with its enclosures issued.
- ii) Amendment/Corrigendum to original Bidding Document issued, if any.
- iii) Letter of Acceptance.
- iv) Detailed letter of Award/Acceptance along with enclosures attached therewith.

35.0 PERFORMANCE SECURITY/ CONTRACT PERFORMANCE BANK GUARANTEE

35.1 The successful Bidder shall be required to submit Contract Performance Bank Guarantee (CPBG) with Owner in the manner and within the time period indicated in Special Conditions of Contract. Should the successful Bidder fail or refuse to sign the agreement or furnish the Contract Performance Bank Guarantee (CPBG) within the specified period, the earnest money shall be forfeited without prejudice to his being liable to any further loss or damage incurred in consequence by Owner.

36.0 CLARIFICATION REQUESTS FROM BIDDERS

36.1 A bidder may seek clarifications regarding the bidding document provisions, bidding process and / or rejection of his bid. Owner shall respond to such requests within a reasonable time.

PROPOSAL FORMS

**EXPERIENCE RECORD PROFORMA
FOR**

SIMILAR COMPLETED WORKS (REFER CLAUSE NO 6.1 OF BIDDER QUALIFICATION CRITERIA-TECHNICAL

**NAME OF WORK: SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF AUDIO VISUAL EQUIPMENTS FOR
IIM NAGPUR NEW CAMPUS (PHASE-1) AT MIHAN, NAGPUR**

S. N.	Project Title and Location	Scope of Work	Client Name, Address, Name & Contact No. of Engineer-incharge	Contract Value (Executed as per Completion Certificate)	Project Start Date	Completion Date		Work Order No. and Date	Completion Certificate No. and Date
						Scheduled	Actual (as per Completion Certificate)		

Note : Details of similar jobs should be submitted by the Bidder along with the copies of work orders and completion certificate.

SIGNATURE OF BIDDER : _____
NAME OF BIDDER : _____
COMPANY SEAL : _____

Reference for filling E- Tenders

E-tendering guidelines to bidders:

1. Vendors must have Class 2/3 Digital Signature Certificate to participate in the tender (To obtain DSC, please contact KEONICS help desk Phone: 08040482113, Email id: dsc@antaressystems.com.
Note: If Vendors already having Digital Signature Certificate then no need to buy the digital signature again.
2. Bidders should register themselves in the website www.tenderwizard.com/IIMN. To activate the user ID and password, kindly pay the Registration fee of Rs. 2,000 plus GST by paying online payment through credit card/Debit card /Net banking in the website.
3. Tenders –Bid should be submitted only through e-Tender portal and obtain the Tender Acknowledgement Token as proof of successful submission.
4. Tender will not be accepted after the date and time fixed for receipt of tenders as set in Tender notice or subsequent extensions if any.
5. Relevant documents in proof have to be uploaded wherever required.

Help Desk:

To get in touch with one of our customer service representatives, please refer the help desk numbers provided on the homepage or call the following number: Bangalore: 080 40482000

1. Sridevi M: 080 40482002 / sridevi.m@antaressystems.com
2. Mohan Kumar: 09686196765 / mohan@etenderwizard.com

Communication Address

KEONICS Help Desk
No. 24, 3rd stage, 4th Block,
Basaveshwaranagar,
Bangalore – 560079
Fax : 080 4048211

(Letter from Statutory Auditor/CA)

(To be printed on Letter Head of Statutory Auditor/CA)

FINANCIAL DETAILS

We, _____, a CA firm having our registered office address _____ and certificate number _____ certify that we are statutory auditor of the Company M/s _____, having its registered office at _____.

OR

We, _____, a CA firm having our registered office address _____ and certificate number _____ certify that statutory auditor is not mandatory for the company M/s _____, having its registered office at _____ as per prevailing law and we are practicing Chartered Accountant, not being an employee / Director and not having any interest in the company.

Financial details of the above mentioned Company, as per latest available audited balance sheet are as follows: Auditor/CA to select either of the following options and strike off the other.

a. In case bidder is a parent company, i.e., having its wholly owned subsidiaries: Auditor to select either of the following options and strike off the other.

- i. Financial details are of parent company without the financial data of subsidiaries
- ii. Financial details are of parent company including the financial data of subsidiaries. It is certified that separate annual report of bidder, without the financial data of subsidiaries, is not prepared and audited.

OR

b. In case bidder is a subsidiary company: Auditor to select either of the following options and strike off the other.

- i. Financial details are of subsidiary company
- ii. Financial details are of parent company including the financial data of subsidiaries. It is certified that separate annual report of bidder, i.e., subsidiary, is not prepared and audited.

OR

c. In case bidder does not have any subsidiary or parent company, financial details of are of the company itself.

S no.	Description	Year	Value Currency (_____)
1.	Turnover	Latest financial year (_____)	
		Preceding 1 st year (_____)	
		Preceding 2 nd year	

		(_____)	
2.	Net Worth	Latest financial year (_____)	(*)
3.	Working Capital	Latest financial year (_____)	

(*) – Indicate Positive or Negative

Note:

1. In case the financial year closing date is within 9 months of bid due date and audited annual report of immediate preceding financial year is not available, bidder has the option to submit the financial details of the three previous years immediately prior to the last financial year. Otherwise, it is compulsory to submit the financial details of the immediate three preceding financial years.

Example, In case, audited annual report of immediate preceding financial year (year ending 31st March) is not available and where bid closing date is up to 31ST December, the financial details of the three previous years immediately prior to the last financial year may be submitted. However, in case the bid closing date is after 31st December, it is compulsory to submit the financial details of the immediate three preceding financial years only.

2. In case a bidder (Parent Company) is having wholly owned subsidiaries but only a single consolidated annual report is prepared and audited, which includes the financial details of their wholly owned subsidiaries, consolidated audited annual report shall be considered for establishing the financial criteria subject to statutory auditor of the bidder certifying that separate annual report of bidder (without the financial data of subsidiaries) is not prepared and audited.

3. Further, in case a bidder is a subsidiary company and separate annual report of the bidder is not prepared and audited, but only a consolidated annual report of the Parent Company is available, consolidated audited annual report shall be considered for establishing the financial criteria subject to statutory auditor of the parent company certifying that separate annual report of bidder is not prepared and audited.

4. **Networth calculation:** Networth means paid up share capital, Share Application Money pending allotment* and reserves# less accumulated losses and deferred expenditure to the extent not written off. Networth has been calculated using the following formula, as per provisions of the enquiry document:

Reserves to be considered for the purpose of networth shall be all reserves created out of the profits and securities premium account but shall not include reserves created out of revaluation of assets, write back of depreciation and amalgamation.

*Share Application Money pending allotment will be considered only in respect of share to be allotted.

Paid up share capital	XXXX
Add: Share Application Money pending allotment	XXX
Add: Reserves (As defined Above)	XXXX
Less: Accumulated Losses	XX
Less: Deferred Revenue Expenditure to the extent not written off	XX
Networth	XXXX

5. Working Capital calculation: Working Capital shall be Current Assets minus Current Liabilities.

6. Turnover: Turnover shall be calculated including Excise Duty but excluding other Incomes.

7. Networth, Working Capital and Turnover has been calculated using the above mentioned formulae and after giving effect to the impact of Audit Qualifications given in the Audit Report.

Signature

Name & Designation

**(Certification by Statutory Auditor/CA)
(To be printed on Letter Head of Company)**

FINANCIAL DETAILS

We, M/s _____, having our registered office at _____ certify that M/s _____ is a CA firm having their registered office address _____ having certificate number _____ are our statutory auditor.

OR

We, M/s _____, having our registered office at _____ certify that statutory auditor is not mandatory for the company as per prevailing law and M/s _____, a CA firm having their registered office address _____ having certificate number _____ are practicing Chartered Accountant, not being an employee/Director and not having any interest in our company.

Financial details of our Company, as per latest available audited balance sheet are as follows: Company to select either of the following options and strike off the other.

a. In case bidder is a parent company, i.e., having its wholly owned subsidiaries:

Company to select either of the following options and strike off the other:

- i. Financial details are of parent company without the financial data of subsidiaries
- ii. Financial details are of parent company including the financial data of subsidiaries. It is certified that separate annual report of bidder, without the financial data of subsidiaries, is not prepared and audited.

OR

b. In case bidder is a subsidiary company: Auditor to select either of the following options and strike off the other.

- i. Financial details are of subsidiary company
- ii. Financial details are of parent company including the financial data of subsidiaries. It is certified that separate annual report of bidder, i.e., subsidiary, is not prepared and audited.

OR

c. In case bidder does not have any subsidiary or parent company, Financial details of are of the company itself.

S no.	Description	Year	Value Currency (_____)
1.	Turnover	Latest financial year (_____)	
		Preceding 1 st year (_____)	
		Preceding 2 nd year (_____)	
2.	Net Worth	Latest financial year	(*)

		(_____)	
3.	Working Capital	Latest financial year (_____)	

(*) – Indicate Positive or Negative

Note:

1. In case the financial year closing date is within 9 months of bid due date and audited annual report of immediate preceding financial year is not available, bidder has the option to submit the financial details of the three previous years immediately prior to the last financial year. Otherwise, it is compulsory to submit the financial details of the immediate three preceding financial years.

Example, In case, audited annual report of immediate preceding financial year (year ending 31st March) is not available and where bid closing date is up to 31ST December, the financial details of the three previous years immediately prior to the last financial year may be submitted. However, in case the bid closing date is after 31st December, it is compulsory to submit the financial details of the immediate three preceding financial years only.

2. In case a bidder (Parent Company) is having wholly owned subsidiaries but only a single consolidated annual report is prepared and audited, which includes the financial details of their wholly owned subsidiaries, consolidated audited annual report shall be considered for establishing the financial criteria subject to statutory auditor of the bidder certifying that separate annual report of bidder (without the financial data of subsidiaries) is not prepared and audited.

3. Further, in case a bidder is a subsidiary company and separate annual report of the bidder is not prepared and audited, but only a consolidated annual report of the Parent Company is available, consolidated audited annual report shall be considered for establishing the financial criteria subject to statutory auditor of the parent company certifying that separate annual report of bidder is not prepared and audited.

4. **Networth calculation:** Networth means paid up share capital, Share Application Money pending allotment* and reserves# less accumulated losses and deferred expenditure to the extent not written off. Networth has been calculated using the following formula, as per provisions of the enquiry document:

Reserves to be considered for the purpose of networth shall be all reserves created out of the profits and securities premium account but shall not include reserves created out of revaluation of assets, write back of depreciation and amalgamation.

*Share Application Money pending allotment will be considered only in respect of share to be allotted.

Paid up share capital	XXXX
Add: Share Application Money pending allotment	XXX
Add: Reserves (As defined Above)	XXXX
Less: Accumulated Losses	XX
Less: Deferred Revenue Expenditure to the extent not written off	XX
Networth	XXXX

5. Working Capital calculation: Working Capital shall be Current Assets minus Current Liabilities.

6. Turnover: Turnover shall be calculated including Excise Duty but excluding other Incomes.

7. Networth, Working Capital and Turnover has been calculated using the above

mentioned formulae and after giving effect to the impact of Audit Qualifications given in the Audit Report.

Signature
Name & Designation

Sign and Stamp of Statutory auditor / CA (on all pages)

FORMAT FOR FINANCIAL CAPABILITY OF THE BIDDER**A.FINANCIALDETAILS:**

S no.	Description	Year	Value Currency (_____)
1.	Turnover	Latest financial year (_____)	
		Preceding 1st year (_____)	
		Preceding 2nd year (_____)	
2.	Net Worth	Latest financial year (_____)	(*)
3.	Working Capital	Latest financial year (_____)	

(*) – Indicate Positive or Negative (Value is not Mandatory)

Note:

1. Networth calculation: Networth means paid up share capital, Share Application Money pending allotment* and reserves# less accumulated losses and deferred expenditure to the extent not written off. Networth has been calculated using the following formula, as per provisions of the enquiry document:

Reserves to be considered for the purpose of networth shall be all reserves created out of the profits and securities premium account but shall not include reserves created out of revaluation of assets, write back of depreciation and amalgamation.

*Share Application Money pending allotment will be considered only in respect of share to be allotted.

Paid up share capital XXXX
 Add: Share Application Money pending allotment XXX
 Add: Reserves (As defined Above) XXXX
 Less: Accumulated Losses XX
 Less: Deferred Revenue Expenditure to the extent not written off XX
 Networth XXXX

2. Working Capital calculation: Working Capital shall be Current Assets minus Current Liabilities.
3. Turnover: Turnover shall be calculated including Excise Duty but excluding other Incomes.

4. Networth, Working Capital and Turnover has been calculated using the above mentioned formulae and after giving effect to the impact of Audit Qualifications given in the Audit Report.

Date:

[Signature of Authorized Signatory]

Name:

Designation:

Seal:

(To be printed on Letter Head of bank)

DECLARATION FROM THE BANK FOR AVAILABILITY OF UNUTILIZED LINE OF CREDIT

Ref: _____ Date: _____
We _____, a Bank firm having our registered office address _____ confirm that the Company M/s _____, having its registered office at _____ is having account with our bank.

Presently, the credit limits of the company are as follows:

Fund Based Line of Credit (towards Working Capital like CC Limit)	Amount in (Currency _____)
Sanctioned Line of Credit	
Utilized Line of Credit	
Balance Line of Credit	

[Bank to specify as applicable]

We declare that we are scheduled bank in India; OR

We declare that we are a commercial bank having Net worth more than equivalent INR 1000 Million as per latest audited financial statements.

Yours Faithfully,
Signature
Name & Designation
e-mail ID
Fax number

SELF-CERTIFICATION

I, _____ S/o/D/o of _____, working as CEO/CFO/Company Secretary/ member of the board of Directors (indicate, as applicable) of the Company _____ having its registered office at _____ certify that all the details including documents pertaining to Bidder Qualification Criteria signed by undersigned vide our offer reference _____ against your Enquiry document _____, are true, authentic, genuine and exact copy of its original.

It is certified that none of the documents are false/forged or fabricated. All the documents submitted has been made having full knowledge of (i) the provisions of the Indian laws in respect of offences including, but not limited to those pertaining to criminal breach of trust, cheating and fraud and (ii) provisions of bidding conditions which entitle the Owner to initiate action in the event of such declaration turning out to be a misrepresentation or false representation.

I further certify that further documents, if any, required to be submitted by our company, shall be submitted under my knowledge and those documents shall also be true, authentic, genuine, exact copy of its original and shall not be false/forged or fabricated.

DECLARATION

I, _____ S/o/D/o of _____, working as CEO/CFO/Company Secretary/ member of the board of Directors (indicate, as applicable) of the Company _____ having its registered office at _____ with reference to our bid _____ against your Enquiry document _____, declare that in case, at a later date, any of the document submitted in our bid referred above is found to be false/forged or fabricated, I, shall be held responsible for the same and Owner has every right to take action against me and my company, as deemed fit as per provisions of the bidding documents including Owner's right to put our company on Holiday/Black list for future business with Owner.

Specimen Signature of authorized representative
Signature
Name & Designation (CEO or CFO or Company Secretary or Member of the board of Directors)

COMPLIANCE TO BID REQUIREMENT

NAME OF WORK : **SUPPLY, INSTALLATION, TESTING & COMMISSIONING
OF AUDIO VISUAL EQUIPMENTS FOR IIM NAGPUR NEW
CAMPUS (PHASE-1) AT MIHAN, NAGPUR**
BIDDING DOCUMENT NO. : **IIMN/Project/ICT/2019-20/03**

We hereby confirm that our Bid complies with the total techno-commercial requirements/ terms and conditions of the bidding document and subsequent addendum/corrigendum (if any) without any deviation/ exception/ comments/ assumptions.

We also confirm that we have quoted for all items of schedule of rates and prices have been filled without any condition and deviation.

SIGNATURE OF BIDDER : _____
NAME OF BIDDER : _____
COMPANY SEAL : _____

CHECK LIST FOR SUBMISSION OF BID

Bidder is requested to fill this check list and ensure that all details/documents have been submitted as called for in the Bidding Document along with duly filled in, signed & stamped checklist

Please tick (✓) the box and ensure compliance:

(A) UNDER SECTION -1

(A.1) Bid Forwarding Letter

Submitted

(A-2) EMD/ BID BOND / BID SECURITY

Bidder to confirm that EMD/ Bid Bond/ Bid Security has been submitted by them as per Tender Proforma.

Submitted

(1) BY BANK GUARANTEE
BG No. _____ Dt. _____ From
Bank _____ Branch _____
For Rs. _____
Valid till _____

(2) BY DEMAND DRAFT
DD No. _____ Dt. _____
Drawn on _____
For Rs. _____

(3) Registration Certificate for MSE (if applicable)

Submitted

(4) If the MSE is owned by SC/ST Entrepreneurs

Yes, Documentary evidence submitted No

(A.3) Power of Attorney in Favour of the e-bid signatory.

Submitted

(B) UNDER SECTION -2

(B.1) Financial Details as per Form -A

Submitted

(B.2) Audited Financial year Statements including audit report, Balance Sheet, profit and loss account and all other schedules submitted for the immediate preceding three financial years.

YES NO

- (B.3) Self Certification as per Form-B Submitted (If applicable)
- (B.4) Declaration regarding PF & ESI as per FORM-H (1) & H (2).
Submitted
- (B.5) Bank Account Particulars as per Form-J
Submitted
- (B.6) Bidder's General information as per Form-I
Submitted
- (B.7) Partnership Deed in case of partnership firm and Article of Association in case of limited company. In case of a proprietorship firm, the name and address of proprietor, and certified copy of 'Certificate of Registration of firm'
Submitted

C) UNDER SECTION - 3

- (C.1) Compliance to Bid Requirement as per FORM-C.
Submitted
- (C.2) Reply to commercial questionnaire as per FORM-E with Bidder's reply/ confirmation for each Sl. No.
Submitted
- (C.3) Declaration by Bidder as per FORM-G.
Submitted
- (C.4) Unpriced copy of Price Part with prices/percentage/rate replaced by word "Quoted" Submitted
- (C.5) Reply to Technical questionnaire (if enclosed in bidding document) with Bidder's Reply/ Confirmation for each Sl. No. Submitted

(D) UNDER SECTION - 4

- (D.1) Technical Details/ Documents specified in Bidding Document.
Submitted Not Applicable

(E) CONFIRM THE FOLLOWING

- (E.1) Master Index of Bidding Document, Compliance Letter for Addendum/ Amendment, if any, duly signed, has been submitted along with offer.
YES

(E.2) All Documents pertaining to BQC are duly authenticated as specified in the bidding document.

YES

SIGNATURE OF BIDDER : _____
NAME OF BIDDER : _____
COMPANY SEAL : _____

COMMERCIAL QUESTIONNAIRE

Bidder's reply/ confirmation as furnished in the Commercial Questionnaire (CQ) shall supersede the stipulations mentioned elsewhere in their bid.

SL. NO.	OWNER'S QUERY	BIDDER'S REPLY/ CONFIRMATION
1.0	Confirm that your Bid is valid for 06 (Six) months from the date of opening of Unpriced Part of Bid.	
2.0	Confirm that Earnest Money Deposit (EMD) as per bid stipulations have been furnished along with bid.	
3.0	Confirm your compliance to total Scope of Work mentioned in the Bidding Document.	
4.0	Confirm that the following documents are Submitted with Part-I:	
a)	All documents as per CHECK LIST.	
b)	Master Index as issued is submitted, duly signed, in unpriced part.	
c)	Compliance letter for Addendum / Amendments as a token of acceptance (Applicable, if issued).	
5.0	Confirm your compliance to critical stipulations of Bidding Document as mentioned in ITB/IFB	
6.0	Schedule of Rates/Price	
a)	Confirm that the Price Part of e-Bid as per Schedule of Rates format enclosed with Bidding Document has been duly filled in for each item and submitted.	
b)	Confirm that the quoted price is for complete scope of work, supply of all material, labour, consumables etc. as applicable as per the Scope of Work.	
7.0	Confirm that you have studied complete Bidding Document and your Bid is in accordance with the requirements of the Bidding Document.	
8.0	Confirm your acceptance for 'Scope of Supply' mentioned in the Bidding Document and confirm that all materials shall be supplied as per Standards and Specification.	
9.0	Confirm your acceptance for Time Schedule as mentioned in Bidding Document.	
10.0	Confirm that your quoted price includes all taxes, duties, levies and cess etc. including "Goods and Services Tax" in accordance with the provision of SCC.	
11.0	Confirm that your quoted price includes all types of insurance as per the provisions of Bidding document.	
12.0	Confirm that all costs resulting from safe execution of Work, such as safety induction, use of protective clothing, safety glasses and helmet, safety precaution taken during monsoon, or any other safety measures to be undertaken by the Contractor for execution of work are included in the quoted rates.	
13.0	Confirm your compliance to the deployment of Indicative	

SL. NO.	OWNER'S QUERY	BIDDER'S REPLY/ CONFIRMATION
	Construction Equipments and Key Manpower, Qualification & Experience requirement of Key personnel to be deployed as per the provisions of Bidding document.	
14.0	Confirm that you shall deploy adequate project/site organisation with qualified supervisory personnel having requisite experience including personnel responsible for safety, planning, stores, QA/QC etc.	
15.0	Confirm that while submitting your price, you have taken consideration of scope of supplies, scope of work and technical requirement mentioned in Bidding Document.	
16.0	Confirm that you have your own QA/QC programme for executing this work. In case of award of work, you will submit all QA/QC documents as given in the Bidding Document.	
17.0	Confirm that all authenticated documents submitted for meeting the BQC are certified as per authentication requirement defined in the bidding document.	
18.0	<p>Confirm that you are not involved in any Litigation/ Arbitration</p> <p>OR</p> <p>Confirm that the current Litigation/ Arbitration, in which bidder is involved will not have any impact in work being tendered or in entering into contract during the validity of offer and performing the contract till all the contractual obligations under contract are performed.</p> <p>(Note: In case Bidder(s) affirms that present litigations/ arbitrations have impact on their obligations to perform the Contract or doesn't provide the affirmation as above, their bids shall be rejected)</p>	
19.0	Confirm that Bidder is not under Liquidation, court receivership or similar proceedings.	
20.0	Confirm that bidder has taken into account the GST law and have passed on the benefit available to bidder in view of the reduction in taxes as well as the input credits available.	
21.0	Confirm that bidder is not on Holiday/ Negative/ suspension/banning list of Owner on due date of submission of bid.	
22.0	We confirm that the content of the Bidding Document including schedule of rates/ prices and Corrigendum / Addendum (if any) have not been altered or modified.	

SIGNATURE OF BIDDER: _____

NAME OF BIDDER : _____

COMPANY SEAL : _____

BIDDER'S QUERIES

SL. NO.	BIDDING DOCUMENT			SUBJECT	BIDDER'S QUERY	OWNER'S REPLY
	PART / VOL.	PAGE NO.	CLAUSE NO.			

NOTE :

1. Bidder's Queries may be sent by e-mail to cao@iimnagpur.ac.in. or srprojmgr@iimnagpur.ac.in.
2. Technical & Commercial queries, if any, must be submitted separately in editable format as per this format.

SIGNATURE OF BIDDER : _____
NAME OF BIDDER : _____
COMPANY SEAL : _____

DECLARATION BY THE BIDDER

We _____ (Name of the Bidder) hereby confirm that we have gone through and understood the Bidding Document and that our Bid has been prepared accordingly in compliance with the requirement stipulated in the said documents.

We are submitting Master Index of Bidding Document as part of our Bid duly signed in token of our acceptance. We undertake that the Bidding Document shall be deemed to form part of our bid and in the event of award of work to us, the same shall be considered for constitution of Contract Agreement. Further, we shall sign and stamp each page of this bidding document as a token of Acceptance and as a part of the Contract in the event of award of Contract to us.

We further confirm that we have indicated prices in Schedule of Rates, i.e., Summary of Price and submitted in Price Bid in the prescribed location of the e-tendering website. We confirm that price quoted by us includes price for all works/activities/supply etc. as mentioned in Item Description of the respective SOR Item(s) in Schedule of Rates as enclosed in the bidding document.

SIGNATURE OF BIDDER : _____
NAME OF BIDDER : _____
COMPANY SEAL : _____

NOTE : This declaration should be signed by the Bidder's representative who is signing the e-Bid.

DETAILS OF P.F. & ESI REGISTRATION

Bidder to furnish details of Provident Fund & ESI Registration:

PF REGISTRATION NO. :

DISTRICT & STATE :

ESI REGISTRATION NO. :

DISTRICT & STATE :

We hereby confirm that the above PF & ESI Account is under operation presently and shall be used for all PF & ESI related activities for the personnel(s) engaged by us in the present work (if awarded to us).

SIGNATURE OF BIDDER : _____
NAME OF BIDDER : _____
COMPANY SEAL : _____

FORM-H (2)

NAME OF WORK : **SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF
AUDIO VISUAL EQUIPMENTS FOR IIM NAGPUR NEW CAMPUS (PHASE-
1) AT MIHAN, NAGPUR**

BIDDING DOCUMENT NO. :

UNDERTAKING

In case our establishment falls under the purview of PF & ESI Act during the execution of Contract, we shall get our establishment registered under PF & ESI and shall be solely responsible to fulfil the obligation of PF & ESI at no extra cost to Owner.

STAMP AND SIGNATURE OF BIDDER: _____

NAME OF BIDDER: _____

NOTE: To be signed by the authorised e-bid signatory and Submitted along with Techno-commercial-part.

BIDDER'S GENERAL INFORMATION

To
Chief Administrative Officer
Indian Institute of Management Nagpur
VNIT Campus, South Ambazari Road
Nagpur 440010

1-1 Bidder Name: _____

1-2 Number of Years in Operation: _____

1-3 Address of Registered Office: _____

City _____ District _____

State _____ PIN/ZIP _____

1-4 Operation Address
if different from above: _____

City _____ District _____

State _____ PIN/ZIP _____

1-5 Telephone Number: _____

(Country Code) (Area Code) (Telephone Number)

Mobile Number _____

1-6 E-mail address: _____

1-7 Website: _____

1-8 Fax Number: _____

(Country Code) (Area Code) (Telephone Number)

1-9 ISO Certification {please furnish details}

1-10 Banker's Name: _____

1-11 Branch: _____

1-12 Branch Code: _____

1-13 Bank account number: _____

1-14 GST Registration number: _____

1-15 PAN No.: _____

1-16 Whether SSI Registered Or not: _____

(SIGNATURE OF BIDDER WITH SEAL)

BANK ACCOUNT PARTICULARS

1. BIDDER'S NAME:
2. ADDRESS OF BIDDER:
3. PARTICULAR OF BANK ACCOUNT:
 - a). NAME OF THE BANK
 - b). NAME OF THE BRANCH
 - c). BRANCH CODE
 - d). ADDRESS OF THE BANK
 - e). 9 DIGIT CODE NUMBER OF THE BANK & BRANCH
(as appearing in MICR Cheque issued by the Bank)
 - f). TYPE OF ACCOUNT (SB, CURRENT, CASH, CREDIT)
 - g). ACCOUNT NUMBER
 - h). WHETHER BRANCH IS RTGS/INTERNET ENABLED
(if yes, then Bank's IFSC Code number)

I hereby declare that the particulars given above are correct and complete and accord our consent for receiving payment through electronic mechanism.

(_____)
Signature of the authorised signatory(ies) & Designation

Place:

Date:

Official seal of the company

BANK CERTIFICATION

Certified that the particulars furnished above are correct as per our records.

Bank's Stamp

Place:

Date:

Signature of the authorised official of the bank



GENERAL CONDITIONS OF CONTRACT

Preface

The General Conditions of Contract shall be read in conjunction with respective provisions specified in Special Conditions of Contract, Specifications, Drawing and any other Part of the Contract. In case of irreconcilable conflicts, the provisions under clause no 2.1 herein of General Conditions of Contract shall prevail.

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1 DEFINITIONS AND INTERPRETATION

1.1 Definitions

“**Affected Party**” shall have the meaning ascribed to it in Clause 24.2.

“**Agreed Variations**” shall mean the statement of agreed variations annexed to the detailed Letter of Acceptance and any document signed by IIMN and the Contractor as an amendment of contract.

“**Applicable Laws**” means all laws in force and effect, including Tax laws but excluding direct Tax laws (which includes income tax, corporate tax, profession tax and wealth tax), as of the Base Date and which may be promulgated or brought into force and effect hereinafter including any revisions, amendments or re-enactments including without limitation regulations, rules and notifications made thereunder and judgments, decrees, injunctions, writs, orders and notifications issued by any court or Authority, as may be in force and effect during the subsistence of the Contract and applicable to either Party, their obligations or this Contract from time to time.

“**Appendix**” means formats/enclosures attached to the General Conditions of Contract.

“**Approval**” and its grammatical variations shall mean approved or confirmed in writing by Engineer-in-Charge.

“**Arbitration Act**” means the (Indian) Arbitration and Conciliation Act, 1996.

“**Authority**” means the Government of India, any state government or any local authority or any department, instrumentality or agency thereof or any corporation (to the extent acting in a legislative, judicial or administrative capacity and not as a contracting party with IIMN or the Contractor) or commission under the direct or indirect control of such central, state or local government or any political sub-division thereof or any court, tribunal or judicial body within India.

“**Base Date**” means the date 7 (seven) days prior to the last date for submission of the Bid/revised Bid, if any.

“**Background Information**” means all and any materials, data, documents, drawings, plans, surveys, reports or other information relating in any way to the Site or the Facility, whether or not made available by IIMN and/or its agents to the Contractor.

“**Bid**” means the Contractor’s signed offer for the Works and all other documents submitted along with the Bid.

“**Bidding Documents**” mean the Notice Inviting Bids/ Letter Inviting Bids, the instruction to bidders (including annexures), form of bid (including appendices), the Contract Agreement, the

General Conditions of Contract, the Special Conditions of Contract, the Specifications and all other reports, surveys, drawings and documents including amendments, if any, provided to the Contractor by IIMN.

“**Billing Schedule**” means the schedule submitted by the Contractor in accordance with Clause 20.3.1, in terms of which IIMN shall be required to make progressive payments to the Contractor.

“**Bill of Quantities**” means the bill of quantities as per the provisions of the Contract.

“**Business Day**” means a day other than a Sunday or a public holiday on which banks are open for business in Nagpur and any other place mentioned in the Contract.

“**Change in Law**” means the occurrence of any of the following after the Base Date:

- (a) The enactment of any new law in India;
- (b) The repeal, modification or re-enactment of any existing Indian law;
- (c) The commencement of any Indian law which has not entered into effect until the date of signing of the Contract;
- (d) Change in the interpretation or application of any Indian law by Government Authority via issuance of circulars/ clarifications or by a court which has become final conclusive and binding;
- (e) Increase/ Decrease in the rate of Taxes in force after the Base Date;
- (f) Change in the basis of computation of Taxes in force after the Base Date,

in such a manner that it has a material effect (positive or negative) on the Contract.

Notwithstanding anything mentioned above, Change in Law will not include any change in direct tax laws (which includes income tax, corporate tax, profession tax and wealth tax) for which the Contractor is the responsible party

“**Clause**” means a clause of this Contract.

“**Completion**” shall mean the successful provision of all materials and inputs and the successful completion and conclusion of all activities and tests (including the Tests on Completion) required to complete the Works in accordance with the Contract, but shall not include the obligation to rectify defects during the Defect Liability Period.

“**Completion Certificate**” shall have the meaning assigned to it in Clause 15.3

“**Confidential Information**” means the Contract and everything contained therein, all

documentation, data, particulars of the Works and technical or commercial information made by (or on behalf of) IIMN. or obtained directly or indirectly from IIMN. by the Contractor or which is generated or obtained by the Contractor or any Subcontractor in relation to the Works or any information or data that the Contractor receives or has access to as a result of the Contract, other than information:

- (a) which is generally available in the public domain other than by any unauthorized actions or fault of the Contractor; or
- (b) that is in the possession of the Contractor with a right to disclose.

“**Contract**” means the agreement between IIMN. and the Contractor for execution of the Works and includes the Contract Agreement, the General Conditions of Contract, the Special Conditions of Contract, the other Bidding Documents, the Specifications, the Price Schedule, and such further documents which are listed in the Contract Agreement and/or these General Conditions of Contract and includes any amendment thereto made in accordance with the provisions hereof.

“**Contract Agreement**” means the agreement entered into between IIMN. and the Contractor along with the Price Schedule and other annexures and includes any amendments thereto made in accordance with the provisions thereof.

“**Contract Performance Bank Guarantee**” means a duly executed, irrevocable, unconditional on demand bank guarantee that is to be procured and maintained by the Contractor in accordance with Clause 9.4.2, to secure the due and proper performance of the Contract.

“**Contract Validity Period**” means the period commencing from the Effective Date up to the end of the Extended Defects Liability Period.

“**Contract Price**” means the total price payable to the Contractor for performing the Works based on the rates and breakdown of prices provided by the Contractor in the Price Schedule, subject to such additions thereto and deductions there from as may be made under the Contract and as adjusted by the actual quantities, if applicable, of the items mentioned in the Price Schedule utilized in the execution of the Works.

“**Contract Spares**” shall have the meaning assigned to it in Clause 9.23

“**Contractor's Documents**” means the documents to be prepared by the Contractor under the Contract including, without limitation, such technical documents specified in the Specifications and such data, designs, information, calculations, specifications, schedules, plans, test plans, programs, the Drawings and Designs, the Billing Schedule, Test Records, As-Built-Drawings and all other information and documents including eye readable or computer readable data relating to the execution of the Works or otherwise for the performance of the Contract.

“**Contractor's Equipment**” means all machinery, apparatus, equipment, material, vehicles, plant and all other things of whatsoever nature required for the execution and Completion of the Works

and remedying of any defects, but does not include Plant, Goods and Materials and any other thing intended to form or forming a part of the Permanent Works.

“**Contractor's Event of Default**” shall have the meaning assigned to it in Clause 29.2

“**Contractor's Insurance**” has the meaning assigned to it in Clause 30.2

“**Contractor's Personnel**” means the Contractor's Representative and all personnel whom the Contractor utilizes on Site, who may include the staff, labour and other employees of the Contractor and of each Subcontractor, and any other personnel assisting the Contractor in the execution of the Works.

“**Contractor's Representative**” means the person nominated by the Contractor to act on its behalf for the purposes of the Contract and notified as such in writing to IIMN.

“**Cost**” means all expenditure reasonably and properly incurred by the Contractor, whether on or off the Site and includes overhead, profit and similar charges.

“**Defect**” means any defect, imperfection or other fault in the Facility or any part thereof arising from or in connection with the execution of the Works or any defect, imperfection or other shortcoming in the Contractor's Documents, or a breach of the Contract or the neglect or failure of the Contractor to comply with any of its obligations, express or implied, under the Contract and the term ‘**Defective**’ shall be construed accordingly.

“**Defect Liability Period**” means the period specified in Clause 16.1 for notifying defects in the Works, calculated from the date of Completion as specified in the Completion Certificate for the Works or part of the Works.

“**Dispute**” shall have the meaning assigned to it in Clause 32.2

“**Design Data**” means all specifications, sketches, plans, graphs, details, dimensions, models and calculations provided by IIMN. as a part of the Bidding Documents and verified by the Contractor.

“**Drawings and Designs**” means the drawings and designs provided by Engineer-in-Charge or prepared by the Contractor on the basis of the Design Data and submitted to and Approved by the Engineer-in-Charge in accordance with Clause 9.13 & 10.5, in accordance with which the Contractor shall proceed with the execution of the Works.

“**Effective Date**” means date of issuance of Fax of Acceptance/Letter of Award of Work.

“**IIMN**” means Indian Institute of Management Nagpur , an autonomous institute established under the IIM Act 2017 with its registered office at , VNIT Campus, South Ambazari Road, Nagpur, Maharashtra,(India)-440010

“**IIMN's Insurance**” shall have the meaning assigned to it in Clause 30.1. “**IIMN's Personnel**” means all staff and employees of IIMN.

“**Engineer-in-Charge**” means the Person designated by IIMN to act as the Engineer-in-Charge for the purposes of this Contract and notified in writing to the Contractor.

“**Extended Defect Liability Period**” shall have the meaning assigned to it in Clause 16.7.

“**Facility**” means the facility to be construed under and in accordance with this Contract and as described in greater detail in the Specifications.

“**Final Completion**” shall mean the successful completion and discharge of all obligations of the Contractor under the Contract, including the obligation to rectify Defects, if any, during the Defects Liability Period and the Extended Defects Liability Period, if any.

“**Final Completion Certificate**” means the certificate issued by IIMN to the Contractor under Clause 34.

“**Final Bill**” has the meaning assigned to it in Clause 20.5.1.

“**Force Majeure**” has the meaning assigned to it in Clause 24.2.

“**General Conditions of Contract**” means these general conditions of contract.

“**Goods and Materials**” means things of all kinds (other than Plant) intended to form or forming a part of the Permanent Work, including materials (if any) to be supplied by the Contractor under the Contract.

“**Good Industry Practice**” means the exercise of that degree of skill, diligence, prudence and foresight in compliance by the Contractor with the undertakings and obligations under the Contract, which would be expected from a skilled and experienced professional person engaged in works that are of the type, nature and scope similar to the Works.

“**Guaranteed Performance Levels**” means the guaranteed levels of performance set out in the Contract that are needed to be met by the Plant, Goods and Materials, the Works and the Facility on conduct of the Tests on Completion.

“**Intellectual Property**” means copyright, registered and unregistered trademarks and service marks, registered and unregistered designs, circuit layouts, all rights conferred under statute, common law or equity in relation to inventions (including patents), proprietary information and all other rights resulting from intellectual activity in the industrial, scientific, literary or artistic fields.

“**INR**” or “**Rupees**” means the legal currency of the Republic of India.

“**Key Date**” means a date identified for the completion of a Stage set out in the Works Completion Schedule, relating to execution of the Works, unless revised in accordance with the terms of the

Contract.

“**Key Personnel**” shall have the meaning assigned to it in Clause 12.2.

“**Letter of Award/ Fax of Acceptance**” means the Letter of Award / Fax of Acceptance issued by IIMN. to the Contractor, awarding the Works to the Contractor.

“**Mobilization**” means the organization of sufficient and adequate resources, including labour, materials and equipment (including Contractor's Equipment and Goods and Materials) by the Contractor for execution of the Works.

“**Mobilization Advance**” means the amount specified in the Payment Schedule that is paid by way of advance by IIMN to the Contractor pursuant to Clause 20.1.

“**Mobilization Advance Guarantee**” means a duly executed, irrevocable, unconditional on demand bank guarantee that is to be procured and maintained by the Contractor as security for the **Mobilization Advance** received by the Contractor.

“**Monthly Progress Reports**” means the monthly progress reports submitted by the Contractor in accordance with the scope of Works / Contract.

“**Operation and Maintenance Manuals**” means the operation and maintenance manual submitted by the Contractor in accordance with Clause 10.7.

“**Payment Milestones**” means the milestones listed in the Payment Schedule.

“**Payment Schedule**” means the document containing the terms of payment of the Contract Price to the Contractor as annexed to the Contract Agreement.

“**Performance Compensation**” means the compensation to be paid by the Contractor to IIMN. as compensation for failure of the Facility and the Works to meet the Guaranteed Performance Levels under Clause 20.1.

“**Performance Tests**” means the tests described in the Specifications which are to be carried out by the Contractor in accordance with the Contract in order to demonstrate compliance with the Guaranteed Performance Levels.

“**Performance Guarantee Test Run**” means the continuous operation of the Facility for a period, in accordance with the Contract, on full load during the Trial Operations.

“**Permanent Works**” means the permanent works to be executed by the Contractor (including all permanent structures and all work intended to form a continuing function after Completion of the Works) in accordance with the Contract.

“**Person**” or “**person**” means an individual, partnership, limited partnership, corporation, trust, joint stock company, unincorporated association, joint venture or Authority.

“**Price Schedule**” or “**Schedule of Rates**” shall mean the price schedule annexed to the Contract Agreement.

“**Project**” means the development, design, procurement, engineering and construction, erection, commissioning, testing, operation and maintenance of the Facility as applicable.

“**Quality Assurance Plan/Project Quality Plan**” means the Approved quality assurance plan and manual developed by Contractor in accordance with Clause 9.18.

“**Related Dispute**” shall have the meaning assigned to it in Clause 32.2.6.

“**Review Period**” means the period of 14 (fourteen) days unless specified elsewhere in the Contract, within which the Engineer-in- Charge or his authorized engineer must complete his review of the Contractor’s Documents, as calculated from the date of submission of the relevant Contractor’s Document.

“**Running Bill**” means the fully supported invoice delivered to IIMN by the Contractor at the times set out in the Payment Schedule, containing all the requisite information and complying with all the requirements set out at Clause 20.3.2.

“**Safety Code**” means the safety code set out at Appendix 3 (Safety Code).

“**Secured Advance**” means the amount specified in the Payment Schedule that is paid by IIMN. to the Contractor pursuant to Clause 20.2

“**Site**” means the land, location, right of way and/or places provided by IIMN. where the Works are to be executed and to which Plant and Goods and Materials are to be delivered and any other place as may be specifically designated in the Contract as forming part of the Site or designated as such by the Engineer-in-Charge.

“**Special Conditions of Contract**” means the special conditions of contract setting out specific deviations from the General Conditions of Contract and other relevant provisions and data, which are to be read in conjunction with the General Conditions of Contract.

“**Specifications**” means all general and technical specifications and directions attached to and forming a part of the Bidding Documents which describe the purpose, scope, design and technical criteria of the Works including, the method and manner of performing the Works, the quality and quantity of the Works to be performed and the materials to be supplied under the Contract and includes all modifications or amendments made thereto by IIMN.

“**Stage**” means the level of progress of the Works identified as such in Works Completion Schedule.

“**Subcontract**” means any contract awarded to a Subcontractor.

“**Subcontractor**” means any person named in the Contract as a subcontractor or an original manufacturer, supplier of any Goods and Materials, Plant, labour or services for the Works or any person to whom a part of the Works has been subcontracted by the Contractor with the prior Approval of Engineer- in- Charge, as the case may be, and the permitted legal successors in title to such person, but not any assignee of such person.

“**Submissions Schedule**” has the meaning assigned to it in Clause 9.13.1.

“**Suspension Order**” shall have the meaning assigned to it in Clause 23.1.

“**Taxes**” means all taxes, duties, imposts, levies and charges pursuant to any law (whether currently in force or coming into force on or after the date of base date as defined above), including income tax, capital gains tax, GST, customs duty, fees, cess, fringe benefit tax and any interest, surcharge, penalty or fine in connection therewith.

“**GST**” shall mean Goods and Services Tax charged on the supply of material(s) and services. The term “GST” shall be construed to include the Integrated Goods and Services Tax (hereinafter referred to as “IGST”) or Central Goods and Services Tax (hereinafter referred to as “CGST”) or State Goods and Services Tax (hereinafter referred to as “SGST”) or Union Territory Goods and Services Tax (hereinafter referred to as “UTGST”) depending upon the import / interstate or intrastate supplies, as the case may be. It also means GST compensation cess, if applicable.

“**Temporary Works**” means all temporary and ancillary works including enabling works and maintenance works connected with the Works and required for the execution and completion of the Permanent Works.

“**Tests on Completion**” mean the tests which are specified in the Contract and designated as such and any includes any other tests that have to be carried out before the Works, or any part thereof is taken over by IIMN.

“**Time for Completion**” means the period specified in the Contract Agreement or the Special Conditions of Contract for Completion of the Works, calculated from the Effective Date.

“**Time for Mobilization**” means the period specified in Clause 9.3.2 for completion of Mobilization, as calculated from the Effective Date.

“**Trial Operation**” means the integrated operation of the Facility in automatic control system for a continuous period specified in the Contract or the Specifications.

“**Variation**” means any alteration and/or modification to the Specifications, which is instructed by the Engineer-in-Charge or as suggested by the Contractor and Approved as a variation by the Engineer-in-Charge in accordance with Clause 21.

“**Variation Order**” shall have the meaning assigned to it in Clause 21.1.

“**Week**” means a period of any consecutive seven days.

“**Working Day**” means a day other than a Sunday or a public holiday on which IIMN is open for business.

“**Works**” means:

- (a) all work and services required in connection with the turnkey design, engineering, procurement, permitting, fabrication, manufacture, construction, construction management, coordination of Subcontractors work, inspection, expediting, transportation, shipment, delivery, import, erection, installation, commissioning, start-up, testing and completion of the Facility, completion of all Performance Tests, in accordance with this Contract;
- (b) the provision of all Plant, Goods and Materials, Contract Spares, machinery, tools, labour, utilities, chemicals, lubricants consumables, transportation, administration, oversight, incidentals and other services and items related to the foregoing in accordance with this Contract;
- (c) the correction of defects in the Facility; and
- (d) the performance of all other obligations and services that are described in, or necessarily implied by, this Contract.

“**Works Completion Schedule**” means the schedule for the performance of the Works and fulfilment of the Parties' obligations as annexed to the Contract Agreement/Special Conditions of Contract, as may be revised in accordance with the terms of the Contract.

“**Works Programme**” means the program showing the sequence, method and timing of the design, procurement, construction, erection, installation, testing, commissioning of the Works (and related activities in the form and content prescribed by the Specifications, or any amended or varied version thereof, as submitted by the Contractor and for which the Engineer-in-Charge has issued a notice of no objection.

1.2 Interpretation

In the Contract, except where the context requires otherwise:

- (a) References to any statute or statutory provision or order or regulation made thereunder shall include that statute, provision, order or regulation as amended, modified, re-enacted or replaced from time to time whether before or after the date hereof.
- (b) References to persons shall include corporate bodies, unincorporated associations, partnerships and any organization or entity having legal capacity.
- (c) Headings of General Conditions of Contract or of the Specification or of any other

Bidding Document are solely for the purpose of giving general guidance for convenience in reading and segregating the general subject matter of various clauses and are not a summary of contents thereof and shall not form part of the operative provisions of the Contract and shall not govern the meaning or importation of the clauses thereunder.

- (d) References to Clauses or Schedules are, unless the context otherwise requires, references to recitals, clauses of, or, schedules to these General Conditions of Contract.
- (e) Unless the context otherwise requires, reference to one gender includes a reference to the other, words importing the singular include the plural and *vice versa*.
- (f) References to the words “include” or “including” shall be construed as being suffixed by the term “without limitation”.
- (g) Reference to an agreement, deed, instrument or other document include the same as amended, novated, supplemented, varied or replaced from time to time.
- (h) Words indicating the singular also include the plural and words indicating the plural also include the singular.
- (i) Provisions of the Contract including the word “agree”, “agreed” or “agreement” require the agreement to be recorded in writing.
- (j) The expression “writing” or “written” shall include communications by telex, e-mail, telegram, facsimile (fax) and letter.
- (k) If any provision in Clause 1.1 is a substantive provision conferring a right or imposing an obligation on any Party, effect shall be given to it as if it were a substantive provision in the body of the Contract.
- (l) The Schedules shall form an integral part of the Contract and shall be in full force and effect as though they were expressly set out in the body of the Contract.
- (m) Where the day on or by which any thing is to be done is not a Business Day or a Working Day, as the case may be, that thing must be done on or by the immediately occurring next Business Day or Working Day, as the case may be.
- (n) The rule of construction, if any, that a contract should be interpreted against the party responsible for the drafting and the preparation thereof, shall not apply to the Contract.
- (o) No verbal agreement, assurance, representation or understanding given by any employee or officer of IIMN or so understood by the Contractor, whether given or understood before or after the execution of the Contract, shall bind IIMN or alter the Contract documents unless specifically given in writing and signed by the Engineer-in- Charge/ IIMN and the Contractor’s authorized representative as an agreed variation and

amendment of the relative term(s) in the Contract.

- (p) Subject to Clause 2 below, All documents forming part of the Contract are to be read together as a whole and are to be taken as mutually explanatory.

2 CONTRACT

2.1 The documents forming the Contract are to be taken as mutually explanatory of one another. If there is an ambiguity or discrepancy in the documents, the Engineer-in-Charge shall issue necessary clarifications or instructions to the Contractor, and the order of precedence of the documents shall be as follows:

- (a) Contract Agreement
- (b) Detailed Letter of Acceptance along with its enclosures
- (c) Letter of Award / Fax of Acceptance
- (d) Job Specifications
- (e) Drawings
- (f) Technical Specifications
- (g) Special Conditions of Contract
- (h) Instruction to Bidders
- (i) General Conditions of Contract
- (j) Other Documents

3 COMMUNICATION

3.1 No verbal agreement, assurance, representation or understanding given by any employee or officer of IIMN or so understood by the Contractor, whether given or understood before or after the execution of the Contract shall bind IIMN or alter the Contract unless specifically given in writing.

3.2 Any consent, approval, authorization, certificate, report, information, notice or request from or by any Party or the Engineer-in-Charge shall be effective and valid only when made in writing under the hand of a duly authorized representative of such Party or the Engineer-in-Charge, as the case may be, and delivered by hand against receipt, sent by the recognized courier, registered mail or transmitted by facsimile transmission, e-mail to the address for the recipient's communication as stated in Clause 3.3 below. In case any notice is delivered by registered mail and/or courier, it shall be deemed to be duly served within forty eight (48) hours after posting and a notice or demand sent by facsimile, e-mail shall be deemed to have been served at the time of its transmission and in proving service of the same, it will be sufficient to prove, in the case of a letter, that such letter was sent by registered airmail, addressed and placed in the post and in the case of a facsimile transmission, e-mail that such facsimile/ e-mail was duly transmitted to a

current facsimile number/ e-mail of the addressee at the address referred above.

- 3.3 Any contractual notice, instruction, decision, order, report, certificate or other communication that is to be exchanged between the Parties shall be served by sending the same by e-mail or facsimile transmission, with a confirmation copy by courier or registered post to the following addresses:

If to IIMN:

Address: [■]
Attention: [■]
e-mail: [■]
Fax: [■]

If to the Contractor:

Address: [■]
Attention: [■]
e-mail: [■]
Fax: [■]

If to the Engineer-in Charge

Address: [■]
Attention: [■]
e-mail: [■]
Fax: [■]

- 3.4 Any change in the address for communication shall be duly notified by IIMN and/or the Contractor to the other Party in accordance with the provisions of this Clause 3.

4 STAMP DUTY

Stamp duties, registration fees (if any) and any related charges payable under the Applicable Laws in relation to the Contract shall be borne by the Contractor.

5 CONFIDENTIALITY AND CONFIDENTIAL INFORMATION

- 5.1 Both Parties shall treat the details of the Contract as private and confidential, except to the extent necessary to carry out obligations under it or to comply with Applicable Laws. The Contractor shall not publish, permit to be published, or disclose any particulars of the Works in any trade or technical paper or elsewhere without prior consent of IIMN.
- 5.2 The Contractor shall treat the Confidential Information as private and confidential, save in so far as may be necessary for the fulfilment of its obligations under the Contract, and shall not use, copy, publish, disclose or otherwise deal with, nor cause nor permit its Subcontractors or any

persons for whom it is contractually or otherwise responsible for, to use, copy, publish, disclose or otherwise deal with the Confidential Information, without prior consent in writing of IIMN. If any dispute arises as to the necessity of any publication or disclosure for the purpose of the Contract the same shall be referred to the decision of IIMN, whose award shall be final.

Without limiting the generality of the foregoing paragraph:

- (a) the Contractor shall take all practicable steps to ensure that no photographs, drawings or other image of the Site or of the Works or any part thereof or any property of IIMN, or any physical or virtual model thereof, are taken or made, except as may be expressly directed or Approved beforehand in writing by IIMN;
- (b) the Contractor shall not in regard to anything concerning the Works publish any information, drawing or photograph and shall not give interviews to or comment to the press or to any person associated with the news media or take part in radio or television schedules except with the express prior written consent of IIMN and subject to such conditions as it may prescribe;
- (c) the Contractor shall not use any part of the Site for the purpose of any advertisement, except by way of notice boards approved (as to location, number and content) by IIMN; and
- (d) the Contractor shall use its reasonable endeavors to procure that its servants and agents comply with this sub-Clause.

5.3 The Contractor shall procure that each and every Subcontractor shall contain confidentiality undertakings on the part of the Subcontractor in substantially similar terms to those entered into by the Contractor, and shall use all reasonable endeavors to enforce them.

5.4 In the event that the Contractor is lawfully required or requested by order of any competent Authority to disclose any Confidential Information, then the Contractor shall, to the extent permitted by the Applicable Laws, prior to disclosure immediately notify IIMN so that an appropriate protection order and/or any other action can be taken if possible, prior to any disclosure. In the event that such protective order is not, or cannot, be obtained, then the Contractor may disclose to the competent Authority that portion of the Confidential Information which it is legally required to disclose and shall use all reasonable endeavors to obtain assurances that confidential treatment will be accorded to any Confidential Information so disclosed.

5.5 The Contractor agrees that, upon request at any time by IIMN, the Contractor shall promptly, but in any event within 5 (five) days of receipt of written notification from IIMN:

- (a) return all Confidential Information that is in tangible form (including, without limitation, Confidential Information contained in software or on computer disc) furnished to the Contractor, together with all copies or extracts thereof; and

- (b) destroy all analysis, compilations, studies or other documents which have been prepared upon or reflect in any way the Confidential Information.

5.6 The provisions of this Clause 5 shall survive the expiration or termination of the Contract.

6 COMPLIANCE WITH APPLICABLE LAWS

6.1. The Contractor shall, in performing the Contract, comply with all Applicable Laws.

6.2. Without prejudice to the foregoing, the Contractor shall be responsible for bearing all registration and statutory inspection fees payable under any Applicable Laws in respect of the Works executed or completed pursuant to the Contract. If the Contractor defaults in complying with the Applicable Laws, the Contractor shall, at its own risk and Cost, bear any and all additional fees, fines, penalties or charges. However, IIMN shall make reasonable efforts to assist the Contractor in rectifying any such default under Applicable Laws upon the Contractor's specific request, including any specific request to issue letters to the relevant Authorities on behalf of the Contractor.

6.3. The Contractor shall not be absolved from any of its obligations under Applicable Laws or the Contract or claim any additional amount from IIMN or seek any extension of the Time for Completion due to its ignorance of any Applicable Law. This Clause 6.3 shall not however restrict the right of the Contractor to claim increase in cost due to Change in Law in accordance with the provisions of Clause 22.

7 BACKGROUND INFORMATION

7.1. Should there be any doubt or ambiguity in the interpretation of the Contract or contradiction in the various documents that comprise the Contract or should there be any discernable error or omission in any document comprising the Contract, the Contractor shall, prior to commencing the Work likely to be affected by such ambiguity, error or omission, apply in writing to the Engineer-in-Charge for resolving the ambiguity or rectifying the error, as the case may be. If the Contractor fails to apply to the Engineer-in-Charge prior to commencing the relevant Work, the Contractor shall perform such Work at its own risk and if the Work are at variance with the requirements of the Contract, then such Work shall be deemed to Defective Work and the provisions of Clause 9.16 shall apply.

7.2. The decision of the Engineer-in-Charge on any application under Clause 7.1 shall be in writing and shall be final and binding on the Contractor and shall form part of the Contract.

7.3. The Parties agree that any ambiguity, discrepancy, inconsistency, divergence, impracticality or omission as aforesaid shall not vitiate the Contract.

7.4. As soon as possible following a request from the Engineer-in-Charge to do so, the Contractor shall provide such reasonable information as the Engineer-in-Charge may request to assist it in resolving the ambiguity or rectifying the error, including if so requested, the Contractor's

proposals for overcoming the ambiguity, discrepancy, inconsistency, divergence, impracticality or omission (as the case may be) but the Engineer-in-Charge shall not be obliged to adopt or instruct the same.

- 7.5. The Contractor is required to make all necessary inquiries and fully acquaint himself with all Background Information, and the Contractor acknowledges that any failure to acquaint itself with the Background Information shall not relieve its responsibility for properly estimating the difficulty or cost of successfully performing its obligations under the Contract and IIMN shall have no responsibility to the Contractor (whether in contract, tort, for breach of statutory duty or howsoever other arising) for or in relation to such Background Information whether as to its accuracy, adequacy, sufficiency or completeness.

8 GENERAL OBLIGATIONS OF IIMN

8.1 Access to and Possession of the Site

8.1.1 IIMN shall provide access the Site to the Contractor for the execution of the Works. In the event of delay in transfer of the Site by IIMN to the Contractor, for reasons not attributable to the Contractor, the Contractor shall only be entitled to a reasonable extension of the Time for Completion pursuant to Clause 14. The Contractor shall take all necessary precautions to ensure that no damage is caused to any building or establishment within the Site. The Contractor shall be liable for any loss suffered by IIMN on account of damage to the Site or any building or establishment within the Site. The Contractor shall ensure that day to day activities of IIMN are not hampered because of Works executed by the Contractor. The Contractor shall ensure that until the issuance of the Completion Certificate (IIMN shall start operations from COD upon completion of the Trial Operations), in accordance with Clause 15 by IIMN, IIMN's Personnel, their representatives and assignees shall have the right to visit the Site at any time and inspect or audit the Contractor's books and records relating to the execution and completion of the Works.

8.1.2 Without prejudice to Clause 8.1.1 above, the Contractor agrees that the Site will be handed over to the Contractor in stages with a view that the Contractor shall plan the Works in a manner so as to achieve Completion in a sequential manner, without affecting the Time for Completion and without starting all the Works at the same time. To this end, within 28 (twenty-eight) Working Days from the Effective Date, the Contractor shall finalize, in agreement with the Engineer-in-Charge, sequential requirement of the Site, taking into account the other works concurrently being undertaken by IIMN at or about the Site or on the performance of which depends the Contractor's performance of the Works.

8.2 Permits, Licenses or Approvals

Without prejudice to the obligations of the Contractor, contained in the Contract, if requested by the Contractor, IIMN and PMC shall use its reasonable endeavors to assist the Contractor in obtaining in a timely and expeditious manner all permits, approvals and/or licenses necessary for the execution of the Contract from all local, state or national government authorities or public service undertakings, in India that such authorities or undertakings require the Contractor or

Subcontractors or the personnel of the Contractor or Subcontractors, may require, as the case may be, pursuant to Applicable Law in India.

8.3 IIMN's Personnel

Without prejudice to the obligations of the Contractor under the Contract, IIMN shall be responsible for ensuring that IIMN's Personnel:

- (a) co-operate with the Contractor's and the Contractor's Personnel; and
- (b) take actions similar to those which the Contractor is required to take under Clause 9.16, on the Site, in respect of any other works undertaken by IIMN at the Site.

8.4 Engineer-in-Charge

IIMN shall appoint the Engineer-in-Charge to act on behalf of IIMN in connection with the Contract. The Engineer-in-Charge shall have the powers and duties specified in the Contract. The Engineer-in-Charge shall have no authority to amend the Contract or to relieve either Party of any of its duties, obligations or responsibilities under the Contract, unless expressly authorized by IIMN by way of a notice to the Contractor.

9 GENERAL OBLIGATIONS OF CONTRACTOR

9.1 General Obligations

- 9.1.1 The Contractor shall execute the Works, as described in greater details in the Specifications, in accordance with the Contract, the Specifications, the Safety Code and Applicable Laws. The Works shall be fit for the purposes for which they are intended, as defined in the Contract. The Works shall include any work which is necessary to satisfy the Specifications, or as implied by the Contract, or arises from any obligation of the Contractor, and all works not mentioned in the Contract but which are necessary for stability, completion or the safe, reliable and efficient operation of the Facility.
- 9.1.2 The Contractor agrees and acknowledges that at any time after acceptance of the Bid, IIMN shall have the right to add, amend or delete any item of the Works in the overall interest of the Project. Further, IIMN shall have the right to split the scope of Works under this Contract between two or more contractors without assigning any reasons thereof.
- 9.1.3 The Contractor shall execute the Works in accordance with the Works Completion Schedule and shall complete each Stage within the relevant Key Date and the entire Works within the Time for Completion and for this purpose the Contractor shall provide such necessary resources, Goods and Materials, Plant and Contractor's Personnel having the requisite experience for the purposes stated in the Contract.
- 9.1.4 The Contractor agrees and acknowledges that it shall perform all of its obligations and

responsibilities under the Contract at its own risk, Cost and expense. IIMN shall have no obligation or responsibility whatsoever with respect to the Completion of the Works or the fulfillment of other obligations of the Contractor under the Contract, except as expressly provided in the Contract.

9.1.5 The Contractor shall provide all superintendence, Goods and Materials and Contractor's Equipment and all other things, whether of a temporary or permanent nature, required for the execution of the Works.

9.1.6 Wherever applicable, the Contractor shall submit within 56(fifty-six) days from the Effective Date, a detailed Bill of Quantities, specifying the materials which, on a preliminary determination made by the Contractor, will be required for incorporation in the Permanent Work. Each item entered in the Bill of Quantities shall be priced, to the extent possible, in conformity with the details given the Bid. IIMN shall review or cause to be reviewed the adequacy, sufficiency, validity and/or suitability of the materials listed in the Bill of Quantities and of the prices indicated in the Bill of Quantities in this regard. Such review shall be performed in conjunction with design, engineering and other technical reviews to be done by IIMN and all provisions applicable to review of critical drawings and designs shall be applicable to the review of the Bill of Quantities. However, no such review or Approval of the priced Bill of Quantities by IIMN shall absolve the Contractor of its obligation to supply all Goods and Materials required to be incorporated in the Permanent Work, within the price quoted for such Goods and Materials in the Price Schedule.

9.1.7 The Contractor shall supply all materials, works, labour and other services, which although not specifically mentioned in the Contract:

- (a) can be reasonably inferred from and is necessary for the execution of the Works, in accordance with Good Industry Practice, including where the Contract describes any portion of the Works in general terms but not in complete detail; or
- (b) that are necessary in order for the Contractor to cause the Facility to satisfy the Guaranteed Performance Levels and the warranties set forth in the Contract or as otherwise necessary in order to meet the purposes for which the Facility is being developed,

as if such superintendence, materials, works, labour and other services were expressly mentioned in the Contract. The performance of such obligations by the Contractor shall not be construed as a Variation and the Contractor shall not be entitled to any revision of the Contract Price or extension of the Time for Completion.

9.1.8 The Contractor shall take full responsibility for the methods of construction, adequacy, stability and safety of the operations carried out at the Site relating the execution of the Works, all Contractor's Documents, Goods and Materials, Contractor's Equipment, irrespective of any Approval or consent by the Engineer-in-Charge.

9.1.9 The Works shall be free of all Defects in materials and workmanship and shall be adequate,

stable, safe and strictly compliant with the instructions of Engineer-in-Charge, the Drawings and Designs, the Specifications and Good Industry Practice, such that the Facility when complete shall be capable of meeting the Guaranteed Performance Levels.

- 9.1.10 The Contractor shall use proven and reliable technologies, configurations and architecture and exercise strict professional standards of skill, care and diligence, adhered to by experienced and competent contractors specializing in performing services of the same type and magnitude.
- 9.1.11 Within 30 (thirty) days of the Effective Date, the Contractor shall, to the extent necessary, register itself and the Contract, at its own Cost, with Reserve Bank of India, Income Tax Authorities, Sales Tax Authorities, Excise Authorities and other relevant statutory Authorities and provide copies of all documents related to such registrations to IIMN for record.
- 9.1.12 Notwithstanding anything contained herein, the Contractor shall obtain and maintain all permits, licenses and approvals required for the execution of the Works as per Applicable Laws.
- 9.1.13 (a) If there is any doubt or ambiguity in the interpretation of the Contract or error, omission or contradiction therein or any of them, the Contractor shall prior to commencing the relative work, apply in writing to the Engineer-in-Charge for his decision in resolution of the doubt, ambiguity, contradiction or correction of the error or omission, as the case may be. Should the Contractor fail to apply to the Engineer-in-Charge for his decision, as aforesaid, prior to commencing the relative Work, the Contractor shall perform the said work at his own risks, and the provisions of Clause 9.1.13 (b) hereof shall apply to any such Work performed by the Contractor.
- (b) In the event of the Contractor having already performed or executed any Work at variance with the decision of the Engineer-in-Charge as aforesaid, then, notwithstanding payment in respect of such Work having made to the Contractor, such Work shall be deemed to be Defective Work and the relevant provisions hereof and associated Clauses thereunder shall apply thereto.
- 9.1.14 The Contractor is deemed to have satisfied itself as to the correctness and sufficiency of the Specifications and other terms of the Contract relating to its risks, liabilities and obligations set out in or implied by the Contract and all matters and things necessary for the proper execution of the Works.
- 9.1.15 The Contractor shall take all steps to cause minimum disturbance of vehicular traffic and other movement of the public, on or in the vicinity of the Site.
- 9.1.16 Without prejudice to the provisions of the Contract and notwithstanding any testing or certification pursuant to this Contract, IIMN shall at any time during the subsistence of this Contract, have the right (but not the obligation) to reject any part of the Works, the Plant, the Goods and Materials, or the Contractor's Equipment, which is found not to be in compliance with the requirements of this Contract including, the Specifications.

9.1.17 In such a situation, IIMN may instruct the Contractor to:

- (a) remove from the Site and replace the rejected Plant, Goods and Materials or Contractor's Equipment or re-instate the Works; or
- (b) execute any work which is urgently required for the safety of the Works, whether because of an accident, unforeseeable event or otherwise,

in accordance with the requirements of this Contract, the cost of which shall be to the sole account of the Contractor. The Contractor shall comply with the instruction within a reasonable time, which shall be the time (if any) specified in the instruction, or immediately if urgency is of the nature specified under paragraph (b).

9.1.18 If the Contractor fails to proceed with the repair or replacement of the rejected item of the Works or the Contractor's Equipment within reasonable time, IIMN may, by contract with third Persons or otherwise, repair or replace such part of the Works and/or terminate this Contract pursuant to Clause 29.2 and the Contractor shall be liable to reimburse IIMN upon demand for all costs and damages incurred by IIMN relating to such repair or replacement by a third party.

9.1.19 If IIMN requires the Works, Goods and Materials, Contractor's Equipment or workmanship to be retested after such remedy of the Defect therein or replacement, the tests required to be conducted under this Contract and as instructed by IIMN shall be repeated under the same terms and conditions. If the rejection and retesting cause IIMN to incur additional costs, the Contractor shall pay these costs to IIMN.

9.1.20 The Contractor shall provide, comply with and require and ensure that its Subcontractors also provide and comply with such documentation/information or any other support as may be requested by IIMN from time to time as may reasonably be deemed fit by IIMN for meeting its obligation under any Applicable Laws for the time being in force or in relation to the said Works, as also matters including but not limited to exemptions, concessions etc as may be availed, sought to be availed by IIMN.

9.1.21 The Contractor shall furnish to IIMN, promptly upon request, such information concerning the Contractor, its Subcontractors and their respective employees or the Works as IIMN may be required to furnish to any competent Authority for the procurement of any licenses, permits or approvals mentioned in Clause 8.2.

9.1.22 To the extent possible, the information regarding existing structures/ overhead lines, existing pipelines and utilities are already indicated on alignment sheets forming part of the Background Information. However, the Contractor may encounter other structures/ pipelines/ optical fiber cables, trees, etc. that may not be appearing on alignment sheets, for which, the Contractor is required to collect information on his own before commencing the Work. The Contractor shall execute the Works in such a manner that the said structures, utilities, pipelines etc. are not disturbed or damaged, and shall indemnify and keep indemnified IIMN from and against any destruction thereof or damages thereto.

9.2 Contractor's Representative

- 9.2.1 The Contractor shall, within 30 (thirty) days of the Effective Date, appoint the Contractor's Representative with the prior written Approval of IIMN (and such Approval shall not be unreasonably withheld) and vest in him the authority to act on behalf of the Contractor for all purposes of the Contract. If the consent is withheld or subsequently revoked, or if the appointed person fails to act as the Contractor's Representative, the Contractor shall submit the name and particulars of another suitable person for such appointment.
- 9.2.2 The Contractor shall not, without the prior consent of IIMN, revoke the appointment of the Contractor's Representative or appoint a replacement.
- 9.2.3 The Contractor's Representative shall coordinate all matters relating to the Contract with IIMN, receive all instructions from Engineer-in-Charge and shall devote substantially all of his time to the performance of the Contractor's obligations under the Contract.

9.3 Mobilization

- 9.3.1 The Contractor shall be responsible for Mobilization including, setting up of offices at the Site with infrastructure facilities such as power, water, communication, conveyance etc., procuring an adequate strength of skilled, semi-skilled and unskilled workers, who, with such infrastructure facilities shall be in a position to commence and execute the Works. The Contractor shall carry out the Mobilization in accordance with the agreed quality standards and Applicable Laws.
- 9.3.2 The Contractor shall complete Mobilization in accordance with the terms of the Contract within the Time for Mobilization, which is 21 days from the Effective Date.

9.4 Security

9.4.1 Mobilization Advance Guarantee

- (a) The Contractor shall furnish the Mobilization Advance Guarantee for a sum equal to 10% (ten percent) of 110% (one hundred and ten percent) of the Contract Price, to cover the Mobilization Advance to be received by the Contractor under the Contract from and Indian nationalized / scheduled bank / Indian branch of an international bank acceptable to IIMN, in the form set out at Appendix 2 (Form of Mobilization Advance Guarantee). The Mobilization Advance Guarantee shall have a claim period of 90 (ninety) days beyond validity.
- (b) The mobilization advance guarantee shall remain valid until the earlier of the following:
- Up to the date when the mobilization advance has been fully recovered; or
 - Up to the date of Final Completion;
- (c) If the Mobilization Advance Guarantee is or becomes invalid for any reason (other than its expiry), the Contractor shall immediately notify the Engineer-in-Charge and obtain within

7 (seven) days a replacement Mobilization Advance Guarantee in the form appearing in Appendix 2 (Form of Mobilization Advance Guarantee).

- (d) IIMN shall have an unqualified option under the Mobilization Advance Guarantee to draw on the guarantee and claim the amount there under in the event of the inadequate adjustment of the Mobilization Advance in accordance with Clause 20.1.3.
- (e) The provision, maintenance or renewal, as the case may be, of the Mobilization Advance Guarantee by the Contractor in accordance with the terms of the Contract shall be a condition precedent to any payment by IIMN to the Contractor.
- (f) If the Contractor fails to provide, maintain or renew the Mobilization Advance Guarantee in accordance with the Contract, then IIMN may, without prejudice to any other rights and remedies to which it may be entitled, by written notice forthwith terminate the Contract.
- (g) The Contractor agrees and acknowledges that IIMN shall be entitled to assign the Mobilization Advance Guarantee in favour of any party to whom this Contract may be assigned by IIMN.
- (h) IIMN shall endeavor to release the Mobilization Advance Guarantee to the Contractor, within 30 days after total recovery of the Mobilization Advance, including any interest/charges, as applicable, on request of Contractor.

9.4.2 Contract Performance Bank Guarantee

- (a) Within fifteen (15) days of the Effective Date, the Contractor shall furnish to IIMN, the Contract Performance Bank Guarantee from any Indian Nationalized / Scheduled Bank / Indian branch of an International Bank acceptable to IIMN for an amount equivalent to 10% (ten percent) of the awarded Contract Price in types and proportions of currencies in which the Contract Price is payable in accordance with the Contract. The Contractor shall procure the Contract Performance Bank Guarantee in the form set out in Appendix 1 (Form of Contract Performance Bank Guarantee). The Contractor shall maintain the Contract Performance Bank Guarantee at its own expense, and shall ensure it shall remain valid for a period of not less than 3 (three) months after the expiry of the Extended Defects Liability Period. The Contract Performance Bank Guarantee shall be extended by such period as IIMN may require if the Completion is delayed beyond the Time for Completion and/or the Final Completion is delayed beyond the scheduled date of Final Completion and any extension thereof as per directions of the Engineer-in- Charge. In the event that the Contract Price is increased during the Contract Validity Period for any reason whatsoever, the value of the Contract Performance Bank Guarantee shall be increased proportionately by the Contractor within 7 (seven) Business Days to ensure that it remains an amount which is equivalent to 10% of the revised Contract Price, as determined by the Engineer-in-Charge.
- (b) IIMN shall have an unqualified option under the Contract Performance Bank Guarantee to draw on the security and claim the amount there under in the event of the Contractor's

failure to honor any of its obligations, responsibilities or commitments under the Contract or in respect of any amount due from the Contractor to IIMN. Provided however that, nothing stated under this Clause shall make it incumbent upon IIMN to utilize the Contract Performance Bank Guarantee in preference to any other remedy which IIMN may have, nor shall it be construed as confining the claims of IIMN against the Contractor to the value of the Contract Performance Bank Guarantee.

- (c) If the Contract Performance Bank Guarantee is or becomes invalid for any reason (other than its expiry), the Contractor shall immediately notify the Engineer-in-Charge and obtain within 7 (seven) days a replacement Contract Performance Bank Guarantee in the form appearing in Schedule 1 (Form of Contract Performance Bank Guarantee).
- (d) Without prejudice to the obligation of the Contractor under sub-clause (a) above, not later than 30 (thirty) Business Days before the expiry of the Contract Performance Bank Guarantee, the Contractor shall, upon request of the Engineer-in-Charge obtain extension of the validity of such Contract Performance Bank Guarantee for the period stated in such request by the Engineer-in-Charge and provide a copy of such renewed security. If the Contractor fails to extend the Contract Performance Bank Guarantee, IIMN shall be entitled to receive the un-drawn amount there under pending the completion of the Works, provided that the amount so received shall be treated as a cash retention and to the extent that there are no outstanding claims thereto, shall be released upon submission of a new Contract Performance Bank Guarantee acceptable to IIMN.
- (e) The Contract Performance Bank Guarantee shall be returned to the Contractor after 3 (three) months from the expiry of Extended Defect Liability Period.
- (f) If the Contractor fails to provide, maintain or renew the Contract Performance Bank Guarantee in accordance with the Contract, then IIMN may, without prejudice to any other rights and remedies to which it may be entitled, by written notice terminate the Contract forthwith.
- (g) The Contractor agrees and acknowledges that IIMN shall be entitled to assign the Contract Performance Bank Guarantee in favour of any party to whom this Contract may be assigned.

9.5 Site Data

- 9.5.1 IIMN has made available to the Contractor all the relevant data in IIMN's possession on hydrological and subsurface conditions relating to the Site. The accuracy or reliability of the data/studies/reports and of any other information supplied at any time by Engineer-in-Charge is not warranted and the Contractor shall be solely responsible for the consequences of its interpretation of all such data/studies/reports. The Contractor shall conduct further investigations considered necessary by it at its own Cost and any error or discrepancies, if found in the data made available by IIMN at any stage shall not constitute ground for extension of the Time for Completion or any monetary claim.

- 9.5.2 The Contractor shall be deemed to have obtained all necessary information as to risks, contingencies and other circumstances which may influence or affect the execution of the Works.
- 9.5.3 The Contractor shall be deemed to have inspected and examined the Site, its surroundings, the studies/reports/data mentioned in Clause 9.5.1 above and other available information with respect to the viability of its design and the execution of Works and satisfied itself by careful examination before submitting its Bid, as to all the relevant matters including:
- (a) The form and nature of the Site, including the surface strata, sub-soil, sub-surface conditions, local conditions;
 - (b) The hydrological and climatic conditions;
 - (c) The extent, nature and magnitude of the Work, availability of the Plant and Goods and Materials necessary for the execution of the Works and remedying any defects;
 - (d) Applicable Laws;
 - (e) The Contractor's requirement for access, accommodation, facilities, personnel, supply of power and water, availability of labour, transport and other services;
 - (f) The risk of injury or damage to property adjacent to the Site and to the occupiers of such property or any other risk;
 - (g) The state of traffic both of passengers and vehicles on, along and adjacent to the Site at all times of the day, during various seasons, festivals, etc.; and
 - (h) The suitability of any building, structure, foundation or means of access to the Site to be provided by IIMN for reception, movement, commissioning and maintenance of the Works within the time or times indicated in the Works Programme.
- 9.5.4 The Contractor now hereby agrees that the Contractor shall not be relieved from any risks or obligations imposed on or undertaken by it in relation to the Works on the grounds of any misunderstanding or misapprehension in respect of the matters referred to in paragraphs (a) to (a) above or on the ground that it did not or could not reasonably have been expected to foresee any such matter stated above which may, in fact, affect or have affected the Completion of the Works and remedying of any Defects therein or the meeting of its obligations in respect of the Works under the Contract.
- 9.5.5 The Site shall be handed over to the Contractor free from any encroachment and the Contractor shall satisfy itself to such effect prior to taking over the Site for the execution of the Works. It is clarified for the avoidance of doubt that after handing over of the possession of the Site or part of the Site, it shall be the sole obligation of the Contractor to ensure that the Site or part of the Site handed over remains free from any encroachment or squatters and the Contractor shall take all necessary steps at its Cost and expense to give effect to its obligations under this Clause.

9.6 Access Routes

- 9.6.1 The Contractor shall be deemed to have satisfied itself as to the suitability and availability of the access routes to the Site. The Contractor shall be responsible for the maintenance of such access routes. The contractor shall construct, if necessary, at his own cost and initiative, temporary access road to site from main public feeder roads. The Contractor shall provide at its own Cost, signs or directions which it may consider necessary or as instructed by the Engineer- in-Charge for the guidance of its employees, laborers, representatives and others. Upon the request of the Contractor and at the risk and Cost of the Contractor, IIMN may assist the Contractor to obtain any permission, concessions and related easement right that may be required from the relevant authorities for the use of such routes, signs and directions.
- 9.6.2 IIMN shall not be responsible for any claims which may arise from the use or otherwise of any access route. IIMN does not guarantee the suitability or availability of any particular access route, and shall not be liable to any claim for any non-suitability or non-availability for continuous use during the execution of the Works of any such route.
- 9.6.3 All transport operations for the execution of the Works shall be carried out as stipulated in the Specifications. The Contractor shall indemnify IIMN in respect of all claims, demands, proceedings, damages, costs, charges and expenses whatsoever arising out of or in relation to any such matters.
- 9.6.4 The Contractor shall take all reasonable measures to ensure that the transportation of the Contractor's Personnel, Goods and Materials or Contractor's Equipment do not interfere with local traffic in the vicinity of the Site.

9.7 Rights of Way and Facilities

IIMN shall provide a non-exclusive right of way for access to the Site. The Contractor shall bear all Costs and charges for special or temporary rights of way which it may require including those for access to the Site. The Contractor shall also obtain, at its risk and Cost, any additional facility outside the Site which it may require for the purpose of the execution of Works. IIMN reserves the right to make use of these service roads/rights of way for itself working in the area, as and when necessary without any payment to the Contractor.

9.8 Sufficiency of Contract Price

- 9.8.1 The Contractor in fixing the rates/prices specified in the Price Schedule shall be deemed to have independently obtained all information necessary for the purpose of preparing the Bid and executing the Works and to have satisfied itself as to the correctness and sufficiency of the Bid and the Contract Price. Any error in description of the quantity or quality of the Works or omission of any item of work shall not vitiate the Contract or release the Contractor from its obligation to perform the Works at the prices specified in the Price Schedule and the Contractor shall be deemed to have known the scope, nature and magnitude of the Works and the materials, equipment and labour required for executing the Works.

9.8.2 Unless otherwise stated in the Contract, the Contract Price and the rates and prices stated in Contract shall, except as otherwise provided for in the Contract, cover all its obligations under and in relation to the Contract, including the obligation to supply Contract Spares; and all matters and all things necessary for the proper execution of the Works. The Contract Price shall not be adjusted save as expressly provided in the Contract, and includes any and all direct, indirect and ancillary charges and costs of whatsoever nature, all profit, all licenses, royalty and other fees, the cost of all spare parts required for the execution of the Works. The Contractor acknowledges and agrees that the Contractor shall be liable to arrange and obtain any and all licenses on Intellectual Property rights required to execute the Works and to perform the Contract, and that any fees associated with such licenses shall be included within the Contract Price and shall be the sole responsibility of the Contractor.

9.9 Works Programme

9.9.1 The Contractor shall submit a detailed Works Programme in 'MS Projects' software to the Engineer-in-Charge not later than 30 (thirty) days from the Effective Date. The Contractor shall also submit a revised Works Programme whenever the Engineer-in-Charge finds that the previous Works Programme is inconsistent with actual progress as provided in the Specifications/ scope of Work.

9.9.2 No alteration to the Works Programme, or to such arrangements and methods specified therein, shall be made without obtaining prior written consent of the Engineer-in-Charge. If the progress of the Works does not conform to the Works Programme, the Engineer-in-Charge may instruct the Contractor to revise the Works Programme, showing the modifications necessary to achieve Completion within the Time for Completion. The Contractor shall then follow the revised Works Programme at its own Cost.

9.9.3 The consent by the Engineer-in-Charge to the Works Programme shall not relieve the Contractor of any of its responsibilities or obligations under the Contract. If the Works Programme indicate that a Key Date has not, or shall not be met, it shall not, by itself entitle the Contractor to an extension of time in relation to such Key Date.

9.10 Progress Reports

9.10.1 The Contractor shall submit to the Engineer-in-Charge, Weekly and Monthly Progress Report which shall, amongst other things, highlight actual or potential departures from the Works Programme and state the measures which the Contractor proposes to take in order to make good or reduce any delay.

9.10.2 The Contractor shall continue to submit the Weekly and Monthly Progress Report until the completion of works . Each Monthly Progress Report shall include:

- (a) An executive summary;
- (b) Charts showing the status of the Works;
- (c) Monthly Material Procurement Status

- (d) Environmental compliances as per GRIHA standards/ requirements.
- (e) For the execution of each main part of the Works, the extent of progress (percentage of the whole), the actual or expected dates of commencement, anticipated completion date of the Stage, inspections and Tests on Completion to be carried out by the Contractor;
- (f) Records of manpower and Contractor's Equipment on the Site;
- (g) Copies of quality assurance documents or reference thereto, test results and certificates;
- (h) Safety statistics, including details of any hazardous incidents and activities relating to environmental aspects;
- (i) Comparisons of actual progress against the planned progress, variance analysis and reasons for the variance and steps taken to mitigate the same, with details of any aspects which may jeopardize the Completion of the Works in accordance with the Contract, and the measures being (or to be) adopted to overcome such aspects;
- (j) Inspection reports of regulatory authorities; and
- (k) Status and details of Licenses/registrations/approvals/permits obtained/ required to be obtained under Applicable Laws.

9.10.3 The Contractor shall also submit to the Engineer-in-Charge such other reports as may reasonably be required by it or any relevant authority or public body.

9.10.4 The Contractor hereby acknowledges and accepts that any programme, Weekly/ Monthly Progress Report, schedule, plan, daily report or any other information to be submitted by it in accordance with this Clause shall not constitute the notices which it is required to give under any provision of the Contract.

9.11 Packing and Forwarding

9.11.1 Imported Supplies

- (a) The Contractor shall, wherever applicable, after proper painting, pack and crate all materials for shipment in a manner suitable for export, in accordance with internationally accepted export practices and in such manner so as to protect the supplies from damage and deterioration in transit by road, rail and/or sea and during storage at Site. Without prejudice to any other liabilities or obligations of the Contractor, the Contractor shall be responsible for all damage to the supplies due to improper packing.
- (b) The Contractor shall notify IIMN and the Engineer-in-Charge of the date of each shipment from the port of loading as well as the expected day of arrival of such shipment at the designated port of arrival.

- (c) The Contractor's notification shall give complete shipping details with regard to the weight, size and content of each package, along with any other information which IIMN may require.
- (d) The following documents shall be sent to IIMN within [3 (three)] days from the date of dispatch of the shipment to IIMN or any other person designated by IIMN:
 - (i) Invoices (2 copies) or any other document of title evidencing sale in transit
 - (ii) Packing list (2 copies)
 - (iii) Test certificate (4 copies)
 - (iv) Insurance certificate (2 copies)
 - (v) Third party inspection certificate as per Quality Assurance Plan Approved by IIMN/Engineer-in-Charge (2 copies).

9.11.2 Domestic Supplies

- (a) The Contractor shall, wherever applicable, after proper painting, pack and crate all materials for in such manner so as to protect the supplies from damage and deterioration in transit by road and/or rail and during storage at Site. Without prejudice to any other liabilities or obligations of the Contractor, the Contractor shall be responsible for all damage to the supplies due to improper packing.
- (b) The Contractor shall notify IIMN and the Engineer-in-Charge of the date of each shipment from the works, factory or warehouse and expected date of arrival at the Site.
- (c) The Contractor's notification shall give complete shipping details with regard to the weight, size and content of each package, along with any other information which IIMN may require.
- (d) The following documents shall be sent to IIMN within [3 (three)] days from the date of dispatch of the shipment to IIMN or any other person designated by IIMN:
 - (i) Invoices (2 copies) or any other document of title evidencing sale in transit
 - (ii) Packing list (2 copies)
 - (iii) Test certificate (4 copies)
 - (iv) Insurance certificate (2 copies)
 - (v) Third party inspection certificate as per approved Project Quality Plan/Quality Assurance Plan Approved by IIMN/Engineer-in-Charge (2 copies).

9.12 Contractor's Equipment

- 9.12.1 All Contractor's Equipment and Temporary Works provided by the Contractor or any Subcontractor shall, when brought on to the Site, be deemed to be exclusively intended for execution of the Works and not be removed without the consent, in writing, of the Engineer-in-Charge. Such consent shall not be unreasonably withheld or delayed by the Engineer-in-Charge.

- 9.12.2 (a) Upon Completion of the Works, the Contractor shall remove from Site, the entire Contractor's Equipment, Temporary Works and surplus materials as defined in sub- clause 9.12.2(b) below, as per the directions of the Engineer-in- Charge.
- (b) Surplus materials
- Surplus civil construction materials comprising sand, cement, bricks, stones, aggregates and the products of dismantling the Temporary Works erected by the Contractor shall vest in and belong to the Contractor upon Completion of the Works and/or earlier termination of the Contract for any cause. The Contractor shall have the right, subject to the other terms & conditions of the Contract, to remove the surplus civil construction material from the Site, subject to satisfactory proof of supply. No other surplus material will be allowed to be removed from the Site and shall be deemed to be the property of IIMN and the same shall be transported properly to IIMN's store or as directed by IIMN. The Contract Price quoted by the Contractor shall be deemed to include the cost of all surplus materials which are deemed to be the property of IIMN.
- 9.12.3 IIMN shall not at any time be liable for the loss or damage to any of the Contractor's Equipment, Temporary Works or materials brought on Site by the Contractor for execution of the Works.
- 9.12.4 The Contractor shall be responsible for obtaining physical clearance from the customs, if any required for constructional plant, materials and other things required for the execution of the Works.
- 9.12.5 The Contractor shall, upon written request by the Engineer-in-Charge, produce to the Engineer-in-Charge, all documents evidencing title to or the contractual arrangement giving the right to the Contractor to use the Contractor's Equipment. In the event of failure to comply with such request within 15 (fifteen) days, then without prejudice to any other rights, IIMN shall be entitled to withhold the payments due to the Contractor under the Contract.
- 9.12.6 The Contractor shall be responsible for maintaining the Contractor's Equipment at the Site in a safe and reliable working condition.
- 9.12.7 The Contractor shall be liable for loss of or damage to any of the Contractor's Equipment or to any Persons, as a result of handling, storage or use of the Contractor's Equipment which may occur at any time during the execution of the Works or the remedying of Defects therein.
- 9.12.8 Notwithstanding anything contained to the contrary in any or all of the Clauses of this Contract, where any goods, materials or equipment for the execution of the Contract are procured with the assistance of any Authority either by issue from the Authority stocks or purchased under orders, permits or licenses issued by the Authority, the Contractor shall use such goods, materials or equipment economically and solely for the purpose of the Contract and shall not dispose of them without the prior written permission of IIMN.

9.13 Contractor's Documents

9.13.1 The Contractor shall submit to IIMN a detailed list of the Contractor's Documents to be submitted as well as a schedule for submissions of the Contractor's Documents (taking into account the requirement for Approval by IIMN, the Engineer-in-Charge or any third party consultant appointed by IIMN) within 3 (three) months from the Effective Date, which shall be subject to Approval by IIMN.

IIMN shall, within 21 (twenty-one) Working Days of the date of submission of such schedule, either Approve the same or reasonably require amendments to such schedule by a written notice to the Contractor. Where IIMN requires amendments to be made to the submission schedule, the Contractor shall make such changes and submit a fresh schedule for submissions. If IIMN does not notify its refusal to Approve such schedule within 30 (thirty) Working Days of the receipt of such schedule, then it shall be deemed to be Approved by IIMN. The latest revision of the Approved schedule for the submission of Contractor's Documents shall be the “**Submissions Schedule**” and shall form a Contract Document.

The Contractor shall comply with the Submissions Schedule for the purposes of submissions of the Contractor's Documents and shall, in any event, ensure the submission of the Contractor's Documents in relation to any element of the Works simultaneously with the performance of that element of the Works. Failure by the Contractor to do so shall entitle IIMN to reject that element of the Works and the consequences thereof shall be borne by the Contractor at its own Cost.

9.13.2 The Contractor's Documents shall be prepared in sufficient detail and shall satisfy all regulatory approvals. The Engineer-in-Charge shall have the right to inspect/review the preparation of the Contractor's Documents, wherever they are being prepared.

9.13.3 Each of the Contractor's Documents shall, when considered ready for use, be submitted to the Engineer-in-Charge for his review. Unless otherwise stated in the Specifications or elsewhere in the Contract, each review by the Engineer-in-Charge shall not exceed the Review Period.

9.13.4 If the Engineer-in-Charge during the Review Period, gives notice to the Contractor that a Contractor's Document fails (to the extent stated) to comply with the Specifications, it shall be rectified, resubmitted and reviewed (and if specified, Approved) by the Engineer-in-Charge, at the Contractor's Cost within such time as the Engineer-in-Charge may specify to the Contractor.

9.13.5 Design, procurement, construction, manufacture and/or installation of any part of the Works shall not commence prior to the expiry of the Review Period for Contractor's Documents which are relevant for the execution of such part of the Works.

9.13.6 If the Contractor wishes to modify any Contractor's Document which has previously been submitted for such pre-construction review, the Contractor shall immediately notify the Engineer-in-Charge, and based on the Engineer-in-Charge's Approval, shall subsequently submit revised Contractor's Documents to the Engineer-in-Charge in accordance with the procedure set out in Clause 9.13.1.

- 9.13.7 If the Engineer-in-Charge instructs that further Contractor's Documents are required to be submitted by the Contractor which is necessary for carrying out the Works, the Contractor shall promptly and at Contractor's Cost prepare such documents.
- 9.13.8 If any errors, omissions, ambiguities, inconsistencies, inadequacies and other defects are found in the Contractor's Documents at any time, then such errors, omissions, ambiguities, inadequacies or other defects shall be rectified by the Contractor at its own Cost and any Approval or consent or review by the Engineer-in-Charge, of the Contractor's Documents shall not relieve the Contractor from any obligations or responsibility under the Contract.
- 9.13.9 Notwithstanding anything contained in this Contract in relation to the Contractor's Documents, the Contractor shall be fully responsible for the adequacy of the Contractor's Documents for the execution of the Works, any failure of the Contractor to comply with the Contract, or otherwise, for any ambiguity, inconsistency, deficiency, lack of fitness for purpose, errors and/ or omissions in such Contractor's Documents.
- 9.13.10 The Contractor's Documents shall be in the custody and care of the Contractor during the Contract. Unless otherwise stated in the Specifications, the Contractor shall provide 6 (six) copies of the Contractor's Documents along with a soft copy of the Contractor's Documents for the use of the Engineer-in-Charge and his assistants.
- 9.13.11 The Contractor shall keep on the Site, 1 (one) complete set of all relevant documents, including the Contract and all documents related to Variations, other communications given or issued from time to time under the Contract and all the Contractor's Documents Approved by the Engineer-in-Charge. IIMN, the Engineer-in-Charge shall have the right to access these documents at all reasonable times.
- 9.13.12 If a Party becomes aware of an error or Defect of a technical nature in the Drawings and Designs or in the Contractor's Documents or any other document which was prepared for use in executing the Works, such Party shall promptly give notice to the other Party of such error or Defect.
- 9.13.13 As-Built-Drawings: The Contractor shall prepare, and keep up to date, a complete set of "as-built records" of the execution of the Works, showing the exact "as-built" locations, sizes and details of the Works as executed, with cross references to relevant specifications and data sheets in accordance with Clause 10.5.

9.14 Subcontractors

- 9.14.1 The Contractor shall not subcontract the whole of the Works and unless otherwise specifically stated:
- (a) The Contractor shall not be required to obtain consent for purchases of Goods and Materials which are in accordance with the Approved vendor list/ Approved makes specified in the Contract or for provisions of labour or for the subcontracts for which the

Subcontractors are named in Contract Agreement/ Contract;

- (b) The prior consent of Engineer-in-Charge shall be obtained for subcontracting any part of the Works other than as specified under Clause 9.14.1(a) provided that the execution of the Works (or any part thereof) by petty contractors or on piece work basis under the supervision of the Contractor (or its representative) shall not be deemed to be Subcontracting under the Contract; and
- (c) Not less than [30 (thirty)] days before the intended date of each Subcontractor commencing work, the Contractor shall notify the Engineer-in-Charge of such intention.

9.14.2 The Contractor shall be responsible for observance by all Subcontractors of any Applicable Laws and all the provisions of the Contract. The Contractor shall be entirely responsible for the acts or defaults of any Subcontractor, its representatives or employees, as if they were the acts, omissions or defaults of the Contractor, its representatives or employees and nothing contained in Clause 9.14.1(a) shall constitute a waiver of the Contractor's obligations under the Contract. The Contractor shall provide to the Engineer-in-Charge, certified true copies of all the executed Subcontracts containing complete terms and conditions, and annexures other than the price. The Contractor shall make timely payments to the Subcontractors and resolve all matters and differences with any Subcontractor speedily, without affecting the execution of the Works in any manner.

9.14.3 The terms and conditions of any Subcontract shall impose on the Subcontractor such terms and conditions of the Contract as are applicable and appropriate to the part of the Works to be executed by the Subcontractor, to enable the Contractor to comply with its obligations under the Contract.

9.14.4 Notwithstanding any consent to the selection of the Subcontractor given by the Engineer-in-Charge, the Engineer-in-Charge and IIMN shall have full power to order the Contractor to terminate any Subcontractor and substitute such Subcontractor with any other sub-contractor and the Contractor shall be bound to follow such order, provided that such order is provided in writing by Engineer-in-Charge, clearly specifying the reasons for such termination.

9.14.5 IIMN shall, under no circumstances be liable to any Subcontractor and the Contractor shall indemnify and keep indemnified IIMN against all liabilities, costs, claims and demands of whatsoever nature by any Subcontractors.

9.14.6 The Contractor shall be solely responsible for the payments to be made to the Subcontractors in accordance with their respective Subcontracts and ensure proper and uninterrupted execution of the Works. IIMN shall not interfere in the day to day management of the Subcontract between the Contractor and its Subcontractor, but if any complaint is received by IIMN (or Engineer-in-Charge) from any Subcontractor regarding non-payment or delay in payment by the Contractor to such Subcontractor, then IIMN may, by a written notice, require the Contractor to resolve such complaint within a reasonable period (to be specified in the notice) and provide the details of the steps taken by the Contractor to resolve the complaint, to IIMN. If the issue is not satisfactorily resolved and the details provided by the Contractor are not considered satisfactory, IIMN may,

at its sole discretion, make direct payment to the Subcontractor as per its claim and recover such payments from any payment due to the Contractor under the Contract.

9.15 Setting Out

9.15.1 The Contractor shall be responsible for:

- (a) The accurate setting out of the Works in relation to the original points, lines and levels of reference given by the Engineer-in-Charge in writing;
- (b) The correctness of position, levels, dimensions and alignments of all parts of the Works;
- (c) The provisions of all necessary instruments, equipment, apparatus and labour in connection with the foregoing responsibilities; and
- (d) Carefully protecting and preserving all bench marks, sight rails, pegs and other things used in setting out the Works.

9.15.2 The Contractor shall first review, validate and undertake its own due diligence of IIMN's alignment survey reports and fix the alignment of the Works, pier locations, maintaining vertical and horizontal clearances keeping in view the important Site references and obligatory locations, in consultation with the Engineer-in-Charge. The Contractor shall establish, at suitable points and at its own Cost, additional reference lines and benchmarks as may be necessary for the proper execution of the Works while ensuring, at all times, that the reference lines, points and benchmarks fixed by the Engineer-in-Charge are not disturbed and/ or damaged and the Contractor shall be liable to make good any damage thereto. The verification/ inspection of any setting out or of any line or level by the Engineer-in-Charge shall not in any way relieve the Contractor of its responsibility for the accuracy or correctness thereof and the Contractor shall carefully protect and preserve all benchmarks, sight-rails, pegs and other things used in setting out the works.

9.15.3 If at any time during the execution of the Works, an error appears in the positions, levels, dimensions or alignment of any part of the Works, the Contractor, on being required to do so by the Engineer-in-Charge, shall, at Contractor's Cost, rectify such error to the satisfaction of the Engineer-in-Charge.

9.16 Safety of Works

9.16.1 The Contractor shall throughout the execution of the Works:

- (a) Take full responsibility for the adequacy, stability, safety and security of the Works, Plant, Contractor's Equipment, Temporary Works, operations on the Site and methods of manufacture, construction and transportation;
- (b) Have full regard for the safety of all persons on or in the vicinity of the Site (including persons to whom access to the Site has been allowed by the Contractor), comply with the

Safety Code, all relevant safety regulations, including provision of safety gear. Insofar as the Contractor is in occupation or otherwise is using areas of the Site, the Contractor shall keep the Site and the Works (so far as the same are not completed and occupied by IIMN) in an orderly state appropriate for the avoidance of injury or accident to all persons on and in the vicinity of the Site and shall keep IIMN indemnified against all costs, charges, losses and damages that may be suffered by IIMN in any manner whatsoever as a result of any injury or accident to any person on or in the vicinity of the Site in connection with the execution of the Works;

- (c) Provide and maintain all lights, guards, fences and warning signs and watchmen when and where necessary or as required by the Engineer-in-Charge or by any Applicable Laws or by any relevant Authority for the protection of the Works and for the safety and convenience of the public and all Persons on or in the vicinity of the Site;
- (d) Where any part of the Works would otherwise be carried out in darkness, ensure that all parts of the Site where such part of the Works is being carried out are so lighted as to ensure the safety of all Persons on or in the vicinity of the Site and of such part of the Works;
- (e) The Contractor shall ensure that its employees and the employees of the Subcontractors wear identification badges (cards), uniforms, helmets, safety shoes, gum boots and other safety/protection wear as directed by the Engineer-in-Charge, and to be provided by the Contractor.

9.16.2 The Contractor shall submit a detailed and comprehensive contract specific Site safety plan and system safety assurance plan in accordance with the Specifications.

9.16.3 The Engineer-in-Charge's consent or rejection of the safety plans and/or supplements thereto shall be without prejudice to the Contractor's obligations with respect to safety measures required to be undertaken or implemented in accordance with the Safety Code and shall not excuse any failure by the Contractor to adopt proper and recognized safety practices throughout the execution of the Works.

9.16.4 The Contractor shall provide all necessary access, assistance and facilities to enable the Engineer-in-Charge or any other third party safety audit agency to carry out inspections to verify that the safety plans are being properly and fully implemented.

9.16.5 The Works, including materials to be used for execution of the Works shall be protected from exposure to and damage due to water.

9.16.6 The execution of the Works shall not be carried out in weather conditions that may adversely affect the execution of the Works or damage the Works (or any part thereof) unless proper protection is provided, to the satisfaction of the Engineer-in-Charge.

9.16.7 During the execution of the Works, storm restraint systems shall be provided by the Contractor where necessary to the satisfaction of the Engineer-in-Charge.

9.16.8 The Contractor shall ensure that the Execution of the Works is carried out in such manner that there is no damage to or interference with:

- (a) watercourses and drainage systems on and in the vicinity of the Site;
- (b) utility services on and in the vicinity of the Site;
- (c) structures (including foundations), roads, street fixtures, etc. on and in the vicinity of the Site;
- (d) public or private, vehicular or pedestrian access routes and roads on and in the vicinity of the Site; and
- (e) monuments, graves or burial grounds other than to the extent that is necessary for them to be removed or diverted for the execution of the Works. Heritage structures shall not be damaged or disfigured on any account. The Contractor shall inform the Engineer-in-Charge, as soon as practicable, of the structures or roads which are not stated in the Contract to be removed or diverted but which the Contractor considers necessary to be removed or diverted. The Contractor shall not remove or divert any such structure or roads until the consent of the Engineer-in-Charge to such removal or diversion has been obtained.

9.17 Security of the Site

The Contractor shall be wholly responsible for security of the Site and the Works. Unless otherwise stated in the Contract:

- (a) The Contractor shall be responsible for keeping unauthorized persons off the Site; and
- (b) Authorized persons shall be limited to the employees, workmen or consultant or representative of the Contractor and its Subcontractor or persons authorized by the Engineer-in-Charge.

9.18 Quality Management System

9.18.1 Unless otherwise agreed with IIMN, the Contractor's proposed quality system shall fully satisfy all the elements of ISO 9001 – 2000 "Quality Management Systems Requirement". As evidence of compliance with ISO 9001 – 2000 "Quality Management Systems Requirement", the Contractor shall be required to submit either the current certificate of quality system registration with ISO 9001 or a recent compliance audit recommending registration from a Registrar acceptable to IIMN. The quality management system developed by the Contractor shall provide for the planned and systematic control of all quality related activities for execution of the Works. Implementation of the quality management system shall be in accordance with the standard specification for quality management system provided with the Bidding Documents.

- 9.18.2 As a part of the quality management system to be developed and implemented by the Contractor, the Contractor shall prepare and submit the Project Quality Plan/ Quality Assurance Plan for the Engineer-in-Charge's review, comments (if any) and approval within 21 (twenty-one) days after the Effective Date. The Engineer-in-Charge shall review the Project Quality Plan/Quality Assurance Plan and provide any comments to the Contractor within 21 (twenty-one) Working Days after its receipt of such draft. Within 14 (fourteen) days after its receipt of the Engineer-in-Charge's comments, the Contractor shall implement such comments re-submit the Project Quality Plan/Quality Assurance Plan to the Engineer-in-Charge for Approval. This procedure shall be repeated until the Project Quality Plan/ Quality Assurance Plan is approved by the Engineer-in-Charge. Any compliance by the Contractor with the Engineer-in-Charge's comments shall neither constitute a Variation nor entitle the Contractor to any extension of the Time for Completion or increase in the Contract Price. No proposed change to the Project Quality Plan/ Quality Assurance Plan shall be effective unless the Engineer-in-Charge approves of such proposed change. Notwithstanding any comments provided by the Engineer-in-Charge, the Contractor shall remain fully responsible for the Project Quality Plan/ Quality Assurance Plan, including rectifying all defects therein.
- 9.18.3 The Contractor shall follow and comply with the Approved Project Quality Plan/ Quality Assurance Plan and shall not amend it without the prior written consent of the Engineer-in-Charge. IIMN may, at any time during performance of the Works, conduct a compliance audit with respect to the Project Quality Plan/ Quality Assurance Plan. If such audit demonstrates non-compliance with any aspect of the Quality Assurance Plan, IIMN may notify the Contractor of such non-compliance and the Contractor shall promptly undertake appropriate remedial action, at Contractor's sole risk, Cost and expense.

9.19 Land, Power, Water and Other Facilities

The Contractor shall be responsible to provide within the scope of Work all facilities necessary for performance of the Works including (but not limited to) water (including water for hydrostatic testing, if any), power, transportation, handling and construction equipment, vehicles, vessels and any additional land at or about the Site required for the Contractor's field office(s), camps, godowns, workshops and residential accommodation for the Contractor's staff, quarry rights, borrow areas and access roads, to or about the Site and the Contractor's offices, camps, godown, workshops, accommodations, and Temporary Works and facilities whatsoever required for execution and Completion of the Works.

9.19.1 Water

- 9.21.1.1 Subject to availability, IIMN may endeavour to provide water to the Contractor, at the cost specified in the Bidding Documents, for construction purposes at one point at the Site which is convenient to IIMN. In such case, the Contractor shall, at its own Cost, provide for water meters approved by IIMN/the Engineer-in-Charge for measurement of the quantity of water supplied to the Contractor for determination of payment due thereon to IIMN. Such meters shall be in custody of IIMN. The Contractor shall also provide at its own Cost and initiative

other pipe networks etc. from source of supply to the Site and such distribution pipe network shall have prior approval of the Engineer-in-Charge so as not to interfere with the layout and progress of the other construction works.

9.21.1.2 In the event of failure or defect of meters, water charges will be calculated on the consumption determined by the Engineer-in-Charge (whose decision shall be final both as regards the existence of a defect or failure and as regards to the water consumed). The amount due to IIMN in respect of the water supplied shall, without prejudice to any other mode of recovery available to IIMN, be deductible from the Running Bills/Final Bill of the Contractor and/or any monies due or becoming due to the Contractor from time to time.

9.21.1.3 IIMN may without notice or specifying any cause suspend or discontinue water supply to the Contractor and such suspension or discontinuation shall not entitle the Contractor to any compensation or damages or constitute a basis or ground for extension of the Time for Completion.

9.21.1.4 The Contractor shall forthwith on Completion of the Work or earlier determination of the Contract or during the execution of the Works, if so required by the Engineer-in Charge, on grounds of hindrance or obstruction caused thereby or other cause whatsoever at its own Cost and initiative remove or re-route, as the case may be, any installation, pipes and/or other equipment put up or erected by the Contractor for the transportation and/or distribution of water, and fill any trenches, ditches or other excavations done by the Contractor for the purpose thereof and restore the Site to the same condition in which it was prior to the installation.

9.21.2 Power

9.21.2.1 Subject to availability of power supply, IIMN may, at its discretion provide for supply of power to the Contractor for execution of the Work from IIMN's convenient & nearest substation, from which source the Contractor shall at his own Cost and initiative make arrangements for temporary distribution of power to Contractor's Works at the Site.

9.21.2.2 All arrangements for the distribution or power from source aforesaid and the work relative thereto shall be made, performed and/or installed in conformity with Indian Electricity Act and other Applicable Laws governing the supply and transmission, distribution of electricity and shall be subject to prior approval by the Engineer-in-Charge.

9.21.2.3 The Contractor shall, at his own Costs and initiative on Completion or prior determination of the Contract or otherwise during execution of the Work, if required by the Engineer-in-Charge because of hindrance caused thereby or for any other cause, forthwith remove or re-route the distribution lines, installations and/or works or part(s) thereof, as the case may be required to be removed or re-routed.

9.21.2.4 IIMN shall recover from the Contractor for the power consumed by the Contractor from IIMN's source(s) of supply the cost thereof to IIMN as determined by IIMN in this behalf from time to time. The amount due to IIMN in respect of such power supplied shall, without

prejudice to any other mode of recovery available to IIMN, be deductible from the Running Bill/Final Bill(s) of the Contractor and/or any monies due or becoming due to the Contractor from time to time.

- 9.21.2.5 The Contractor shall provide at his own Cost suitable electric meters approved by the Engineer-in- Charge for measurement of the power units supplied to the Contractor for determination of the payment due thereon to IIMN. Such meters shall be under the custody and control of IIMN.
- 9.21.2.6 In the event of failure or defect of meter(s), power charges shall be calculated on the consumption determined by the Engineer-in-Charge (whose decision shall be final both as regards the existence of a defect or failure and as regards the power consumed).
- 9.21.2.7 IIMN may at any time without notice and without specifying any cause, suspend or discontinue power supply as aforesaid to the Contractor, and such suspension or discontinuance shall not entitle the Contractor to any compensation or damages or constitute a basis for extension of Time for Completion.
- 9.21.2.8 Power supplied by IIMN to the Contractor shall be entirely at the risks of Contractor as to the continuity and regularity of supply, maintenance of voltage and adequacy of load and frequency without any warranty by or liability to IIMN in respect thereof and without entitlement to the Contractor to claim compensation from IIMN on grounds of discontinuance, fluctuation of voltage or inadequacy of load or frequency or any other cause whatsoever.

9.21.3 Land

9.21.3.1 Land for Contractor's Field Office, Godown and Workshop

IIMN may, at his own discretion and convenience and for the duration of the execution of the Works make available near the Site, land for construction of Contractor's temporary field office, godowns, workshops and assembly yard required for the execution of the Contract. The Contractor shall at his own Cost construct all these temporary buildings and provide suitable water supply and sanitary arrangement and get the same approved by the Engineer-in-Charge. On Completion of the Works undertaken by the Contractor, it shall remove all Temporary Works erected by it and have the Site cleaned as directed by Engineer-in-Charge.

If the Contractor shall fail to comply with these requirements, the Engineer-in-Charge may at the Cost of the Contractor remove such surplus, and rubbish materials and dispose off the same as he deems fit and get the Site cleared as aforesaid; and Contractor shall forthwith pay the amount of all expense so incurred and shall have no claim in respect of any such surplus materials disposed off as aforesaid. The Engineer-in- Charge reserves the right to ask the Contractor any time during the pendency of the Contract to vacate the land by giving 7 days notice on security reasons or on national interest or otherwise. Rent may be charged by IIMN for the land so provided to and occupied by the Contractor, which may be deducted from the

Running Bills/Final Bill of the Contractor or from any other amount due or that becomes due to the Contractor.

The Contractor shall put up temporary structures as required by it for their office, fabrication shop and construction stores only in the area allocated to them on the Site by IIMN or his authorized representative. In addition, for uninterrupted fabrication work, the Contractor shall put up temporary covered structures at its Cost within area allocated to it within the Site by IIMN or its authorized representative. No tea stalls/canteens should be put up or allowed to be put up by any Contractor on the allotted land or complex area without written permission of IIMN

No unauthorized buildings, constructions or structures should be put up by the Contractor anywhere on the Site.

No person except for authorized watchman shall be allowed to stay on the Site, including on any area allotted to the Contractor pursuant to this Clause 9.21.3 after completion of the day's work without prior written permission from the Engineer-in-Charge.

9.21.3.2 Land for Residential Accommodation

No Land shall be made available for residential accommodation for staff and labour of Contractor.

9.22 Access for the Engineer-in-Charge

The Contractor shall allow the Engineer-in-Charge or its assistant or any other person authorized by the Engineer-in-Charge, access to the Site at all times, and to any place where work in connection with the Contract is being carried out or is intended to be carried out and to any place where Goods and Materials or Plant are being manufactured, fabricated, constructed and/or assembled for incorporation in the Facility, during usual working hours and beyond usual working hours, upon prior intimation. The Contractor shall ensure that the Subcontracts, if any, shall contain provisions entitling the Engineer-in-Charge or any person authorized by him to have such access.

9.23 Contract Spares

The Contractor shall procure and supply:

- (a) all spare parts required during pre-commissioning and commissioning of the Facility and associated systems;
- (b) all mandatory spares required for the Facility and specified in the Bidding Documents;
- (c) all operation and maintenance spares, required during the Defects Liability Period

(collectively the “**Contract Spares**”).

The Contract Price shall include the cost of procuring and supplying the Contract Spares, unless otherwise specified in the Contract.

9.24 Avoidance of Damage

9.24.1 While transporting any Plant, Goods and Material, Contractor's Equipment or any other equipment, the Contractor shall comply with Applicable Laws and take all steps necessary to ensure that roads, viaducts and bridges on any route leading to the Site, including access and link roads to the Site as well as any third party properties, are not damaged.

9.24.2 In case the transportation of any Plant, Goods and Material, Contractor's Equipment or other equipment by the Contractor is likely to cause damage to any road, viaduct or bridge on any route leading to the Site, including access and link roads to the Site and any third party property, it shall inform the concerned Authorities before transporting such Plant, Goods and Material, Contractor's Equipment or other equipment and obtain all necessary approvals and permits from the relevant Authorities as may be required, or give its proposal for strengthening such roads, viaducts or bridges. Any Cost incurred in this regard shall be borne by the Contractor.

9.24.3 The Contractor shall indemnify and keep IIMN indemnified against all losses, damages and claims incurred by IIMN due to any damage caused to any bridge or road or any other structure or street furniture leading to the Site, arising from the transportation of any Plant, Goods and Material, Contractor's Equipment or other equipment.

9.25 Quality Control

9.25.1 All Goods and Materials to be supplied under the Contract shall be constructed, and all Works shall be executed by the Contractor, in the manner set out in the Contract. Where the manner of manufacture, construction and the execution is not set out in the Contract, the Works shall be executed in a proper, workman like and careful manner, with properly equipped facilities and non-hazardous materials, and in accordance with recognized and internationally accepted industrial standards and Good Industry Practice. The successful execution of the Works is the sole responsibility of the Contractor.

9.25.2 IIMN shall be entitled at all times, at the risk of the Contractor, to inspect and/or test by itself or through an independent person(s) or agency(ies) appointed by Engineer-in-Charge and/ IIMN or to direct the Contractor to inspect and/or test or to get inspected and/or tested, all materials, items and components, whatsoever supplied or proposed for supply for incorporation in the works, inclusive during the course of manufacture or fabrication by the Contractor and/or at the Contractor's or his sub-vendors' works or otherwise, of such material, item or component. The inspection and/or tests shall be conducted at the expense of the Contractor and may be directed by Engineer-in-charge to be conducted by authorized representatives of Engineer-in-charge or third party inspection agency(ies) appointed by IIMN. IIMN may also require that all the inspections and tests conducted by the Contractor at his works or his sub-vendors' works be carried out in the presence of authorized representatives of Engineer-in-charge/ third party inspection agency(ies) appointed by IIMN. The Contractor shall provide Engineer-in-charge

and/or their representatives/Agents every facility of assistance necessary for carrying out or witnessing, as the case may be the Test(s) / Inspection(s).

- 9.25.3 The Contractor shall be responsible for procurement, transport, receiving, unloading and safe keeping of all Goods and Materials and other things at the Site required for the successful execution of the Works.
- 9.25.4 The Contractor shall provide all documents and other information necessary for testing of the Goods and Materials and such assistance, labour, materials, electricity, fuel, stores, apparatus and instruments as are necessary to carry out such tests efficiently.
- 9.25.5 The Contractor shall agree with the Engineer-in-Charge, the time and place for the testing of any Goods and Materials and other parts of the Works as specified in the Contract.
- 9.25.6 If the Engineer-in-Charge does not attend at the time and place agreed, or if the Contractor and the Engineer-in-Charge agree that the Engineer-in-Charge shall not attend, the Contractor may proceed with the tests, unless the Engineer-in-Charge instructs the Contractor otherwise, such tests shall be deemed to have been made in Engineer-in-Charge's presence.

- 9.25.7 The Contractor shall promptly forward to the Engineer-in-Charge duly certified reports of the tests. If the Engineer-in-Charge has not attended the tests, he shall accept the readings as accurate, except where there is a manifest error.
- 9.25.8 If, as a result of inspection, examination or testing, any Goods and Materials is found to be defective or otherwise not in accordance with the Contract, the Engineer-in-Charge may reject the same within 15 (fifteen) Working Days of such inspection, examination or testing by giving notice to the Contractor with reasons. The Contractor shall then promptly make good the defect and ensure that the rejected item after rectification complies with the Contract.
- 9.25.9 If the Engineer-in-Charge requires such Goods and Materials to be retested, the tests shall be repeated under the same terms and conditions. If such rejection and retesting causes IIMN to incur additional costs, such costs shall be recoverable from the Contractor by IIMN, and may be deducted by IIMN from any monies payable to the Contractor under the Contract.
- 9.25.10 The Contractor shall not be released from any of its liabilities or obligations under the Contract by reason of any such inspection or testing or witnessing of testing, or by the submission of reports of inspection or testing to the Engineer-in-Charge.
- 9.25.11 Subject to Clause 11.5, each item of the Goods and Materials shall become the property of IIMN upon the earlier of: (i) delivery of such item to the Site; or (ii) payment for such item, either in part or full, by IIMN. The Contractor shall however continue to bear the risk and responsibility in respect of such items which continue to remain in its possession until the date of issuance of the Completion Certificate.

9.26 Samples

The Contractor shall submit at its own Cost the following samples and relevant information to the Engineer-in-Charge for pre-construction and/or pre-manufacture review:

- (a) Manufacturer's standard samples of Goods and Materials;
- (b) Samples (if any) specified in the Specifications.

Each sample shall be labelled as to its origin and intended use in the Works.

9.27 Records

The Contractor shall from time to time maintain at the Site (in addition to any other records or registers required to be maintained by the Contractor under any Applicable Law) such records and registers with respect to the Works as the Engineer-in-Charge or IIMN may require the Contractor to keep and/or maintain from time to time. The failure to maintain or submit any record or register required pursuant to this Clause 9.27 shall disentitle the Contractor from submitting any Running Bill pursuant to Clause 20.3 and shall constitute a breach of this Contract.

The review or acceptance of any record or register maintained by the Contractor pursuant to this Clause 9.27 shall be without prejudice to the rights and remedies of IIMN and obligations and liabilities of the Contractor under this Contract and shall not otherwise operate as an estoppel against IIMN by reason only of the fact that no notice of or objection to any information contained in any such record or register was taken.

(a) .

9.28 IIMN may do part of the Works

Upon failure of the Contractor to comply with any instructions given in accordance with the Contract, IIMN shall have the right to deploy additional labour force, tools, equipment and materials for such part of the Works as IIMN may designate and/or engage another contractor to carry out the Works. In such cases, IIMN shall deduct from the amount which might otherwise become due to the Contractor the cost of deploying additional labour or materials of the cost of engaging another contractor to complete the Works along with an additional 10% of such cost to cover all other expenses and departmental charges incurred by IIMN in this regard. Should the total amount thus calculated exceed the amount due to the Contractor, the difference shall be recovered from the Contractor as a debt due.

10 DESIGN, PLANS AND MANUALS

10.1 Design Data

10.1.1. The Design Data and all other information forming a part of the Bidding Documents have been provided by IIMN in good faith with a view to assist the Contractor in preparing the Drawings and Designs and executing the Works. IIMN assumes no responsibility for the accuracy or adequacy of the Design Data and the Contractor is expected to undertake a complete and independent survey of all factors relevant to the performance of the Works and to verify the Design Data. The Contractor shall proceed with the use of the Design Data only after satisfying itself of its sufficiency and appropriateness for use.

10.2 Contractor's General Obligations

10.2.1 The Contractor shall design and provide all necessary specifications for the Works, strictly in accordance with the Specifications and the Design Data. Any design detail, plan, drawing, specifications, notes, annotations and information required shall be provided in sufficient detail, size and scale and within such time as may be required to ensure effective execution of the Works and/or as otherwise required by the Specifications.

10.2.2 All Drawings and Designs, assumptions, calculations, schedules, patterns, models and other relevant information provided by the Contractor or as may be required under the Specifications or as may be required by the Contractor for the execution of the Works, or as the Engineer-in-Charge may require for a full appreciation of any design, methods of construction and installations proposed by the Contractor, shall be submitted to the Engineer-in-Charge for acceptance in accordance with

Clause 9.13 prior to implementation. Any acceptance by the Engineer-in-Charge shall not however relieve the Contractor of any of his responsibilities for the accuracy, suitability, adequacy, performance and practicality of any such Design and Drawings, assumptions, calculations, schedules, patterns, etc. and any subsequent amendment thereof. The cost of all necessary remedial works in relation to any Works required as a result of any inaccuracy, inadequacy or impracticality in the Contractor's proposals and any subsequent amendments at any time during and after the execution of the Works, shall be the entire responsibility of and shall be borne by the Contractor.

10.2.3 The Engineer-in-Charge shall have full power and authority to require the Contractor to amend or modify any Drawings and Designs (including related calculations, design documents or other affected particulars) if he finds any shortcomings thereto and the Contractor shall without delay, correct such shortcomings at its own Cost and submit all revised Drawings and Designs, calculations, design documents or other affected particulars to the Engineer-in-Charge for his Approval in accordance with the provisions of Clause 9.13. Such instructions shall not however in any way relieve the Contractor of any of its responsibilities for the accuracy, suitability, adequacy, performance and practicality of the amended or modified Drawings and Designs.

10.2.4 IIMN shall have no liability whatsoever for the cost of orders placed or of manufacturing, construction or installation commenced by the Contractor, other than orders placed or of manufacturing, construction or installation commenced following the acceptance of the Engineer-in-Charge as provided under Clause 10.2.2.

10.2.5 The Contractor confirms that the Contractor possesses the experience and capability necessary for the design in relation to the Works. The Contractor undertakes that the Contractor (and its employees) shall be available to attend discussions with the Engineer-in-Charge to enable the Engineer-in-Charge to seek Approval of IIMN at all reasonable times during the Contract Validity Period.

10.3 Contractor's warranty of Design

10.3.1 The Contractor shall be fully responsible, for the suitability, adequacy, integrity, durability and practicality of the Drawings and Designs.

10.3.2 The Contractor warrants that the Drawings and Designs meet the Specifications and are fit for the purpose thereof. Where there is any inadequacy, insufficiency, impracticality or unsuitability in or of the Specifications of the Design Data or any part thereof, the Drawings and Designs shall take into account, address or rectify such inadequacy, insufficiency, impracticality or unsuitability at Contractor's own Cost.

10.3.3 The Contractor warrants that the Works have been and/or shall continue to be executed in accordance with the standards specified in the Specifications and utilizing proven up to date technology, systems, procedures, high quality goods, materials and equipment's and high standards of workmanship and fabrication, in accordance with Good Industry Practice.

10.3.4 The Contractor warrants that the execution of the Works have taken or shall have taken full account of the effects of the transportation of material and equipment, and other logistics movement, Site

constraints, traffic constraints, climatic conditions, intended construction and manufacturing methods, Temporary Works and Contractor's Equipment.

- 10.3.5 The Contractor shall indemnify IIMN against any damage, expense, liability, loss or claim, which IIMN might incur, sustain or be subject to, arising from any breach of the Contractor's design responsibility and/or warranty set out in this Clause 10.3.
- 10.3.6 No claim for additional payment or extension of the Time for Completion shall be entertained and/or the Contractor shall not be relieved from any obligation/liability under the Contract, for any delay, suspension, impediment to or adverse effect upon the progress of the Works due to any mistake, inaccuracy, discrepancy or omission in the Design Data provided by IIMN, the Drawings and Designs or any failure by the Contractor to prepare any Drawings and Designs or submit the same to the Engineer-in-Charge in due time and the Contractor shall promptly make good any such Defect at its own Cost.
- 10.3.7 For each part of the Work, and except to the extent that the Parties otherwise agree:
- (a) execution of such part of the Work shall not commence prior to the expiry of the Review Periods for all the Drawings and Design which are relevant to its design and execution;
 - (b) execution of such part of the Work shall be in accordance with the relevant Drawings and Designs, as Approved by the Engineer-in-Charge. Where any Work or part of the Work executed by the Contractor is not in conformity with the Approved Drawings and Designs, the Engineer-in-Charge shall be entitled to require the Contractor to repair, rectify, dismantle and/or reconstruct such Work or part of the Work, as the case may be and all costs and expenses for such rectification, repair, dismantling and/or reconstruction of such Work or part of the Work shall be borne by the Contractor;
 - (c) if the Contractor wishes to modify any Drawings and Designs which has previously been submitted for review, the Contractor shall immediately give notice to the Engineer-in-Charge. Thereafter, the Contractor shall submit the revised documents to the Engineer-in-Charge in accordance with the above procedure.

10.4 Technical Standards and Regulations

The Contractor's Documents (including Drawing and Designs) shall, in addition to complying with the Specifications, comply with the technical standards, building construction, safety and environmental regulations and other standards specified under or defined by Applicable Laws.

10.5 As-Built Drawing and Documents

- 10.5.1 The Contractor shall prepare, and keep up to date, a complete set of "as-built records" of the execution of the Works, showing the exact "as-built" locations, sizes and details of the Works as executed, with cross references to relevant specifications and data sheets. These records shall be kept on the Site and shall be used exclusively for the purposes of this Contract. One original copy, 6 (six) hard copies of such "as built" records, together with a soft copy of such "as built" records

shall be submitted to the Engineer-in-Charge prior to the commencement of the Tests on Completion.

- 10.5.2 In addition, the Contractor shall prepare and submit to the Engineer-in-Charge “as-built drawings” of the Works, showing all Works as executed by the Contractor. The drawings shall be prepared as the Works proceed, and shall be submitted to the Engineer-in-Charge for his review and inspection. The Contractor shall obtain the consent of the Engineer-in-Charge as to their size, the referencing system, and other pertinent details.
- 10.5.3 Prior to the issue of the Completion Certificate, the Contractor shall submit to the Engineer-in-Charge one soft copy, one full-size original copy and six (6) printed copies of the relevant “as-built drawings”, and any further Contractor's Documents specified in the Specifications. The Works shall not be considered to be completed and the Completion Certificate shall not be issued under Clause 0 until the documents referred above have been submitted to the Engineer-in-Charge in accordance with this Clause 10.5.3.

10.6 Alteration in Specifications, Plans, Drawings and Designs, Extra- Works

- 10.6.1 The Engineer-in-Charge shall have the power, by written notice to the Contractor, at any time prior to or during the execution of the Works, to alter, amend or modify any Specification. To the extent that such alteration, amendment or modification requires any corresponding amendment to the Drawings and Designs or any other Contractor's Document, the Contractor shall make such amendments to the Drawings and Designs or, as the case may be, the relevant Contractor's Document.
- 10.6.2 Contractor shall be bound to carry out such altered/extra/new items of work in accordance with any instruction which may be given to it by the Engineer-In-Charge.
- 10.6.3 Subject to Clause 21.10.2, if any alteration, amendment or modification of the Specifications pursuant to Clause 10.6.1 shall, in the opinion of the Contractor and/or IIMN, result in an increase, reduction or change in the Works that are covered in the Price Schedule, which would render the Contract Price unreasonable, IIMN and the Contractor shall negotiate a suitable increase or, as the case may be, reduction in the Contract Price. If IIMN and the Contractor fail to agree on a revised Contract Price, the Engineer-in-Charge shall, as an interim measure, decide on an appropriate adjustment to the Contract Price and pending a final decision on the quantum of increase or, as the case may be, reduction in the Contract Price under Clause 32, the Contractor shall be bound to execute the Works on the basis of the revised Contract Price determined by the Engineer-in-Charge.

For the avoidance of doubt, it hereby clarified that if the rate(s) of any additional, altered or substituted item of Work are specified in the Price Schedule, the Contractor shall be bound to carry on the additional, altered or substituted items of Work at the same rate(s) as are specified in the Price Schedule.

- 10.6.4 If any alteration, amendment or modification of the Specifications pursuant to Clause 10.6.1 shall, in the opinion of the Contractor and/or IIMN, necessitate any additional, altered or substituted items

of Work that are not covered in the Price Schedule, the remuneration for such additional, altered or substituted items of Work that are not covered in the Price Schedule shall be determined by the Engineer-in-Charge in the following manner:

- (a) If it is possible to derive the rate(s) for such additional altered or substituted items of Work from any of the items of Work covered in the Price Schedule, the rate(s) for such additional altered or substituted items of Work shall be the rate(s) arrived at on the basis of such derivation. The opinion of the Engineer-in-Charge as to whether the rate(s) for the additional altered or substituted items of Work can be derived from the rate(s) of items already covered in the Price Schedule shall be final and binding on the Contractor.
- (b) If, in the opinion of the Engineer-in-Charge, it is not possible to derive the rate(s) for the additional altered or substituted items of Work from any of the items of the Work covered in the Price Schedule, then the rate(s) for such items of Work shall be determined by taking:
 - (i) the issue rate(s) of materials supplied by IIMN, if applicable;
 - (ii) materials supplied by the Contractor and incorporated in the Permanent Works at the rate(s), if any, specified in the Price Schedule;
 - (iii) labour cost at rate(s) for labour, if any, specified in the Price Schedule;
 - (iv) if the additional altered or substituted items of Work involve the use of any material or labour not covered in the Price Schedule, for the purpose of determining the rates under sub-paragraph (ii) and/or (iii) above, the prevailing market rate(s) shall be taken into account for determining the rate(s) of such materials and/or labour and an additional 15% (fifteen percent) shall be added to the market rate(s) to cover the Contractor's, supervisions, overheads and profits.
 - (v) the opinion of the Engineer-in-Charge as to the quantity or quality of materials and/or labour involved in executing the additional altered or substituted items of Work or as to whether the additional altered or substituted items of Work involve the use of materials and/or labour that are not covered in the Price Schedule and if not, as to the market rate(s) that shall be applicable shall be final and binding on the Contractor.

10.7 Operations and Maintenance Manuals

10.7.1 The Contractor shall prepare and submit to the Engineer-in-Charge, the Operation and Maintenance Manuals in accordance with the Specifications and in sufficient detail for IIMN to operate, maintain, dismantle, reassemble, adjust and repair the Facility. The Contractor shall not be entitled to receive the Completion Certificate unless the Operation and Maintenance Manuals have been submitted to the Engineer-in-Charge and received his consent.

10.7.2 The Operation and Maintenance Manuals submitted by the Contractor shall, if required, be updated

by the Contractor during the Defect Liability Period and re-submitted for review by the Engineer-in-Charge in accordance with Clause 9.13.

11 TRANSFER OF TITLE AND RISK

11.1. Subject to Clause 11.5 below, the title of domestic supply of Goods and Material and Plant shall pass to IIMN in the manner set out below:

11.1.1 In the event the Contractor is the manufacturer of the domestic Goods and Material and Plant (including the mandatory spares etc), the title to such domestic Goods and Material and Plant shall be transferred to IIMN ex-factory, ex works or ex warehouse basis i.e. upon the dispatch of such goods by the Contractor from its premises.

11.1.2 In the event the Contractor is not the manufacturer of the domestic Goods and Material and Plant (including the mandatory spares etc), and instead procures the same from a Subcontractor/ vendor / original manufacturer, then the title shall be transferred in the following manner:

- (a) If pursuant to the above arrangement between IIMN and the Contractor and between the Contractor and its Subcontractor/ vendor, the goods move from outside the state where the Site is located to the Site, the title shall be transferred by the Contractor to IIMN during the transport of such goods from the Subcontractor/ vendor/ original manufacturer's premises, as the case may be, to the Site, by endorsement of documents of title by the Contractor in favour of IIMN.
- (b) If pursuant to the above arrangement between IIMN and the Contractor and between the Contractor and its sub-contractor/ vendor, the goods move within the state where the Site is located, then the title shall be transferred to IIMN upon the dispatch of the goods by the Contractor or its Subcontractor/ vendor / original manufacturer, as the case may be, from its premises.

Notwithstanding the transfer of title of the domestic Goods and Material and Plant (including the mandatory spares etc), the responsibility for care and custody thereof together with the risk of loss or damage thereto shall remain with the Contractor until the issuance of Completion Certificate by IIMN. However, the risk for any defect or shortcoming in such Goods and Materials and Plant shall continue to remain with the Contractor until issuance of the Final Completion Certificate.

11.2. Subject to Clause 11.5 and 11.6 below, the title of Goods and Material and Plant imported by the Contractor or its Subcontractor for supply to IIMN for the execution of Works shall be transferred by the Contractor in favour of IIMN by effecting appropriate sales through endorsement of the Bill of Lading or such other documents of title in relation to such imported Goods and Material and Plant before the same cross the customs frontiers of India on high sea sale basis or FOB (free on board basis) at the port of loading of the Goods and Material and Plant, as may be agreed between the Parties.

The Contractor and its Subcontractor/ vendor shall accordingly execute such documents as may be necessary for effecting the transfer of title in favour of IIMN in a manner indicated herein above, such that the Contractor has proper title over the imported Goods and Material and Plant before it transfers the title over such imported Goods and Material and Plant in favour of IIMN.

Notwithstanding the passing of title as mentioned hereinabove such passing of title to IIMN shall not in any way absolve, diminish, or dilute the responsibilities and obligations of the Contractor under the Contract.

Notwithstanding the transfer of title as above, the Contractor shall continue to be responsible for the risk to, quality and performance of such imported Goods and Material and Plant and for their compliance with the performance guarantees and the technical specifications until the issuance of the Completion Certificate by IIMN. However, the risk for any defect or shortcoming in such Goods and Materials and Plant shall continue to remain with the Contractor till issuance of the Final Completion Certificate.

The Contractor warrants that all imported Goods and Material and Plant supplied by the Contractor shall be free of any encumbrance or lien.

- 11.3. The title of the Contractor's Equipment used by the Contractor or its Subcontractor in connection with the Contract shall remain with the Contractor or its Subcontractor, as the case may be.
- 11.4. Notwithstanding anything to the contrary contained in the foregoing provisions of this Clause 11, the title of all Consumables, shall only be deemed to be transferred by the Contractor to IIMN, upon Final Completion, subject to the provisions of Clause 9.12.2.

For the purposes of the foregoing, "**Consumables**" shall mean and include all raw material and consumables, comprised in the Goods and Materials and Plant, including, without limitation, such as sand, bricks, stones, tiles, cement, reinforcement steel, structural steel, and civil construction materials, subject to INPUT TAX credit for such items, not being available under Applicable Laws in India.

- 11.5. Further, the Contractor shall ensure that all Goods and Material and Plant procured by the Contractor from the Subcontractors/ vendor / original manufacturer, or otherwise supplied by the Contractor are consigned by the Subcontractor/ vendor / original manufacturer or the Contractor (as applicable) directly to the Site, unless otherwise agreed between the Parties.
- 11.6 Notwithstanding anything to the contrary contained in Clause 11.1 and 11.2 above, but subject to Clause 11.4:
- (i) title in respect of any Goods and Materials and/ or Plant, which are consigned, in breach of the foregoing provisions of this Clause 11.5, to any location other than the Site, shall only be deemed to be transferred to IIMN, in accordance with the provisions of Clause 11.1 or 11.2 above, where the said Goods and Material and/ or Plant are duly consigned to the Site; and
 - (ii) notwithstanding transfer of title in accordance with Clause 11.1 above, Contractor shall retain care, custody, and control of all such Goods and Materials and/or Plant and exercise due care thereof until Completion. Further, such transfer of title shall in no way affect IIMN's rights under any other provision of this Contract
 - (iii) Contractor shall, in order to protect IIMN's interest in all Goods and Materials and/or Plant to which title has passed to IIMN but which remains in the possession of the Contractor or any another party, take or cause to be taken all steps necessary under the Applicable Laws to protect IIMN's title and to protect IIMN against claims by other parties with respect thereto. Contractor shall fully indemnify IIMN in this regard. Further, to the extent reasonably required, Contractor shall cause such Goods and Materials and/or Plant to be suitably marked with an identifying mark or symbol indicating that such Goods and Materials and/or Plant are the property of IIMN.

12 CONTRACTOR'S PERSONNEL

- 12.1. The Contractor shall make arrangements for the engagement of staff and labour for the execution of the Works at its own Cost. The Contractor shall, if required by the Engineer-in-Charge, deliver to the Engineer-in-Charge or his assistant, a report in detail, in such form and at such intervals as the Engineer-in-Charge may prescribe, showing the number of personnel employed in different categories by the Contractor on the Site.
- 12.2. The Contractor shall designate and propose suitable, adequately skilled and qualified persons as key personnel (“**Key Personnel**”), whose identities and resumes will be submitted by the Contractor to IIMN within 30 (thirty) days of the Effective Date, to supervise the execution of the Works and to liaise with IIMN, his authorized Engineer or any competent Authority, as appropriate.
- Should the Contractor intend to make any change in Key Personnel appointed pursuant to this Clause 12.2, it shall immediately notify the Engineer-in-Charge of such intended change and seek Approval for replacement of such Key Personnel.
- 12.3. The Contractor shall ensure that the Contractor's Personnel shall be sufficient and competent in number, suitably qualified and experienced for the purpose of execution of the Works at the Site and that it shall provide such numbers of Contractor's Personnel at the Site until Completion has been achieved and that the selection of the Contractor's Personnel shall maximise productivity and prevent slow-downs, work stoppages or other disruptive concerted actions of the Contractor's Personnel.
- 12.4. Throughout the execution of the Works, and as long thereafter as is necessary to fulfil the Contractor's obligations, the Contractor shall provide all necessary superintendence to plan, arrange, direct, manage, inspect and test the Works. Superintendence shall be given by a sufficient number of persons with adequate knowledge of the language for communications and of the operations to be carried out (including the methods and techniques required, the hazards likely to be encountered and methods of preventing accidents), for the satisfactory and safe execution of the Works.
- 12.5. If and whenever any of the Contractor's or Sub-Contractors agents, sub-agents, assigns, consultants or employees shall in the opinion of the Engineer-in-Charge (whose opinion in this behalf shall be final) or his authorized person be guilty of misconduct or be incompetent or not qualified for, or negligent in, the performance of his/their duties, or if in the opinion of the Engineer-in-Charge (which shall be final) it is undesirable for any reason (which need not be disclosed to the Contractor) for such person(s) to be employed in the Works, the Contractor, if so directed by the Engineer-in-Charge or his authorized person shall forthwith remove or cause to be removed such person(s) from employment thereon, and any person(s) so removed shall not be re-employed in the Works except with the prior permission in writing of the Site. Should the Contractor be requested to repatriate any person removed from the Works; the Contractor shall do so forthwith at its own Cost. Any person(s) so removed from the Works shall be immediately replaced at the expense of Contractor by a qualified and competent substitute.

- 12.6. The Contractor shall make itself aware of all labour regulations and their impact on the cost and build up the same in the Contract Price. Subject to Clause 22, during the Contract Validity Period no extra amount in this regard shall be payable to the Contractor, for any reason whatsoever.
- 12.7. In the event of default being made in the payment of any money in respect of wages of any person employed by the Contractor or any of its Subcontractor of any tier in and for carrying out of the Contract and if a claim thereof is filed in the office of the labour Authorities and proof thereof is furnished to the satisfaction of the labour Authorities, IIMN may, failing payment of the said money by the Contractor or the Subcontractor, as the case may be, make payment of such claim on behalf of the Contractor, to the said labour Authorities and any sums so paid shall be recoverable by IIMN from the Contractor. If the Contractor fails to pay any amount required to be paid to IIMN as aforesaid, within 7 (seven) days of its demand, IIMN shall be entitled to recover the amount from any moneys due or accruing to the Contractor under the Contract.
- 12.8. The establishment of the Contractor and its sub-contractors shall be duly registered under the Employees' Provident Fund and Miscellaneous Provisions Act, 1952 and the Employees' State Insurance Act, 1948 and the Contractor shall duly and timely pay and ensure payment by its subcontractors of contributions and its/their employees to the Authorities prescribed under the said Acts and any schemes framed thereunder in respect of all labour employed by it for the execution of the contract. Copies of challans/receipt of such payments along with the list showing persons employed together with emoluments paid for the purpose of provident fund deductions shall be submitted to IIMN before the end of every calendar months. In case the relevant provident fund Authority's receipt/challans referred to above are not furnished, IIMN shall deduct 5% (five percent) of the payable amount from the Running Bill and retain the deducted amount as a security for the contribution to provident fund. Such retained amounts shall be released to the Contractor only on production of challan/receipts of the relevant provident fund Authority for the period covered by the related deduction.
- 12.9. The Contractor and Subcontractor(s) shall obtain from the Authority(ies) designated in this regard under any Applicable Law, including but not limited to the Factories Act, 1948 and Contract Labour (Regulation & Abolition Act, 1970 (in so far as applicable) any and all such licence(s), consent(s), registration(s) and/or other authorization(s) as shall from time to time be or become necessary for or relative to the execution of the Works or any part or portion thereof or the storage or supply of any material(s) or otherwise in connection with the performance of the Contract and shall at all times observe and ensure due observance by the Subcontractors, servants and agents of all terms and conditions of the said license(s), consent(s), regulation(s) and other authorization(s) and laws, rules and regulations applicable thereto.
- 12.10. Without prejudice to the responsibility of the Contractor to comply with the Applicable Laws under the Contract, the Contractor shall, in relation to the execution of the Works, comply and shall ensure that the Subcontractors comply with all labour laws, including but not limited to the Factories Act, 1948, the Workmen's Compensation Act, 1923, the Payment of Wages Act, 1936, the Minimum Wages Act, 1948, the Industrial Disputes Act, 1947, the Employees' State Insurance Act 1948, the Weekly Holidays Act, 1942, the Employees State Insurance Act, 1948, the Employees Provident Funds Scheme, 1952, the Employees Provident Funds and

Miscellaneous Provisions Act, 1952, the Maternity Benefit Act, 1962, the Contract Labour (Regulation and Abolition) Act, 1970, the Equal Remuneration Act, 1976, the Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979, the Labour Laws (Exemption from Furnishing Returns and Maintaining Registers by Certain Establishments) Act, 1988, the Children (Pledging of Labour) Act, 1933, the Child Labour Prohibition and Regulation Act, 1951, the provisions of the Income Tax Act, 1961, Environment Protection Act, 1986, Maritime Act, 2008, Wild life (Protection) Act, 1972 and any other Applicable Law relating to the employment of workmen, employees or labour or any subsequent modification or re-enactment thereof.

12.11. Without prejudice to the generality of the scope of Clause 12.8 above, the Contractor shall comply with the provisions of the Apprentices Act, 1961 and the Rules and Orders issued there under from time to time. Any failure to comply with the Apprentices Act, 1961 shall amount to a breach of the Contract and IIMN may, at his discretion, terminate the Contract. The Contractor shall also be liable for any pecuniary liability arising on account of any violation of the Apprentices Act, 1961 by him.

12.12. (a) In order to govern welfare and working conditions of labourers engaged in construction activities, the Building and other Construction Workers' (Regulation of Employment and Conditions of Service Act, 1996, hereinafter referred to as the "RE &CS") came into force. The RE&CS Act is applicable in respect of building and other construction work. Wherever applicable, the Contractor shall strictly comply with the provisions pertaining to RE&CS Act. The Contractor must be registered with the concerned authorities under the RE&CS Act, or in case of non-registration the Contractor should obtain registration within one month of the award of the Contract.

(b) The Contractor shall comply with the Building and Other Construction Workers' Welfare Cess Act, 1996, the Building and other Construction Workers' Rules, 1998 and the Building and Other Construction Workers Welfare Cess Rules, 1998.

Cess as per the prevailing rate, shall be deducted at source from bills of the Contractor by the Engineer-in-Charge of the contract and remitted to the "Secretary, Building and Other Construction Workers Welfare Board" of the concerned State. The Contractor shall be responsible to submit final assessment return of the cess amount to the assessing officer after adjusting the cess deducted at source.

12.13. The Contractor shall and shall cause its Subcontractors to comply with the following:

(a) the provision and maintenance of such temporary accommodation, canteen facilities and other amenities as may be reasonably necessary for all of the Contractor's Personnel employed at the Site, including fencing, first aid, water supply (both for drinking and other purposes), electricity supply, sanitation, fire prevention and fire-fighting equipment, a creche where 10 or more women workers may keep their children below the age of 6 years, any other facility/utility as may be required under the Contract as well as under the applicable statutory provisions and other general requirements in connection with such

accommodation or amenities, provided that the Contractor's Personnel shall not maintain any temporary or permanent living quarters within the structures forming part of the Permanent Works;

- (b) due regard shall be given to all recognized festivals, days of rest and religious or other customs prevalent in the location where the Site is situated, in all dealings with the Contractor's Personnel;
- (c) no work shall be carried out on the Site outside the normal working hours, unless, permitted by IIMN or if the work is unavoidable or necessary for the protection of life or property or for the safety of the Works, in which case the Contractor shall immediately intimate IIMN/Engineer-in-Charge;
- (d) all reasonable precautions shall at all times be taken to prevent any unlawful, riotous or disorderly conduct by or amongst the Contractor's Personnel and to preserve peace at the Site and to ensure the protection of all persons (including the Contractor's Personnel) and property at or in the neighborhood of the Site, against any such disruption. If IIMN is required to maintain special police force/security personnel in consequence of unlawful, riotous or disorderly conduct by or amongst the Contractor's Personnel, all costs and damages incurred by IIMN in this regard shall be borne by the Contractor; and
- (e) the Contractor shall not employ, for the purposes of Works, any Person below the age as is statutorily forbidden.

12.14. The Contractor shall keep IIMN indemnified from and against all personal and third party claims whatsoever (inclusive of all costs incurred between attorney and client) arising out of any act, omission or inter-omission on part of any Sub-Contractor or agent, sub-agent, consultant or employee of the Contractor or any Sub-Contractor, whether committed, omitted or arising within or without the scope of the Contract, Sub-Contract, agency or employment, as the case may be.

12.15. If, the Contractor directly or through petty contractors or Subcontractors supplies any labour to be used wholly or partly under the direct orders and control of the Engineer-in-Charge or IIMN, whether in connection with any work being executed by the Contractor or otherwise for the purposes of IIMN, such labour shall, for the purpose of this Clause, be deemed to be persons employed by the Contractor.

12.16. The Parties hereto agree that the employment of the personnel and/or workmen by the Contractor, Subcontractor in relation to the execution of the Works shall not constitute any IIMN-employee relationship between IIMN and such personnel and/or workmen as employed by the Contractor and the Subcontractor in relation to the execution of the Works.

12.17. (a) The Contractor shall ensure that local labour, skilled and/or unskilled, to the extent available shall be employed in this work. In case of non - availability of suitable labour in any category out of the above persons, labour from outside may be employed.

(b) The Contractor shall not recruit personnel of any category from among those who are already employed by the other agencies working at Site.

12.18. All foreign nationals coming to India for execution of the Contract will have to apply for employment visa only and that grant of employment visa would be subject to strict adherence of following norms:

- (a) Employment visa is granted only for the skilled and qualified professionals or to a person who is being engaged or appointed by a company, organization, industry or undertaking etc. in India on contract or employment basis at a senior level or at a skilled position such as technical expert, senior executive or in managerial position etc.
- (b) Request for employment visa for jobs for which large number of qualified Indians are available, is not considered.
- (c) Under no circumstances an employment visa is granted for routine, ordinary secretarial/ clerical jobs.

The Contractor must check the latest visa rules from Indian Embassy/ High Commission in their country in case foreign nationals are required to be deputed to India during execution of the Contract.

13 TIME FOR COMPLETION AND PRICE REDUCTION DUE TO DELAY IN COMPLETION

13.1 Time for Completion

Time is the essence of the Contract. The Parties agree and acknowledge that it is of paramount importance that the Works are executed strictly in accordance with the Works Completion Schedule, as may be revised from time to time and completed in accordance with the Specifications, within the Time for Completion.

13.2 Price Reduction due to delay in completion

13.2.1 If the Contractor fails to complete the Works within the Time for Completion, and/or if completion of any specific work(s) in respect of which a separate progress schedule has been established is not achieved by the date of completion thereof specified in the Works Completion Schedule (each of the said date(s) is hereinafter referred to as the “starting date for discount calculation) other than due to an event of Force Majeure or any reason solely attributable to IIMN, then the Contract Price shall be reduced by 1 % (one percent) per week of delay or part thereof subject to a maximum deduction of 10% (ten percent) of the Contract Price. After any adjustments made to the Contract Price pursuant to this Clause 13.2.1, if any amount is due to IIMN from the Contractor, then such amount will either be set-off against any amount due or that becomes due to the Contractor or be recovered by invoking the Contract Performance Bank Guarantee.

The decision of the Engineer-in-Charge in regard to applicability of price reduction shall be final and binding on the Contractor.

- 13.2.2 The reduction of Contract Price shall not relieve the Contractor from its obligations to complete the Works and the Facilities, or from any of its other duties, obligations or responsibilities under the Contract. The Contractor shall use and continue to use its best endeavor to avoid or reduce further delay to the Works, or the issue of the Completion Certificate.
- 13.2.3 It is specifically acknowledged that the provisions of Clause 13.2 constitute purely a provision for price adjustment and/or fixation and are not to be understood or construed as a provision for liquidated damages or penalty under Section 74 of the Indian Contract Act, 1872 or otherwise.
- 13.2.4 Application of price reduction under this Clause 13.2 above shall be without prejudice to any other right of IIMN, including the right of termination under Clause 29.2 and associated clauses there under.

14 EXTENSION OF TIME

- 14.1. Without prejudice to, and subject Clause 14.3 below, to the extent that any of the following events cause the Contractor to suffer a delay in the critical path progress of the Works, which in turn prevents the Contractor from completing the Works within the Time for Completion, the Contractor may apply for an extension of the Time for Completion of the Works:
- (a) Occurrence of a Force Majeure event;
 - (b) There is delay in handing over the possession of the Site (save and except sequential handing over of Site as per provisions of Clause 8.1.2) to the Contractor not caused due to default of the Contractor;
 - (c) Instruction of the Engineer-in-Charge to suspend the Works and the Contractor not being in default;
 - (d) Any order of Court restraining the performance of the Contract in full or in any part thereof, unless such order is attributable to any default, breach or non-compliance by the Contractor;
 - (e) Under Clause 21.7 due to IIMN's Variation;
 - (f) Delay in Approval of the Contractor's Document in terms of Clause 9.13;
 - (g) Under Clause 22 due to Change in Law;
 - (h) Under Clause 15.6 due to taking of possession of the Works or any part thereof by the Engineer-in-Charge prior to Completion.
- 14.2. Except as specified in Clause 14.1 above, the Contractor shall not be entitled to any extension of the Time for Completion for any reason whatsoever. Provided, notwithstanding anything contained in Clause 14.1 or otherwise, the Contractor shall not be entitled to any extension of

time:

- (a) where the instructions or acts of Engineer-in-Charge are necessitated by or intended to cure any default of or breach of the terms of the Contract committed by the Contractor;
- (b) where any delay is due to:
 - (i) The failure of its Subcontractor, to commence or to carry out the part of the Works in due time; or
 - (ii) Non-availability, or shortage of Contractor's Equipment, labour, utility services, Plant and Goods and Materials; or
 - (iii) Inclement weather conditions or the occurrence of an event of Force Majeure.

14.3. The Contractor shall, as soon as reasonable practicable and in any event within 7 (seven) days, after the Contractor knew or ought reasonably to have known of its occurrence of any of the events specified in Clause 14.1, provide to IIMN, in writing, the full particulars of such event and the probable material adverse effect that such event is likely to have on the performance of its obligations under the Contract.

14.4. Any notice issued pursuant to Clause 14.3 shall include full particulars of:

- (a) The nature and extent of each such event which is the subject of any claim for relief under Clause 14.3 with evidence in support thereof;
- (b) The estimated duration and the effect or probable effect which such event is having or shall have on the Contractor's performance of its obligations under the Contract;
- (c) The measures which the Contractor is taking or proposes to take, to alleviate the impact of such event; and
- (d) Any other information relevant to the Contractor's claim.

The Engineer-in-Charge shall not consider any claim for relief from the Contractor, if the Contractor fails to comply with the provisions of Clause 14.3 and this Clause 14.4.

14.5. The Parties agree and acknowledge that:

- (a) the Contractor shall constantly use its reasonable endeavours to prevent and/or minimize delay in the progress of the Works, howsoever caused, and to prevent delay in the performance of Works beyond the Works Completion Schedule and the Contractor shall not be entitled to an extension of the Works Completion Schedule in respect of any cause of delay nor for any period of delay which by the exercise of reasonable endeavours could be avoided or reduced (to the extent that such delay could have been

- reduced). The onus of proving that the Contractor has exercised all reasonable endeavours, and that despite such endeavours, the delay could not be avoided or reduced, shall in all cases rest with the Contractor;
- (b) the Contractor shall not under any circumstances be entitled to an extension of the Works Completion Schedule where the delay or likely delay is, or would be, attributable to the default, breach, negligence, improper conduct or lack of endeavour of the Contractor or any persons for whom it is contractually or otherwise responsible for and further the Contractor shall not be entitled to an extension of the Time for Completion where delay arises as a consequence of the termination of a Sub-contractor's employment by the Contractor;
 - (c) if there are two or more concurrent causes of delay and only one of those concurrent causes is a delay which would entitle the Contractor to an extension of the Works Completion Schedule, the Contractor would not be entitled to an extension of the Works Completion Schedule for the period of that concurrence;
 - (d) it is a further condition precedent to the Contractor's entitlement to an extension of the Works Completion Schedule that the critical path progress of the Works is affected in a manner which might reasonably be expected to result in a delay to the Contractor in the performance of the Works as per the Works Completion Schedule; and
 - (e) no relief shall be granted to the Contractor to the extent that any failure or delay in the performance of the Works by the Contractor, would nevertheless have been experienced by the Contractor, had an event of Force Majeure or other relevant event(s) specified in Clause 14.1 entitling the Contractor to otherwise claim an extension of time, not occurred.
- 14.6. If the delay in the completion of the Works or a portion thereof, for which an earlier completion period is stipulated, is due to the Contractor's failure or fault, and the Engineer-in-Charge is of the view that the remaining Works can be completed by the Contractor in a reasonable and acceptable short time, then IIMN may allow the Contractor an extension of the Time for Completion at its discretion with or without a reduction in the Contract Price, as it may decide.
- 14.7. The extension of time shall be the sole remedy of the Contractor for any cause or event of delay mentioned in Clause 14.1 or elsewhere in the Contract and other than as provided in the Contract, the Contractor shall not be entitled to claim any damages or compensation in addition to or in lieu of such extension of time.
- 14.8. Notwithstanding anything to the contrary contained in the Contract, to the extent that this Contract is entered into by IIMN pursuant to a contract awarded to IIMN for the development of the Facility (the "**Main Contract**"), the extension of time and/or Cost awarded to the Contractor under this Contract shall be proportionate to the extension of time and/or cost awarded to IIMN under the Main Contract and in no event shall such the extension of time and/or Cost awarded under this Contract exceed the extension of time and/or cost awarded to IIMN under the Main Contract.

15 COMPLETION

15.1 Where the Contract is a lump-sum turnkey contract

When the Contractor has:

- (a) successfully completed Trial Operation
- (b) successfully completed the Performance Tests of all facilities and systems
- (c) completed all Punch-list Items;
- (d) submitted the Contract Performance Bank Guarantee in accordance with Clause 9.4.2;
- (e) provided to IIMN such certification by the Contractor or other written evidence, as IIMN may reasonably require, to demonstrate that the Contractor has complied with all relevant Applicable Laws and has obtained all relevant clearances in connection with the Works which it is the Contractor's responsibility to comply with or to obtain; and
- (f) provided to IIMN all such documentation and information such as manuals, systems descriptions, computer programs, access codes etc. that are necessary to enable IIMN to properly test and use any part of the Works in accordance with Good Industry Practice and in compliance with the laws and regulations relating to environment, safety etc. and in order to attain the Guaranteed Performance Levels by IIMN,
the Contractor shall so notify IIMN in writing.

15.2 Where the Contract is an item rate contract

When the Contractor has successfully completed the total Works as per the scope of Works defined in the Contract and the Specifications and the Facility is ready for commercial operations, the Contractor shall so notify IIMN in writing.

15.3 IIMN shall, subject to provisions of Clause 15.1, Clause 15.2 and Clause 15.4, within 30 (thirty) Working Days of receipt of a notification from the Contractor pursuant to Clause 15 or, as the case may be Clause 15.2, along with all the documents mentioned in Clause 15.4 (b) below:

- (a) inspect the Works and if it is satisfied that the Works are complete in all respects in accordance with the Specifications and free of all Defects, issue a completion certificate to the Contractor (“**Completion Certificate**”) and the Works shall be taken over by IIMN on the date of issue of the Completion Certificate; or
- (b) if the Engineer-in-Charge is not satisfied that the Works are complete in all respects in accordance with the Specifications or discovers any Defects in the Works, notify the Contractor of the reasons why it considers that the notice given pursuant to Clause 15 or Clause 15.2 was improperly or prematurely issued and notify the Contractor of:

- (i) any items of work which are in IIMN's or the Engineer-in-Charge's reasonable opinion required to render the Facility ready for being taken over; or
- (ii) any Defects in the Facility which are required to be rectified and following completion such items or, as the case may be, rectification of such Defects, the Contractor shall submit a fresh notice to IIMN to which the provisions of this Clause 0 shall apply mutatis mutandis.

15.4 Notwithstanding anything contained in Clause 15.3, IIMN shall not issue the Completion Certificate until:

- (a) the Contractor has cleared the Site of all scaffolding, wiring, pipes, surplus materials, Contractor's labour, equipment and machinery, demolished, dismantled and removed all the Contractor's Site offices and quarters and other Temporary Works, structures and constructions and other items and things whatsoever brought upon or erected at the Site and not incorporated in the Permanent Works, removed all rubbish from the Site, cleared and leveled the Site to the satisfaction of the Engineer-in-Charge and put IIMN in undisputed custody and possession of the Site, free & clear of all encumbrances and encroachments; and
- (b) the Contractor has submitted the following documents to IIMN:
 - (i) the technical documents according to which the Work was carried out;
 - (ii) complete set of "as-built" drawings showing therein corrections and modifications (if any) made during the course of execution of the Works, signed by the Engineer-in-Charge;
 - (iii) Statement of final levels as set for various works, signed by the Engineer-in-Charge;
 - (iv) Records of the final test as maintained jointly and signed by the representative of the Contractor and the Engineer-in-Charge or Format-III (if Commissioning is not within the Contractor's scope of Work) and Format -V (if Performance Tests are not within the Contractor's scope of Work) and Performance Test certificate issued by the Engineer-in-Charge upon successful completion of the Performance Tests (if Performance Tests are within the Contractor's scope of Work).;
 - (v) Item-wise list of surplus materials including the quantity & estimated value of each surplus item (out of the Free Issue Materials or materials brought on the Site by the Contractor) returned to IIMN's or otherwise disposed of, duly signed by the Engineer-in-Charge;
 - (vi) Materials-at-site accounting for the Free Issue Materials supplied to the Contractor under the Contract, signed by the Engineer-in-Charge;
 - (vii) Discharge in respect of IIMN supplied equipment and machinery, signed by the Engineer-in-Charge; and
 - (viii) Declaration by the Contractor that it has duly cleared any and all of the dues payable by it to its labourers, employees, piece rate workers (PRWs), and other

personnel, Subcontractors, suppliers, vendors, income Tax, sales tax, octroi, entry tax, service tax, excise, customs duty, provident fund, employees state insurance (ESI) and royalties, or other amounts payable under any Applicable Law (if any).

15.5 Upon the issuance of the Completion Certificate, IIMN shall take over the possession, care, custody and control thereof from the Contractor.

15.6 Notwithstanding anything to the contrary contained in the Contract, the Engineer-in-Charge shall have the right to take possession of or use any completed or partially completed Work or part of the Works. Such possession or use shall not be deemed to be an acceptance of any Works. If such prior possession or use by the Engineer-in-Charge delays the progress of Work, equitable adjustment in the Time for Completion shall be made in accordance with Clause 14.

16 DEFECT LIABILITY PERIOD

16.1 The Defect Liability Period shall be a period of 12 (Twelve Four) months from the date of Completion mentioned in the Completion Certificate.

16.2 The Contractor warrants that during the duration of the Defect Liability Period, the Works shall be free of all Defects.

16.3 If, during the Defect Liability Period, any Defects are discovered in the Works or any part thereof; or the Works or any part thereof fails to meet the Guaranteed Performance Levels, IIMN will notify the Contractor of such Defects or failure. Upon receipt of such notice, the Contractor shall promptly repair or replace such Work (including any necessary uncovering, covering and recovering) in accordance with the Contract, Good Industry Practices and Applicable Laws. At IIMN's option and Contractor's expense, IIMN shall have the right to provide labour in connection with such repair or replacement to the extent that such labor can be provided by IIMN's then- current permanent employees working at during normal working hours. The Contractor shall provide for all additional labor required for such repair or replacement and shall bear all Costs and expenses associated with repairing or replacing any Work, including costs incurred by IIMN in relation to providing labor, employees and personnel for any such repairs or replacement. Upon completion of any repair or replacement work, the Contractor shall, at its own expense, and with IIMN's coordination and Approval, perform such tests as necessary to demonstrate that pursuant to cure of Defects under this Clause 16.3, the Works meet the Guaranteed Performance Levels.

16.4 If the Contractor fails to rectify any Defects in the Work during the Defect Liability Period, IIMN (at its sole discretion) may:

- (a) Carry out the work itself or by others, in a reasonable manner at the risk and Cost of the Contractor; In addition to the costs, IIMN shall be entitled to claim 15% (fifteen percent) of such costs towards the genuine pre-estimated damages suffered by IIMN; or
- (b) If the Defect or damage is such that IIMN has been deprived of substantially the whole of the benefit of the Works or part of the Works, terminate the Contract in respect of such parts of the Works as cannot be put to the intended use. Without prejudice to any other rights, under the Contract or otherwise, IIMN shall then be entitled to recover all sums paid for such parts of the Works together with the cost of dismantling the same, clearing the Site and

returning Goods and Materials to the Contractor and the provisions of Clause 29 shall not apply.

- 16.5** If the Defect or damage is such that it cannot be remedied expeditiously on the Site and if IIMN gives consent, the Contractor may, remove from the Site for the purpose of repair any part of the Works, which is defective or damaged. The consent may require the Contractor to increase the amount of Contract Performance Bank Guarantee by the full replacement cost of items which are to be replaced or to provide other appropriate security acceptable to IIMN.
- 16.6** If the repair or remedy of any Defect or damage is such that it may affect the performance of the Works, IIMN may, within 30 (thirty) Working Days after such repair or remedy, require that certain tests be repeated as may be necessary to demonstrate compliance with the Guaranteed Performance Levels.
- 16.7** If any part of the Works has been replaced, renewed or repaired during the Defect Liability Period, the Defect Liability Period in respect of such part shall start again for a period of 12 (twelve) months from the date on which such replacement, renewal or repair has been completed to the satisfaction of the Engineer-in-Charge (“Extended Defect Liability Period”).

17 COMPENSATION

- 17.1** If the Works and the Facility, or any part thereof, fails to meet the Guaranteed Performance Levels, then the Contractor shall pay to IIMN Performance Compensation at the rates specified in the Contract (“**Performance Compensation**”). The liability of the Contractor towards Performance Compensation under this Clause 17.1 shall not exceed a sum that is greater than 10% (ten percent) of the Contract Price. The Parties acknowledge that the Performance Compensation are a genuine pre-estimate of and reasonable compensation for the losses and damages that will be suffered by IIMN in the event that the Works, or any part thereof, fail to meet the Guaranteed Performance Levels and the Contractor irrevocably undertakes that it will not, whether by legal proceedings or otherwise, contend that the amount of the Performance Compensation are not reasonable.
- 17.2** IIMN may:
- (c) deduct and retain the amount of the Performance Compensation becoming due under Clause 17.1 from any sums due or which become due to the Contractor; or
 - (d) invoke the Contract Performance Bank Guarantee submitted by the Contractor to IIMN; or
 - (e) require the Contractor to pay such amount to IIMN within 28 (twenty-eight) days from the date receipt of a written notice for such payment from IIMN,

notwithstanding any Dispute between the Parties as to the amount due or the liability to make payment of the same.

- 17.3** The payment of the Performance Compensation does not in any way relieve the Contractor from any of its obligations to perform the Works or from any other obligations and liabilities of the Contractor under the Contract.

17.4 The Contractor agrees that the payment of Performance Compensation shall not affect the right of IIMN to recover damages resulting from the breach of any other terms of this Contract, seek specific performance, or terminate the Contract pursuant to any other provisions hereof.

18 CONTRACT PRICE

18.1 In consideration of the full and complete discharge of the Contractor's obligations under the Contract, IIMN shall pay to the Contractor the Contract Price at the time and in the manner set forth in the Payment Schedule, subject to such deductions and adjustments as may be permissible under the Contract.

18.2 For Lump-Sum Contract

The Contract Price is a fixed lump-sum price inclusive of all Taxes and shall not be subject to any escalation, variation or alteration whatsoever throughout the Contract Validity Period, except as provided in the Contract or the Bidding Document; and includes any and all direct, indirect and ancillary costs, including profits, license, royalty and other fees, cost of all Goods and Materials, Plant and Contractor's Equipment and all other charges arising out of or in connection with the execution of the Works. The Contractor acknowledges and agrees that the lump-sum price and the rates set out in the Price Schedule and the Contract Price shall hold good till the completion of the Works and shall not be adjusted for any fluctuation in the market costs of labour or materials.

18.3 For Item Rate Contract

18.3.1 The Contract Price shall be deemed to include and cover the following:

- (a) all costs, expenses, outgoings and liabilities of every nature and description and all risks whatsoever to be taken or which may occur in relation to the acquisition, loading, unloading, transporting, storing, fabricating any Plant, equipment or system or the execution, completion, testing, commissioning and/or handing over of the Facility to IIMN;
- (b) cost of all construction, Plant, Goods and Materials and all other items, materials and things required for incorporation in the Permanent Works or otherwise in execution of the Works, including cost of procuring Contractor's Equipment, supply of water and power, construction of Temporary Works/ Facilities, temporary roads, cost of labour, spares, fuel, stores and supplies to be provided or arranged in connection with the execution of the Works;
- (c) cost of all Drawings and Designs, Contractor's Documents, plans, models, studies and other documents required to be prepared and furnished by the Contractor under the Contract;
- (d) cost of mobilization including, mobilization of vehicles, machinery, equipment, tools, consumables and other items, goods and personnel necessary to commence the execution of the Works;

- (e) cost of all Taxes, other than to the extent provided in Clause 19.0 below;
- (f) cost of all rents, royalties, licenses, permits, permissions and other fees, duties, penalties, levies and damages payable on the performance of the Works including, the excavation, removal or transportation of any material or acquisition or use of any right of way or other rights, permits or privileges in connection with the performance of the Works;
- (g) cost of all insurance(s) (including insurance premium) required to be obtained and maintained by the Contractor in terms of the Contract;
- (h) cost of all inspections, tests and cost of items, instruments and/or tools required to conduct such inspections or tests;
- (i) cost of all escalations including, Taxes, labour costs, cost of materials and other inputs;
- (j) cost of supervision, establishment overheads and financing;
- (k) cost of all Contractor's indemnities under the Contract; and
- (l) cost of all deductions, discounts, adjustments and withholdings whatsoever under or in connection with the Contract.

19 TAXES AND DUTIES

- 19.1** All the Taxes and levies payable in India whether under Central, State, union territory or Local laws applicable in India as well as those leviable outside India, shall form part of the Contract Price. The Contractor shall bear all the Taxes, duties, levies on the supply of Goods and Material and Plant (including customs duties payable on imported Goods and Materials and Plant) and on performance of the services, under Central, State, union territory or Local laws applicable in India as well as those leviable outside India”
- 19.2** In respect of Goods and Material and Plant to be supplied by the Contractor from within India the Ex-factory value of such Goods and Material and Plant and all the indirect Taxes leviable on the transaction between ‘IIMN and Contractor’ shall be separately indicated in the Price Schedules (as indicated in the Price Schedule) along with the rate of Tax so applied in computing such indirect Taxes.
- 19.3** The Contract Price comprises the base price of the Goods and Material, Plant and services and the Taxes thereon and therefore the Contractor is mandatorily required to indicate the Taxes in the format prescribed under Price Schedules.
- 19.4** The customs duty shall be to the account of the Contractor and the Contractor shall be responsible for the timely payment of the custom duties to the relevant Government Authorities. IIMN shall assist in provision of all necessary documents required by the Contractor to clear the Goods and Material and Plant on availing the benefit of any concessional rate of customs duty available.

The Contractor shall be responsible for, and shall exercise due diligence in properly classifying the Goods and Material and Plant, undertaking the payment of customs duties, and/ or otherwise complying with all Applicable Laws with respect to any import of the Goods and Material and Plant. In case IIMN is exposed to any penal action (interest and/ or penalties) by the customs Authorities for incorrect declaration and/ or valuation of the Goods and Material and Plant by the Contractor, or otherwise on account of any breach of Applicable Laws in the course of the import of the Goods and Material and Plant, the Contractor shall indemnify and hold harmless, IIMN for any and all costs, expenses or losses suffered or incurred by IIMN in this regard.

19.5 Unless otherwise provided for in the Contract, the Contractor shall be solely liable for payment of the following amounts:

- (a) all Taxes imposed and assessments made in relation to the Contractor's Equipment and the Works (including any Taxes applicable to the Works performed by the Subcontractors) which are payable in India;
- (b) all contributions payable under Applicable Laws, awards or pursuant to any contract with an industrial or trade union or other association of employees; or otherwise with respect to or ascertained by reference to the wages, salaries or other compensation paid to the employees of the Contractor or any Subcontractor in respect of the Works, including Taxes or contributions for workers' compensation, unemployment or sickness benefit, old age benefit, welfare funds, pensions and disability insurance;
- (c) all harbour dues, pilotage fees, port fees, wharf fees, unloading costs incurred in India in respect of any imported Contractor's Equipment;
- (d) all direct Taxes, including income tax, profession tax and wealth tax for which the Contractor is the responsible party.

19.6 The Contractor and its Subcontractor/ vendor/ original manufacturer shall issue proper invoice, as stipulated under the customs, excise, VAT/CST, service tax, GST and other Applicable Laws, and other necessary documents as may be relevant from time to time to enable IIMN or any person designated by IIMN to avail the credit of such Taxes, wherever applicable, paid by the Contractor or any Subcontractor/ vendor/ original manufacturer within the time period specified under the applicable legislation in this regard.

If IIMN is not able to avail the credit (as indicated in the Price Schedule, unless otherwise mentioned in this Contract), partially or entirely because the Contractor or any Subcontractor/ vendor/ original manufacturer issued a defective invoice or failed to produce the requisite documents, then the Contractor shall immediately indemnify IIMN for such loss of Tax credit which would be otherwise available to IIMN. IIMN, in such case, may, in its sole discretion, decide to recover such loss by way of deduction from payment due to the Contractor or invoking the Contract Performance Bank Guarantee.

19.7 The benefit of any Tax exemption, concessions, rebate or any other incentives available when the Contractor or its Subcontractors/ vendor are performing their obligations under the Contract, shall

be passed on to IIMN.

- 19.8** Contractor agrees for withholding from wages and salaries of its agents, servants or employees all sums, required to be withheld by the laws of the Republic of India or any other agency having jurisdiction over the area where Contractor is conducting operations, and to pay the same promptly and directly when due to the proper authority. Contractor further agrees to comply with all accounting and reporting requirements of any Nation having jurisdiction over the subject matter hereof and to confirm to such laws and regulations and to pay the cost of such compliance. If requested by IIMN/PMC, Contractor will furnish IIMN/PMC the evidence of payment of applicable Taxes, in the country (ies) of the Contractor's and his sub-Contractor(s) and expatriate employees. IIMN shall issue a Tax deduction or withholding certificate to the Contractor evidencing the Tax deducted or withheld and deposited by IIMN on payments made to the Contractor to enable the Contractor to claim the credit of the Tax deducted or withheld by IIMN.
- 19.9** The Contractor shall be solely responsible for all procedural compliances related to registration, the payment of Taxes under the Contract and it shall protect, indemnify and hold harmless IIMN, from any and all cost, penalty, claims or liability:
- (e) to pay any Taxes assessed or levied by any competent Authority on the Contractor or its Subcontractors/ vendor / original manufacturer or on IIMN for or on account of any act or omission on the part of the Contractor or its Subcontractors/ vendor/ original manufacturer; or
 - (f) on account of the Contractor's or its Sub-contractor's/ vendor's failure to file Tax returns as required by Applicable Laws or comply with reporting or filing requirements under Applicable Laws relating to Taxes; or
 - (g) arising directly or indirectly from or incurred by reason of any misrepresentation by or on behalf of the Contractor or its Subcontractors to any competent Authority in respect of Taxes; or
 - (h) arising from any proceedings initiated against IIMN by any competent Authority in respect of any non-compliance, non-payment, short-payment of Taxes.
- 19.10** In case the Contractor is a foreign entity, it is mandatory to furnish the Contractor's Permanent Account Number (PAN), as per the Indian Income Tax requirements, failing which the Contractor shall be responsible for any additional Tax deduction at source as per the provisions of the Indian Income Tax Act/Rules. The PAN shall be furnished before release of any payment or within one month of award of work, whichever is earlier.
- 19.11** Taxes, Duties and Levies in Foreign Countries

The Contractor shall accept full and exclusive liability at his own Cost for the payment of any and all Taxes, duties, cesses and levies howsoever designated, as are payable to any government, local or statutory authority in any country other than India as are now in force or as are hereafter imposed, increased or modified and as are payable by Contractor, his agents, Sub-Contractors and its/their respective employees for or in relation to this performance of this contract. The

Contractor shall be deemed to have been fully informed with respect to all such liabilities and considered and included the same in its bid and the quoted price shall not be varied in any way on this account.

20 TERMS OF PAYMENT

20.1 Mobilization Advance

20.1.1 Contractor may ((if specified by it in its Bid and accepted by IIMN) be provided a recoverable interest bearing Mobilization Advance up to a maximum of 10% (ten percent) of the awarded Contract Price towards Mobilization and execution of the Works. Mobilization advance shall carry an interest rate as defined in the Contract.

20.1.2 Mobilization Advance shall be paid to the Contractor in two instalments subject to the fulfilment of the following conditions:

(a) First Instalment

5% (five percent) of awarded Contract Price shall be payable as the first instalment of Mobilization Advance, within 15 (fifteen) Business Days, after fulfilling the following formalities by the Contractor:

- (i) Signing of the Contract Agreement by the Contractor;
- (ii) Submission of the Contract Performance Bank Guarantee in accordance with Clause 9.4.2; and
- (iii) Submission of the Mobilization Advance Guarantee in accordance with Clause 9.4.1. The Contractor may submit 2 (two) separate Mobilization Advance Guarantees, one against each instalment of the Mobilization Advance (5% each instalment).

(b) Second Instalment

Balance 5% (five percent) Mobilization Advance shall be payable to the Contractor after the Contractor has constructed a site office, storage shed, fabrication yard, , labour hutment etc. and has physically mobilized construction equipment (concrete batching plant, concrete pumps, adequate transit mixtures etc) and is ready to start the Works to the entire satisfaction of the Engineer-in-Charge and commencement of work at Site. Where the Contractor elects to submit 2 (two) separate Mobilization Advance Guarantees, one against each instalment of the Mobilization Advance, the second instalment of the Mobilization Advance will be released by IIMN only upon receipt of the second Mobilization Advance Guarantee.

20.1.3 Recovery of Mobilization Advance

The Mobilization Advance together with the interest accrued, thereon, shall be recovered from each Running Bill @ 12% (twelve percent) of gross amount of each Running Bill in such a manner that the total Mobilization Advance and interest accrued thereon is recovered by the

time approximately 85% (eighty five percent) of the Contract Price is paid to the Contractor. Balance amount, if any, shall be deducted in full from the pre-final Bill. Mobilization advance Bank Guarantee will be reduced accordingly on quarterly basis against the request of the Contractor.

20.1.4 If the Mobilization Advance has not been fully adjusted against the Running Bills within 30 (thirty) days of the expiration of the Time for Completion or pre-final bill whichever is earlier or immediately prior to termination under Clause 29 the whole of the balance of the Mobilization Advance then outstanding shall immediately become due and payable by the Contractor to IIMN and IIMN shall be entitled to call upon the Mobilization Advance Guarantee.

20.2 Secured Advance

20.2.1 IIMN may provide a Secured Advance to the Contractor for non-perishable, non-fragile and non-combustible Goods and Materials brought on the Site for execution of the Works, in the following manner:

- (a) in the case of steel, 75% of the value of the Goods and Materials on receipt

of the Goods and Materials at the Site or 75% of the quoted value of corresponding SOR item in which the Goods and Materials are to be incorporated, whichever is lower, and Approval of the Goods and Materials by IIMN/Engineer-in-Charge. **For cement, the Secured Advance will be released only when the Contractor has established proper storage and handling facility at the Site;**

- (b) in the case of non-perishable Goods and Materials other than steel, 75% of the landed cost on receipt of the Goods and Materials at the Site or 75% of the quoted value of corresponding SOR item in which the Goods and Materials are to be incorporated, whichever is lower, and Approval of the Goods and Materials by IIMN/Engineer-in-Charge (as per the list for Category B Items provided in SCC in the Bidding Document), against submission of the following documents:
- a) vendor's/manufacturer's invoice with proof of full payment, indicating quantity, unit rate and amount of the procured Goods and Materials, with the lot/batch numbers, as applicable;
 - b) in the case of imported Goods and Materials, copy of bill of lading, proof of payment of customs duty;
 - c) original factory test and inspection certificate with the lot/batch numbers, wherever applicable;
 - d) inspection release note signed by IIMN/Engineer-in-Charge;
 - e) an indemnity bond in the format set out at Appendix IV;
 - f) copy of IMIR (Incoming Material Inspection Report) document duly authenticated;
 - g) copy of insurance policy for full value of the Goods and Materials for which the Secured Advance is being provided (in respect of specific goods and materials mentioned elsewhere in the contract), including landed cost at the Site, during storage and erection against all risk insurance, obtained in the joint names of IIMN and the Contractor with IIMN as the first beneficiary.

20.2.2 The Secured Advance shall not be payable for items not mentioned in the Specifications or Contract or for such items payment on the supply of which is covered in the payment schedule.

20.2.3 The Secured Advance will be recovered from the Running Bills proportionate to the extent that the Goods and Materials in respect of which the Secured Advance was provided are incorporated in the Permanent Work. The balance amount if any will be recovered completely on the earlier of:

- (a) 90% of the Contract Price being paid to the Contractor; and
- (b) Submission of the Final Bill.

20.2.4 No interest shall be levied on the Secured Advance, provided that the Goods and Materials for which the Secured Advance is provided are incorporated in the Permanent Work within the agreed Works Completion Schedule. If there is any inordinate and inexcusable delay in incorporation of

the Goods and Materials for which the Secured Advance is provided in the Permanent Work, IIMN may levy interest at the rate as defined in the contract on the value of the unutilized Goods and Materials from the date on which such Goods and Materials were scheduled to be incorporated in the Permanent Work as per the Works Completion Schedule till the date on which the Goods and Materials are incorporated in the Permanent Work.

20.3 Progressive Payments/On Account Payment

20.3.1 (a) Where the Contract is a lump-sum Contract,

The Contractor shall submit to IIMN, within 30 (thirty) days of the Effective Date, the Billing Schedule, which shall be taken into account by IIMN when releasing payment of Running Bills.

Within 30 (thirty) Working Days of the receipt of such Billing Schedule, the Parties shall mutually agree upon the same. In the event that the Parties are not able to reach an agreement, IIMN's decision regarding the Billing Schedule shall be final and binding on the Parties. Such Billing Schedule shall be deemed to be a Contractor's Document and shall form the basis of progressive payments of the Contract Price as stated in the payment terms, in accordance with this Clause 20.3.

(b) Where the Contract is an item rate contract:

- (i) The Contractor may raise Running Bills, as specified below, every alternate month and if an ad hoc payment is made by IIMN in respect of the intervening month, for the amount certified by the Engineer-in-Charge on the basis of a summary assessment made by the Engineer-in-Charge of the value of the Works performed by the Contractor during the intervening month, such ad hoc payment(s) shall be deducted from the amount(s) certified by the Engineer-in-Charge as payable on the next Running Bill raised by the Contractor.
- (ii) Where a lump sum rate is stipulated in the Schedule of Rate(s) or otherwise in respect of any particular Work or part thereof and the Works are not, at any intervening stage, capable of measurement, the Running Bill to be prepared by the Contractor shall be prepared on the basis of a value assessment of the percentage of the particular Work or part thereof completed by the Contractor for which the lump-sum rate is stipulated in the Schedule of Rates, as certified by the Engineer- in-Charge.

20.3.2 (a) Within 7 (seven) days after completion of a Payment Milestone (in case of a lump-sum contract)/ individual item of Work (in case of an item rate contract), the Contractor must submit to IIMN's Representative a Running Bill. Each Running Bill must set out:

- (i) the estimated value of the Works executed by the Contractor and the Contractor's Documents produced until the date of the Running Bill (including Variations);
- (ii) any amounts to be deducted on a pro rata basis towards the adjustment of the

- Mobilization Advance in accordance with Clause 20.1 above;
- (iii) any interim ad-hoc payments made by IIMN in accordance with Clause 20.3.1(b)(i) above;
 - (iv) any other additions or deductions which may have become due under the Contract or otherwise, including those under Dispute; and
 - (v) the deduction of amounts certified in all previous Running Bills and paid by IIMN to the Contractor in accordance with Clause 20.
- (b) Each Running Bill must contain the Contractor's certification with supporting documentation:
- (i) that each obligation, item of cost or expense mentioned in that Running Bill has been properly incurred and is a proper charge and that all physical progress is as represented;
 - (ii) that it has reviewed all financial and budget data contained in the Running Bill and the same is true and complete;
 - (iii) that the quality of all completed Works is in accordance with the Specifications;
 - (iv) that each obligation, item of cost or expense has not been the basis of any previous payment (unless the amount of the payment was subsequently reimbursed to IIMN); and
 - (v) that all the requisite original statutory declarations or forms or documents, challans, required for availing of any Tax concessions or rebate or refund or credits or set-off or discounts as prescribed under any of the Applicable Laws for the time being in force in India have been submitted.
- (c) Within 30 (thirty) Business Days after receipt of a Running Bill submitted in full compliance with Clause 20.3.2 and not more than once a month, IIMN shall endeavour to pay the amount requested or pay a lesser amount as it or the Engineer-in-Charge determines is properly due, in each case less any amounts retained, withheld or set off in accordance with the terms of the Contract subject to IIMN's right under Clause 20.7 to set off against amounts due from the Contractor. If less than the full amount of the Running Bill is paid, IIMN shall state in writing the reasons for paying the lesser amount. Notwithstanding anything contained in this Clause 20.3.2 (c), IIMN may, at its sole discretion, release 75% of the amount of a Running Bill, as certified by the Engineer-in-Charge, within 15 (Fifteen) Business Days from the receipt of the Running Bill.

20.4 Payments Withheld

IIMN may withhold from any payment due to the Contractor amounts IIMN deems reasonably necessary or appropriate because of any one or more of the following reasons:

- (a) Defects and deficiencies in any Works, whether or not payment has been made in relation to that part of the Works;
- (b) failure by the Contractor to provide certificates of insurance or insurance policies in accordance with the terms of the Contract;
- (c) reasonable evidence that completion of the Works will not occur within the Time for Completion;
- (d) failure, in any material respect, to perform the Works or any of the Contractor's other obligations under the Contract;
- (e) any overpayments made by IIMN in a previous payment;
- (f) any payment required to be withheld under any Applicable Laws;
- (g) a dispute exists as to the accuracy or completeness of any Running Bill (but only with respect to the amount then in dispute);
- (h) amount of Taxes which IIMN may have to pay if conditions of Clause 22 are not fulfilled; and
- (i) any amount expected to be paid by IIMN to any person, on behalf of the Contractor or its affiliates under any agreement or any Applicable Laws for the time being in force or any court order or any other reason or purpose.
- (j) Any amount otherwise specified under the Contract, as being deductible from the payments to be made by IIMN to the Contractor.

20.5 Final Payments

20.5.1 Within 15 (fifteen) days after receipt of the Completion Certificate, the Contractor must submit a payment claim and endorse it as the “**Final Bill**”. The Contractor must include in that claim:

- (c) statements for the Contract Price, summarizing and reconciling all previous payments made by IIMN and adjustments in the Contract Price; and
- (d) any further sums which the Contractor considers to be due to it under the Contract.

20.5.2 Except as provided in Clause 20.5.4, within 90 (ninety) Business Days after the receipt of the Final Bill complete in all respects in accordance with the Contract, IIMN must pay to the Contractor the amount mentioned in the Final Bill and certified by the Engineer-in-Charge, less any disputed amounts, subject to IIMN's right under Clause 20.7 to set off against amounts due from the

Contractor. If the amount that the Contractor owes to IIMN under Clause 20.7 is greater than the amount mentioned in the Final Bill and certified by the Engineer-in-Charge, then the Contractor must pay the excess amount which is a debt due and payable to IIMN within 90 (ninety) days after IIMN's receipt of the Final Bill.

20.5.3 After the expiry of the 15 (fifteen) days period referred to in Clause 20.5.1, a claim which the Contractor was entitled to make, but has not made in the Final Bill, is barred and the Contractor waives any right to bring such a claim.

20.5.4 The amount certified in the Final Bill will not become due under Clause 20.5.2 until the Contractor submits to IIMN:

- (e) a certificate of release certifying that the Contractor waives all rights to bring any claims which the Contractor is entitled to make, but which are not included in the Final Bill;
- (f) if requested by IIMN, other data establishing payment or satisfaction, including receipts, releases, and waivers as may be required by IIMN;
- (g) a confirmation from the Contractor that there has been no Change of Law that it has not notified IIMN which may result in a reduction in the Contract Price; and
- (h) any and all outstanding documentation required to be given to IIMN by the Contractor.

20.6 No interim payment by IIMN constitutes acceptance by IIMN of the Works or any part thereof, or releases the Contractor from any of its obligations or liabilities under the Contract.

20.7 Payment of the amount mentioned in the Final Bill by IIMN shall not mean release of the Contractor from all of its liabilities under the Contract. The Contractor shall be liable to fulfill and discharge all his liabilities and responsibilities under the Contract until the end of the Contract Validity Period and release of the Contract Performance Bank Guarantee.

20.8 Without limiting Clause 20.4 and 20.5, IIMN may at any time deduct from any moneys which are or may be payable to the Contractor (including security), any sums which may be or are payable by IIMN pursuant to the Contract. Nothing in this Clause 20.8 affects the right of IIMN to recover from the Contractor, the whole of the debt or any balance that remains owing after any deduction.

20.9 If the Contractor fails to pay a Subcontractor on time such sum as is properly due under the agreement between the Contractor and such Subcontractor, then IIMN may, on behalf of the Contractor, make the payment direct to the Subcontractor and the amount so paid will be a debt due and payable from the Contractor to IIMN.

20.10 Mode of Payment

20.10.1 Subject to the other provisions of the Contract, if the execution of the Works shall necessitate the importation into India of materials, plant or equipment or if the Works or any part thereof are to be executed by labour from outside India, a portion of the payments to be made under the Contract shall be made in the appropriate foreign currencies as requested in the Bid and accepted by IIMN.

20.10.2 All payments required to be made by IIMN to the Contractor shall be made by wire transfer to an account or accounts to be designated by the Contractor, which is maintained by the Contractor:

(a) for payments in Indian currency, with a bank or banks in India; and (b) for payments in foreign currency, with a bank or banks in the country in which the payment is to be received. IIMN's liability to make payment shall be deemed to have been discharged when the amount due is deposited in the accounts or accounts designated by the Contractor for this purpose and subject to all acts necessary to initiate the relevant wire transfer being completed within the time stipulated for making payment of the amount due, any delay within the international or domestic banking system in the transfer of such amount to the Contractor's account or accounts shall not give rise to a claim that IIMN is in breach of its payment obligations under the Contract.

20.11 Measurement

20.11.1 All measurements under this Contract shall be in the metric system and except where expressly indicated to the contrary in the Contract, all measurements shall be taken in accordance with the procedure set out in the Contract notwithstanding any provision(s) in the relative standard method of measurement or any other general or local custom to the contrary.

20.11.2 All measurements shall be taken jointly by the Engineer-in-Charge or his representative on the one hand and the Contractor or the Contractor's Representative on the other hand and the Contractor shall be bound to present the Contractor's Representative for measurement(s) whenever so required by the Engineer-in-Charge and the Contractor's Representative shall remain present throughout the time required for joint measurements.

20.11.3 If the Contractor absents itself for any reason whatsoever on the date appointed for joint measurements, the measurements shall be taken by the Engineer-in-Charge or its representative in the absence of the Contractor and such measurements signed by the Engineer-in-Charge or its representative shall be final and binding upon the Contractor.

20.11.4 Measurements shall be signed and dated on each page by the Contractor or the Contractor's Representative and the Engineer-in-Charge or his representative. If the Contractor objects to any of the measurements recorded, including the mode of measurement, such objection shall be noted in the measurement book against the item objected to and such note shall be signed by the Contractor's Representative and the Engineer-in-Charge or its representative. In the absence of any noted objections, the Contractor shall be deemed to have accepted the relative measurements as entered in the measurement book and shall be barred from making or recording any objection in respect of the measurements recorded in the measurement book.

20.11.5 All measurement(s) relative to which any objection(s) have been noted in the measurement book shall be submitted to the Engineer-in-Charge for its decision and the decision of the Engineer-in-Charge shall be final and binding on the Contractor.

20.11.6 In case of discrepancy between measurement of work specified in the special conditions of contract , Standard Specification/ Job Specification, Schedule of Rates etc., precedence shall be given in following order:

- a) Measurement of works as specified in Special Conditions of Contract.
- b) Measurement of works as mentioned in Standard Specification/ Job Specification.

- c) Measurement of works in accordance with item description of relevant item mentioned in Schedule of Rates.

In case the clarity is not available through (a), (b) & (c) above, then it shall be as prescribed by the Bureau of Indian Standards (“BIS”) and if it does not so prescribed by BIS, then measurement of works shall be as decided by Engineer-in-Charge, which shall final and binding upon the Contractor.

20.11.7 Wherever the unit of items has been indicated as lumpsum, the payment shall be made on lumpsum basis on completion & no mode of measurement shall be applicable.

21 VARIATION

21.1 IIMN may at any time during the performance of the Works instruct the Contractor, by issuing a written notice, to carry out a Variation (“**Variation Order**”); and the Contractor must perform and be bound by a Variation. IIMN shall not propose a Variation which:

- (a) will have a material adverse effect upon the Contractor's ability to cause the Works to meet the Guaranteed Performance Levels upon completion of the Facility;
- (b) is not technically feasible, such feasibility being determined in accordance with Good Industry Practice.

21.2 The Contractor may propose to IIMN any Variation which the Contractor considers necessary or desirable to improve the quality, efficiency, reliability, operability, maintainability or safety of the Facility. IIMN may, in its absolute discretion, Approve or reject any Variation proposed by the Contractor. Any Approval must be notified to the Contractor.

21.3 Notwithstanding anything contained in Clauses 21.1 and 21.2, a Variation made necessary due to any act, omission or default of the Contractor in the performance of its obligations under the Contract will not result in any payment to the Contractor or an increase in the Contract Price.

21.4 No Variation shall invalidate the Contract. The Contractor agrees that a Variation may involve the omission of any part or parts of the Works and the Contractor agrees that IIMN may engage others to perform that part or parts of the Works which have been omitted. The Contractor further acknowledges that any omission or omissions will not constitute a basis to allege that IIMN has repudiated the Contract no matter the extent or timing of the omission or omissions.

21.5 Within 15 (fifteen) days of receipt of the direction referred to in Clause 21.1, the Contractor must prepare and submit to the Engineer-in-Charge a statement setting out:

- (a) detailed particulars of the Variation;
- (b) the work required or no longer required;
- (c) an estimate of the increase or decrease in the Contract Price;
- (d) any requisite adjustment to Works Completion Schedule; and
- (e) any proposed modifications to the Contract and/or any effect such Variation would have on the Works and/or on any other provisions of the Contract.

- 21.6** IIMN may accept the offer given under Clause 21.5 or request the Contractor to submit revised estimates. If IIMN accepts any offer it shall issue an instruction identifying the offer that is being accepted and requesting the Contractor to proceed with the Variation.
- 21.7** If agreement of an estimate is not reached under Clause 21.6, IIMN may issue an instruction to the Contractor to proceed with the Variation and:
- (a) the Variation will be valued under Clause 21.8(b);
 - (b) the Contractor's right to an extension of the Time for Completion will be determined under Clause 14.
- 21.8** The valuation of the Variation shall be calculated as follows:
- (a) by agreement by making reference to the cost of similar or analogous work being executed by the Contractor under the Contract; or
 - (b) failing agreement under Clause 21.8(a), the Engineer-in-Charge will determine the valuation.

Clause 32 shall apply to this Clause 21.8.

- 21.9** If a Variation results in a reduction of the time required to complete the Works, the Engineer-in-Charge may determine a reasonable reduction and notify the Contractor of the revised Time for Completion and other dates as set out in the Works Completion Schedule.

21.10 Quantity of Works

21.10.1 The quantities set out in the Price Schedule are estimated quantities for the execution of the Works and such quantities shall not be taken as the actual and correct quantities required for the execution of the Works. The Contractor shall be paid only for the actual quantities of Works executed by it on the basis of the rates set out in the Price Schedule and in accordance with the Payment Schedule and other relevant provisions of the Contract.¹

21.10.2 Notwithstanding anything to the contrary in Clause 21 and this Clause 21.10, variations in the quantities of the items set out in the Price Schedule shall be paid for by IIMN in the following manner:²

- (a) There shall be no variation in the rates of the items specified in the Price Schedule as a result of any increase in the total Contract Price up to 25% (twenty-five percent);
- (b) If the increase in the total Contract Price is likely to be more than the limit specified in Clause 21.10.2 (a) above, the rates for the additional quantities shall be mutually agreed between IIMN and the Contractor, duly accounting for savings, if any, that may be available to the Contractor in case of increased quantities.

21.10.3 The Contractor shall be bound to notify the Engineer-in-Charge at least 15 (fifteen) Working Days before the necessity arises for the variation in the quantities of item(s) set out in the Price Schedule,

in excess of the limits of variation specified above. If the Engineer-in-Charge and the Contractor are unable to agree on the revised rates on account of variation in quantities of item(s) in excess of the limits mentioned above, the revised rates of such varied quantities of item(s) shall be determined in accordance with Clause 32, pending which the Contractor shall be bound to perform the Works in relation to such varied quantities in accordance with the Contract.

21.10.4 There shall be no variation in the rates of the items specified in the Price Schedule, unless specifically, mentioned elsewhere in the Bidding Document as a result of any decrease in the total Contract Price and the Contractor shall not be entitled for any compensation in this regard.

21.10.5 Except as provided in Clause 21.10.2 above, the quantities of the Works stated in the Price Schedule are indicative and as such (in case of item rate tender) do not form part of the Contract and IIMN shall neither be liable for any increase or decrease in the actual quantities of the Works performed, nor shall such increase or decrease in the actual quantities of the Works performed form the basis of any alteration of the rates quoted in the Price Schedule or for any claim for additional compensation, damages or loss of profits. Notwithstanding the quantities mentioned in the Price Schedule and the Contract Price mentioned in the Letter of Award, the Contractor shall only be entitled to payment in respect of actual quantities of the Works performed by it.

¹ This Clause is not applicable if the Contract is a lump-sum price contract

² This Clause is not applicable if the Contract is a lump-sum price contract

21.10.6 The quantities of the Works and the gross value of the Works actually performed by the Contractor as valued on finalization of all dues to the Contractor is the sole liability of IIMN towards the Contractor and the Contractor shall not be entitled to any compensation in addition to such amounts.

22 CHANGE IN LAW

22.1 In the event that the Contractor reasonably considers that there is a Change in law as a result of which the Contractor suffers an increase in Cost or reduction in net financial burden payable with respect to execution of the Works, the Contractor shall give notice to the Engineer-in-Charge as soon as is reasonably practicable with:

- (a) details of the Change in Law;
- (b) any other information which the Engineer-in-Charge reasonably requires (including the Contractor's estimate of any increase or decrease in the Contract Price incurred by it as a consequence of a Change of Law, any Variation for making the Works compliant with the Change in Law and/or changes to the Works Programme that will be incurred in complying with that Change of Law).

22.2 If the Change of Law requires a Variation or the Contractor is beneficially affected by a Change of Law, the Engineer-in-Charge must within 14 (fourteen) Working Days of receiving the Contractor's notification under Clause 22.1 provide a direction to either:

- (a) proceed with the Variation as proposed by the Contractor or as deemed appropriate by IIMN; or
- (b) vary the Works on a different basis as directed by IIMN; or

- (c) not proceed with the Works in which event the Contractor will be relieved of its obligations to comply with the subject of the Change in Law.

22.3 If the Engineer-in-Charge provides a direction under Clauses 22.2(a) and 22.2(b), such direction will be treated as a Variation to which the provisions of Clause 21 will apply.

22.4 To the extent that a Change of Law causes the Contractor to incur more Cost or less Cost than it would otherwise have incurred, the difference shall be compensated by IIMN or the benefit of lower Costs shall be passed on to IIMN by the Contractor, as the case maybe. The Contractor shall produce sufficient proof and estimate of increase in Costs for IIMN's consideration.

23 SUSPENSION

23.1 The Engineer-in-Charge may at any time by issuing a written order (“**Suspension Order**”) to the Contractor (with a copy to IIMN) suspend the execution of part or all of the Works including:
(d) delivery of Contractor's Equipment which is ready for delivery to the Site; or (b) the erection of the Plant or part thereof which has been delivered to the Site; or (c) testing and commissioning of the Works.

23.2 The Suspension Order may be issued by the Engineer-in-Charge under the following circumstances:

- (a) Due to Contractor's default under the following circumstances:
- (i) any act, default, omission or breach by the Contractor or for some default or breach by the Contractor reasonably anticipated by the Engineer-in-Charge; or
 - (ii) for the proper execution of the Works; or
 - (iii) existence of any emergency on the Site or at any place where the Works (or any part thereof) are being executed leading to unsafe conditions; or
 - (iv) as a consequence of any action by a statutory authority; or
 - (v) failure to furnish Contract Performance Bank Guarantee or Mobilization Advance Guarantee or renewal of such guarantees.

(b) For any other reason which the Engineer-in-Charge thinks reasonable.

23.3 Upon issuance of any Suspension Order under Clause 23.1, the Contractor shall protect, store and secure such part or whole of the Works or any Plant or Contractor's Equipment to which the Suspension Order relates to, against any deterioration, loss or damage and shall not remove any goods or equipment (including any Goods and Materials and Plant) from the Site without the prior written consent of the Engineer-in-Charge, during the entire suspension period. The Contractor shall take all steps to minimize cost and losses to IIMN due to suspension and shall meet the Engineer-in-Charge on a regular basis.

23.4 On issuance of the Suspension Order due to events specified in Clause 23.2(a), the Contractor shall

within 10 (ten) days undertake all necessary steps (including such steps as instructed by the Engineer-in-Charge) to remedy the circumstances leading to Suspension Order and immediately inform the Engineer-in-Charge on completion of such actions. Within 7 (seven) Working Days of receipt of such intimation from the Contractor, if the Engineer-in-Charge is satisfied that his instructions above have been fulfilled and complied with, issue a letter instructing the Contractor to resume the Works or such part of the Works that are subject of a Suspension Order. If the Engineer-in-Charge is of the view that such instructions have not been complied, the Engineer-in-Charge shall identify by means of further written notice the additional action required to be taken by the Contractor before any instruction to resume can be given.

23.5 The Engineer-in-Charge may at any time instruct the Contractor to resume the Works or such part of the Works that are subject of a Suspension Order, in which case the Contractor shall do so as soon as is reasonably practicable and in any event within 5 (five) days of receiving such instructions. The Contractor shall, after notice to the Engineer-in-Charge, and together with the Engineer-in-Charge, examine the Works, Plant, Goods and Materials affected by the Suspension Order. The Contractor shall make good any deterioration or Defect in or loss of/ to the Works, Plant, Goods and Materials, which has occurred during the suspension.

23.6 The Contractor shall under no circumstances be entitled to any extension of the Time for Completion or claim for any monetary compensation where Suspension Order has been issued by the Engineer-in-Charge under Clause 23.2(a).

23.7 Notwithstanding anything contained in the Contract, the Contractor shall not be entitled to any Costs for preserving the Works during the period of suspension caused due to any Force Majeure event.

24 FORCE MAJEURE

24.1 Neither Party is responsible for any failure to perform its obligations under the Contract, if it is prevented or delayed in performing those obligations by an event of Force Majeure.

24.2 An event of Force Majeure is an event or circumstance which is beyond the control and without the fault or negligence of the party affected (“**Affected Party**”) and which by the exercise of reasonable diligence the Affected Party was unable to prevent and which is not caused or contributed by the Affected Party, provided that event or circumstance is limited to the following:

- (c) act of terrorism;
- (d) riot, war, invasion, act of foreign enemies, hostilities (whether war be declared or not), civil war, rebellion, revolution, insurrection of military or usurped power;
- (e) ionizing radiation or contamination, radio activity from any nuclear fuel or from any nuclear waste from the combustion of nuclear fuel, radioactive toxic explosive or other hazardous properties of any explosive assembly or nuclear component;
- (f) epidemics, earthquakes, flood, fire, hurricanes, typhoons or other physical natural disaster, but excluding weather conditions regardless of severity; and
- (g) freight embargoes, strikes at national or state-wide level or industrial disputes at a national or state-wide level in any country where Works are performed, and which affect an essential portion of the Works but excluding any industrial dispute which is specific to the performance of the Works or the Contract.

For the avoidance of doubt, inclement weather, third party breach, delay in supply of materials (other than due to a nationwide transporters' strike) or commercial hardship shall not constitute a Force Majeure event.

- 24.3** Where there is an event of Force Majeure, the Affected Party must notify the other Party in writing as soon as possible and in any event within [10(ten)] days of becoming aware of or the date it ought to have become aware of the occurrence of an event of Force Majeure giving full particulars of the event of Force Majeure and the reasons for the event of Force Majeure preventing the Affected Party from, or delaying the Affected Party in performing its obligations under the Contract. The Affected Party must use its reasonable efforts to mitigate the effect of the event of Force Majeure upon its performance of its obligations under the Contract and notify the other party of the measures being taken to mitigate the effect(s) of the event of Force Majeure.
- 24.4** Upon completion of the event of Force Majeure the Affected Party must as soon as reasonably practicable recommend the performance of its obligations under the Contract. Where the Affected Party is the Contractor, the Contractor must provide an amended Works Programme rescheduling the Works to minimize the effects of the prevention or delay caused by the event of Force Majeure.
- 24.5** An event of Force Majeure does not relieve a party from liability for an obligation which arose before the occurrence of that event, nor does that event affect the obligation to pay money in a timely manner which matured prior to the occurrence of that event.
- 24.6** The Contractor has no entitlement and IIMN has no liability for:
- (h) any costs, losses, expenses, damages or the payment of any part of the Contract Price during an event of Force Majeure; and
 - (i) any delay costs in any way incurred by the Contractor due to an event of Force Majeure.
- 24.7** If an event of Force Majeure occurs and its effect continues for a period of 180 (one hundred eighty) days or more in a continuous period of 365 (three hundred sixty five) days after notice has been given under this Clause 24, either Party may terminate the Contract by issuing a written notice of 30 (thirty) days to the other Party.
- 24.8** In the event that the Parties are unable to agree in good faith about the existence or occurrence of a Force Majeure event, such dispute shall be finally settled in accordance with the dispute resolution mechanism provided herein; provided however that the burden of proof as to the occurrence or existence of such Force Majeure event shall be upon the Party claiming relief on account of such Force Majeure event.

25 INTELLECTUAL PROPERTY

- 25.1** The Contractor (with full title guarantee) hereby grants to IIMN a royalty-free, irrevocable, non-exclusive licence to use, modify and reproduce the Contractor's Documents and any Intellectual Property contained in the Facility, the Works and the Contractor's Documents for any purpose whatsoever connected with the Facility; and the licence hereby granted shall carry the right to grant

sub-licences and shall be transferable to third parties. This licence does not include a licence to reproduce the Intellectual Property contained in the Works and the Contractor's Documents for any other project undertaken by IIMN or any third person.

- 25.2** IIMN shall grant or shall grant to the Contractor a royalty-free, exclusive licence to use the Background Information and any Intellectual Property contained in the Background Information for the sole purpose of the performance of the Contractor's obligations under this Contract. The Contractor shall have no right to create any copies of, reproduce or to disclose the Background Information to any third Persons without the prior written consent of IIMN, except in favour of the Contractor's Personnel and its Subcontractors (provided that the Contractor's Personnel and its Subcontractors shall be bound by the terms of the license granted under this Clause 25.2).
- 25.3** The Contractor warrants and represents that:
- (j) it has all rights and licences necessary to grant, assign and transfer to IIMN licences to the Contractor's Documents and any Intellectual Property contained in the Works and the Contractor's Documents in accordance with this Contract;
 - (k) it has no title or ownership to the Background Information and shall make no claim against or create any encumbrance over the Background Information or any Intellectual Property therein;
 - (l) no infringement of any Intellectual Property of any kind of any third Person will result from the performance of this Contract; and
 - (m) it has paid all royalty on any and all Intellectual Property licensed by it
- 25.4** The Contractor acknowledges that the Contractor is the author of the Contractor's Documents referred to in Clause 25.1 and the Contractor waives any moral rights which the Contractor might otherwise possess and the Contractor shall obtain a waiver of all rights that any of its employees, agents or Subcontractors may have pursuant to Applicable Laws in relation to the Contractor's Documents.
- 25.5** The Contractor shall, if so requested by IIMN, at any time, execute such documents and perform such acts as may be required fully and effectively to assure to IIMN the rights referred to in this Clause 25.
- 25.6** If, consequent to an infringement of Intellectual Property, the Contractor is prevented from performing the Works, or IIMN is prevented from using the Works or the Contractor's Documents, the Contractor shall at its own expense and at its option:
- (n) procure for IIMN the right to continue using the Works and the Contractor's Documents or any portion thereof;
 - (o) re-perform the Works or part thereof, or replace the Contractor's Documents or part thereof with a non-infringing plant and equipment or part thereof; or
 - (p) modify the Contractor's Documents or part thereof so it becomes non-infringing.
- 25.7** The Contractor shall indemnify IIMN, the Engineer-in-Charge and their officers, employees, agents from and against all claims, liability, loss, damage costs and expenses (including but not limited to

legal costs) arising out of any claim that any Intellectual Property contained in the Works or the Contractor's Documents or any use of such Intellectual Property by or on behalf of IIMN infringes the Intellectual Property of a third party.

- 25.8** The Contractor shall pay all royalties and license fees, if any, for materials, apparatus, methods, processes, systems, software or other Intellectual Property rights purchased or used by Contractor or any Subcontractor for execution of the Works. The Contractor represents and warrants that except for amounts included in the Contract Price, no royalties or other payments are due or payable by IIMN or any other Person in respect of the Intellectual Property used by the Contractor or any Subcontractor in relation to the Works.

26 REPRESENTATIONS AND WARRANTIES

26.1 General Representations and Warranties

The Contractor makes the following representations and warranties to IIMN each of which is true and correct during the term of the Contract:

- (a) it has been incorporated as a company under the laws of India and is validly existing under those laws;
- (b) it has power to enter into the Contract and comply with its obligations under it;
- (c) the Contract and the transactions under it do not contravene its constituent documents or any Applicable Law or obligation by which it is bound or to which any of its assets are subject or cause a limitation of powers or the powers or its directors to be exceeded;
- (d) it has in full force and effect the authorizations necessary for it to enter into the Contract and the transactions under it;
- (e) its obligations under the Contract are valid and binding and are enforceable against it in accordance with the terms of the Contract;
- (f) it is not in breach of any Applicable Law or obligation affecting it or its assets in a way which may result in a material adverse effect on the business or financial condition of the Contractor;
- (g) there is no pending or threatened proceeding affecting the Contractor or any of its assets that would affect the validity or enforceability of the Contract, the ability of the Contractor to fulfil its commitments under the Contract in any material respect, or that could result in any material adverse change in the business or financial condition of the Contractor;
- (h) there are no reasonable grounds to suspect that it is unable to pay its debts as and when they become due and payable;

- (i) it has the necessary skills and experience to perform the Works in accordance with the Contract;
- (j) it owns or has the right to use or provide to IIMN all Intellectual Property necessary to perform its obligations under the Contract; and
- (k) it will perform its obligations under the Contract and conduct its business with a high level of integrity which is reasonably expected of an international contractor of similar size and profile, conducting a similar line of business, and will not engage in any corrupt or fraudulent practices.

26.2 Warranties related to Works

Without prejudice to any other warranties expressed elsewhere in the Contract, and despite any inclusion of IIMN's documents in the Contract (including in the Specifications) or any Approval given or withheld by IIMN under the Contract, the Contractor warrants:

- (l) the Works will be performed with all the skill and care to be expected of appropriately qualified and experienced contractors with experience in performing works and services of a similar size, type, nature and complexity to the Works and in accordance with Good Industry Practice;
- (m) the Works will be performed in accordance with, all the requirements in the Contract and the Specifications, by properly qualified and accredited personnel, for the Contract Price and by the Time for Completion;
- (n) the Works will be performed with the highest regard for safety and protection of the environment and so that the Facility is capable of being operated and utilised in accordance with all Applicable Laws and the Contract;
- (o) the Works will be fit for their intended purpose as described in, or reasonably inferable from, the Contract;
- (p) the Works utilise proven technology, being a technology that has operated commercially at other coal fired power stations of similar net output capacity and which, as of the date of the Contract, is capable of being insured on a reasonable commercial basis; and
- (q) the Works will comply with all Applicable Laws.

27 INDEMNITY

- 27.1** The Contractor shall indemnify and hold harmless IIMN, the Engineer-in-Charge, their advisors, representatives and employees from and against all actions, suits, proceedings, claims, damages, losses, expenses and demands of every nature and description, by reasons of any breach of the provisions of the Contract by the Contractor or any act or omissions of the Contractor, its representative or its employees, agents, and sub-contractors in the execution of the Works, including

any professional services provided by the Contractor.

- 27.2** These indemnification obligations shall include but not be limited to claims, damages, losses, damage proceedings, charges and expenses which are attributable to:
- (a) Sickness, disease or death of, or injury to any person;
 - (b) Loss of, or damage to, or destruction of any property;
 - (c) Loss, damage or costs arising from the carriage of Goods and Materials and/or ownership or chartering of marine vessels by the Contractor, or Subcontractor of any tier.

The Contractor shall also indemnify and hold harmless IIMN from and against all claims and proceedings on account of infringements of patents rights, design, trademark, etc., as detailed out in Clause 25.

- 27.3** All sums payable by way of compensation under these conditions shall be considered reasonable compensation payable to IIMN with reference to the actual loss or damage sustained by IIMN. The decision of the Engineer-in-Charge as to compensation claimed shall be final and binding.
- 27.4** Notwithstanding anything in the Contract to the contrary, no liabilities owed by the Contractor to IIMN that is covered by insurance obtained by the Contractor or IIMN pursuant to Clause 30 is included in the Contractor's aggregate liability for the purpose of determining the limit of the Contractor's liability under the Contract.
- 27.5** Neither Party shall be liable to the other Party for any kind of indirect or consequential loss or damage including, loss of use, loss of profit, loss of production or business interruption which is connected with any claim arising under the Contract.
- 27.6** Contractor's Care of the Works

The Contractor shall take full risk and responsibility for the care of the Works, or any part thereof, including full risk and responsibility for the care of the Works being constructed/ installed, or stored off-Site for inclusion in the Works, until the date of issue of the Completion Certificate, when risk and responsibility shall pass to IIMN.

28 LIMITATION OF LIABILITY

- 28.1** The aggregate total liability of the Contractor to IIMN under the Contract shall not exceed the total Contract Price, except that this Clause 31 shall not limit the liability of the Contractor for following:
- (a) In the event of breach of any Applicable Law;
 - (b) In the event of fraud, willful misconduct or illegal or unlawful acts, or gross negligence of the Contractor or any person acting on behalf of the Contractor; or
 - (c) In the event of acts or omissions of the Contractor which are contrary to the most

elementary rules of diligence which a conscientious Contractor would have followed in similar circumstances; or

- (d) In the event of any claim or loss or damage arising out of infringement of Intellectual Property; or
- (e) For any damage to any third party, including death or injury of any third party caused by the Contractor or any person or firm acting on behalf of the Contractor in executing the Works.

28.2 Neither Party shall be liable to the other Party for any kind of indirect or consequential loss or damage including, loss of use, loss of profit, loss of production or business interruption which is connected with any claim arising under the Contract.

29 TERMINATION

29.1 Termination for Convenience

IIMN shall, in addition to any other right enabling it to terminate the Contract, have the right to terminate the Contract at any time by giving prior written notice of at least 14 (fourteen) days to the Contractor. Such termination shall be without prejudice to the rights of the Parties that have accrued on or before the date of termination of the Contract.

29.2 Termination Due to Contractor's Default

The Contract may be terminated by IIMN, at its sole and absolute discretion, upon the occurrence of any of the following events/acts committed by the Contractor (each a “**Contractor's Event of Default**”) by issuing a notice to the Contractor, stating the intention of IIMN to terminate the Contract:

- (a) fails to complete Mobilization within the Time for Mobilization under Clause 9.3;
- (b) commits a material breach of its obligations under the Contract;
- (c) abandons or repudiates the Contract or suspends the execution of the Works during the subsistence of any Dispute under the Contract;
- (d) fails to adhere to the Specifications and/or Variations in terms of the Contract;
- (e) the Contract Price is reduced to the maximum extent specified in Clause 13.2, yet the delay in respect of which the reduction was made continues to subsist;
- (f) a petition for the winding up of the Contractor has been admitted and a liquidator or provisional liquidator has been appointed or an order of bankruptcy or an order for the winding up or dissolution of the Contractor has been made by a Court of competent jurisdiction, except voluntary change in partnership/ constitution of Contractor's

organization (if a partnership/ Company) or liquidation for the purpose of amalgamation or reconstruction subject to IIMN's acceptance to continue the Contract with the re-constituted firm/ company.

- (g) Contractor fails to replace or remedy Defective Work pursuant to Clause 9.1.18;
- (h) Contractor's liability for compensation under Clause 17 reaches 10 % (ten percent) of the Contract Price and the Defect for which the compensation are/were charged continues to exist;
- (i) gives any warranty or makes any representation under the Contract which is found to be false or misleading;
- (j) fails to furnish or renew the Contract Performance Bank Guarantee;
- (k) fails to obtain and maintain insurance in accordance with its obligations under the Contract; or
- (l) commits any default under any Applicable Law.

29.3 If the Contractor fails to remedy or rectify the default stated in the notice issued by IIMN under Clause 29.2 within 30 (thirty) days of receipt of such notice, IIMN shall be entitled to terminate the Contract by issuing a termination notice and expel the Contractor from the Site (but without thereby releasing the Contractor from any of its obligations or liabilities under the Contract, or affecting the rights and powers conferred on IIMN under the Contract up to the date of termination). However, in case of events specified in Clause 29.2 (c) and (f), IIMN shall be entitled to immediately terminate the Contract without giving any notice to the Contractor.

29.4 Procedure on Termination

29.4.1 Upon termination of the Contract under Clause 29.3:

- (a) IIMN may complete the Works and/or arrange for other entities to do so at the risk and Cost of the Contractor. IIMN and its entities may then use the access roads, the Contractor's Documents and all other facilities made by or on behalf of the Contractor;
- (b) Call upon the whole or such portion of the Contract Performance Bank Guarantee amount as IIMN may consider fit;
- (c) Recover from the Contractor the cost of carrying out the balance Works in excess of the sum which the Contractor would have been paid according to the Final Bill, if the Works had been carried out and completed by the Contractor under the terms of the Contract. The amount to be recovered may be deducted by IIMN from any amount due to the Contractor under the Contract. Any amount outstanding to IIMN under this Clause 29.4.1(c) shall be recovered from the Contractor as a debt due;
- (d) Enter upon the Site and expel the Contractor. IIMN may, to the exclusion of any right of

the Contractor, take over and use, without payment to the Contractor, any Contractor's Equipment, materials, goods, machinery or other items which are on the Site in connection with the Works for any reasonable period as IIMN considers necessary for the performance and completion of the Works.

29.4.2 Upon termination of the Contract under Clause 29.3, the Contractor must either immediately or upon any date as is specified in the notice of termination:

- (a) cease all further work, except for any work IIMN may specify in the notice of termination;
- (b) terminate all Subcontracts, except those to be assigned or novated to IIMN in accordance with paragraph (d) below;
- (c) deliver to IIMN the parts of the Works performed by the Contractor up to the date of termination;
- (d) to the extent legally possible assign or novate to IIMN all right, title and benefit of the Contractor to the Works as at the date of termination, and, as may be required by IIMN, in any subcontracts between the Contractor and its Subcontractors;
- (e) subject to Clause 29.4.1(d), remove all Contractor's Equipment, surplus materials (as per Clause 9.12.2 (b), scaffolding from the Site, dismantle and remove its Site offices and quarters and other Temporary Works and structures and repatriate the Contractor's Personnel from the Site, remove from the Site any wreckage, rubbish and debris of any kind, and leave the whole of the Site in a clean and safe condition; and
- (f) deliver to IIMN all documents prepared by the Contractor in connection with the Works as at the date of termination.

Should the Contractor fail to comply with the provisions of sub-Clause (e) above, IIMN shall have the right, at the sole risk and Cost of the Contractor, to clear the Site of all rubbish, scaffolding, surplus materials, Contractor's Equipment, machinery, dismantle and remove the Contractor's Site offices and other Temporary Works and store, sell, dispose of and/or otherwise deal with any of the above and the Contractor shall forthwith on demand pay IIMN the costs and expense incurred by IIMN in this regard with an additional amount equivalent to 15% (fifteen percent) of such costs and expenses to cover IIMN's overheads. IIMN shall have the right to recover such amounts from: (i) the proceeds of any sale or disposal of the Contractor's Equipment, machinery, surplus materials, Temporary Works or other items removed from the Site; and (ii) any amounts due to the Contractor under the Contract.

Nothing contained in this Clause or otherwise in the Contract shall constitute IIMN as a trustee or bailee for or in respect of any of the Contractor's Equipment, surplus materials, machinery or other items or things removed, cleared, demolished or dismantled as mentioned above and IIMN shall not be bound by any duty of care in respect thereof.

29.4.3 Notwithstanding anything contained in Clause 29.4.2 above, upon termination of the Contract,

IIMN may require the Contractor to:

- (a) complete or take to an intermediary stage of completion any item of the Works already commenced by the Contractor; and
- (b) take such steps as are considered necessary by the Engineer-in-Charge for properly protecting and securing the Works already completed by the Contractor.

29.5 Payment on Termination

29.5.1 If the Contract is terminated under Clause 24.7 or 29.1, the Contractor is entitled to be paid:

- (a) the Contract Price attributable to the Works performed as at the date of termination, or in the case of a termination under Clause 24.7, the commencement of the relevant event of Force Majeure; and
- (b) the costs, if any, necessarily incurred in performing the work (if any) specified in the notice of termination issued by IIMN under Clause 28 or as instructed by IIMN pursuant to Clause 29.4.3; and
- (c) if the Contract is terminated in accordance with Clause 28, additionally (but without duplication):
 - (i) the costs reasonably incurred by the Contractor in terminating any subcontracts as a result of the termination of the Contract; and
 - (ii) the costs reasonably incurred by the Contractor in the repatriation of the Contractor's and the Subcontractor's employees,

less the aggregate of all previous payments allocated to the Works. Any sums due to IIMN from the Contractor accruing prior to the date of termination or the commencement of the relevant event of Force Majeure (as the case may be) will be deducted from the amount to be paid to the Contractor under the Contract. If, as a result of any such deductions, there is a negative amount payable to the Contractor, then the Contractor must pay an amount equal to that negative sum to IIMN within 15 (fifteen) days of IIMN raising an invoice for that amount.

The Contractor agrees and acknowledges that payment of termination compensation in terms of this Clause 29.5.1 shall be the sole and exclusive liability of IIMN and the sole and exclusive remedy of Contractor, with respect to a termination of the Contract under Clause 29.1 or Clause 24.7.

29.5.2 If the Contract is terminated under Clause 29.3, IIMN will not be bound to make any further payment to the Contractor until the full and final cost of completion of the Works by IIMN or other contractors and all damage, loss or expense suffered or incurred by IIMN as a result of the

termination of the Contract have been ascertained.

- 29.5.3 Upon all cost, damages, loss and/or expense being ascertained under Clause 29.5.2, the Engineer-in-Charge must issue a certificate stating the total amount of the cost of completing the Works and any damage, loss or expense suffered or incurred by IIMN as a result of the termination of the Contract.
- 29.5.4 If the Contract Price attributable to the Works performed as at the date of termination less the aggregate of: (a) all previous payments allocated to the Works which have been paid to the Contractor; and (b) the amount stated in the certificate under Clause 29.5.3,
- (d) is a positive amount payable to the Contractor, then IIMN must pay such amount to the Contractor within 15(fifteen) Business Days of the issuance of the certificate pursuant to Clause 29.5.3; or
 - (e) is a negative amount payable to the Contractor, then an amount equal to that negative sum will be a debt due and payable to IIMN by the Contractor and the Contractor must pay such amount to IIMN within 15 (fifteen) days of IIMN raising an invoice for that amount.

30 INSURANCE

- 30.1 IIMN shall at its own Cost, take out and maintain in effect, or cause to be taken out and maintained in effect, during the execution of the Works, a comprehensive Erection All Risks Policy (“**IIMN's Insurance**”).
- 30.2 Without prejudice to Clause 30.1, the Contractor shall be required to take out and maintain at all times during the subsistence of this Contract, adequate insurance coverage in respect of:
- (a) any damages or compensation against claims, demands, proceeding, costs, charges and expenses, whatsoever in respect or in relation thereto, payable under Applicable Laws in respect or any consequence of any accident or injury to any Contractor's Personnel during or pursuant to their employment by the Contractor or by the Contractor's Subcontractors, save and except an accident or injury resulting from any act or fault of IIMN;
 - (b) all Contractor's Equipment brought on to the Site by the Contractor or its Subcontractors for use in connection with the Works, to the extent of their full value against all loss or damage from whatever cause arising; and
 - (c) third party liability for physical loss of or damage to any third party property or injury to or death of any third party which may arise out of or in connection with the execution of the Works at the Site by the Contractor or IIMN, (collectively “**Contractor's Insurance**”).
- 30.3 IIMN's Insurance and the Contractor's Insurance shall each be composite policies in the joint names of the Parties, for their respective rights and interests. The terms of IIMN's Insurance and the Contractor's Insurance shall entitle the respective Parties to maintain the policies in force after

termination of the Contract.

- 30.4** Either Party shall, at the request of the other Party, produce within 7 (seven) days of request, such evidence as the other may reasonably require and as is obtainable from insurers that IIMN's Insurance or the Contractor's Insurance (as relevant) have been effected, which evidence may include sight of the insurance policies and confirmation of the payment of all premiums to keep the policies in force.

If either Party fails upon request to produce to the other satisfactory evidence in accordance with this Clause 30.4 that there is in force any of IIMN's Insurance or the Contractor's Insurance (as relevant), the other Party may effect and keep in force any such insurance and the Party failing to evidence insurance shall pay to the other all reasonable costs incurred by the other for such purpose.

- 30.5** Each Party shall ensure that it and its personnel, Subcontractors, servants and agents at all times:

- (d) Comply with the terms and conditions of IIMN's Insurance or the Contractor's Insurance, as relevant;
- (e) Comply with the procedures for claims notification and administration there under; and
- (f) Do nothing nor omit to do anything which might entitle any insurer to refuse to pay any claim under, or which might otherwise prejudice any of IIMN's Insurance or the Contractor's Insurance.

- 30.6** IIMN's Insurance as well as the Contractor's Insurance, shall wherever possible, provide for 30 (thirty) days written notice of any cancellation, non-renewal or material modification of any such policy to be given by the insurers to the insured persons. Further, IIMN's Insurance and the Contractor's Insurance shall contain a clause to the effect that the insurers have agreed to waive all rights of subrogation against the persons assured (including all beneficiaries thereof).

- 30.7** Regardless of the extent of settlement of claims for insurance proceeds under IIMN's Insurance or under the Contractor's Insurance or the time taken for settlement of such claims, the Contractor shall promptly make good any loss or damage for which it is responsible under the terms of this Contract. The Contractor shall be reimbursed to the extent that any insurance proceeds are received and payable to the Contractor.

31 GOVERNING LAW AND JURISDICTION

- 31.1** The Contract shall be governed by and construed in accordance with the laws of India and the courts at Nagpur shall have exclusive jurisdiction over all Disputes arising under or in connection with the Contract.

32 CLAIMS AND DISPUTE RESOLUTION

32.1 Claims

- 32.1.1 If the Contractor intends to claim any additional payment on the occurrence of any event which entitles the Contractor to claim such additional payment, the Contractor shall give notice to the Engineer-in-Charge as soon as possible and in any event within 10 (ten) days of the Contractor becoming aware of such event.
- 32.1.2 The Contractor shall keep such contemporary records as may be necessary to substantiate any claim. Without admitting IIMN's liability, the Engineer-in-Charge may on receipt of a notice pursuant to Clause 32.1.1 above, inspect such records and may instruct the Contractor to produce and maintain further records. The Contractor shall permit the Engineer-in-Charge to inspect all such records and shall (if instructed) submit copies to the Engineer-in-Charge.
- 32.1.3 Within 30 (thirty) days of issuing a notice pursuant to Clause 32.1.1, the Contractor shall send to the Engineer-in-Charge an account, giving detailed particulars of the amount and basis of the claim.
- 32.1.4 If the Contractor fails to comply with this Clause 32, the Contractor shall not be entitled to claim any additional payment.
- 32.1.5 Notwithstanding anything to the contrary in this Contract, IIMN shall not be liable for any claim arising out of or in connection with the Contract or the execution of the Works, unless the Contractor shall have given notice of such claim within 60 (sixty) days from the date of issuance of the Completion Certificate.
- 32.1.6 The Contractor shall be entitled to additional costs as the Engineer-in-Charge considers due, after taking Approval from IIMN. If the particulars supplied are insufficient to substantiate the whole of the claim, the Contractor shall be entitled to payment for such part of the claim as has been substantiated by the Engineer-in-Charge and agreed to by IIMN.

32.2 Dispute Resolution

- 32.2.1 If any disagreement arises out of or in connection with the validity, application or interpretation of the Contract (the "**Dispute**"), the Parties shall endeavour in good faith to resolve the Dispute through negotiation within 7 (seven) days of a written notice setting out the nature of such Dispute.
- 32.2.2 In the event that any Dispute is unable to be resolved between the Parties pursuant to Clause 32.2.1 within 21 (twenty-one) days of receipt of the notice under Clause 32.2.1, then such Dispute shall be referred to arbitration.
- 32.2.3 The arbitration will be conducted as per the Arbitration Act. The arbitral tribunal shall comprise of a sole arbitrator whom shall be appointed by IIMN. The place of arbitration for any Disputes and Related Disputes shall be Nagpur (save and except where otherwise specified under the Main Contract for the Related Dispute, in which event the place of arbitration shall be the place of arbitration for such Related Dispute). The language to be used in the arbitral proceedings shall be English. The arbitral award shall be final and binding upon both the Parties.
- 32.2.4 Responsibility of payment for all costs of arbitration, excepting counsel fees, shall be as per the arbitration award.
- 32.2.5 While any Dispute under this Contract is pending; and except where this Contract has been terminated in accordance with the terms of this Contract, the Parties shall continue to perform all

of their respective obligations under this Contract without prejudice to the final determination in accordance with the provisions under this Clause 32.

32.2.6 Where, in IIMN's absolute discretion, it is beneficial for the completion of the Facility for any Dispute between IIMN and the Contractor, in respect of which an arbitration notice has been given, to be resolved in the same arbitration proceedings as a dispute between IIMN and any other party or parties engaged in relation to the completion of the Facility (the “**Related Dispute**”) then:

- (a) if a notice to concur in the appointment of an arbitrator has been served in the Related Dispute, the Contractor hereby agrees that, at IIMN's sole option, the Dispute between IIMN and the Contractor shall be referred to the arbitrator appointed or to be appointed in respect of the Related Dispute and be determined at the same time as such Related Dispute;
- (b) where an arbitrator has already been appointed in connection with the Related Dispute, the Contractor hereby agrees that, at IIMN's sole option, the Dispute between IIMN and the Contractor shall be referred to and be determined by the arbitrator so appointed contemporaneously with the Related Dispute.

32.3 Settlement of dispute between Govt. Dept./ Public Sector Undertaking

32.3.1 If the Contractor is a PSU or Enterprise or is a Govt. Department, any disputes or differences between the Contractor and IIMN hereto arising out of any notified claim of the Contractor in terms hereof and/or arising out of any amount claimed by IIMN (whether or not the amount claimed by IIMN or any part thereof shall have been deducted from the final bill of the Contractor or any amount paid by IIMN to the Contractor in respect of the work), then in suppression of the provisions of clause no 32.2 of the General Conditions of Contract, the following provisions shall apply, namely; such disputes or differences shall be resolved amicably by mutual consultation or through the good offices or empowered agencies of the Government. If such resolution is not possible, then the unresolved disputes or differences shall be referred to arbitration of an arbitrator to be nominated by the Secretary, Department of legal affairs (Law Secretary) in terms of the Office Memorandum No. **DPE/4(10)/2001-PMA- GL-I dated 22nd January, 2004** issued by the Cabinet Secretariat (Department of Cabinet Affairs) as modified from time to time. The Arbitration Act shall not be applicable to the arbitrator under this clause. The award of the arbitrator shall be binding upon parties to the dispute, provided, however any party aggrieved by such award may make a further reference for setting aside or revision of the award to Law Secretary whose decision shall bind the parties finally and conclusively. The parties to the dispute will share equally the cost of arbitration as intimated by the arbitrator.

32.3.2 Notwithstanding the existence of any dispute or arbitration in terms hereof or otherwise, the Contractor shall continue and be bound to continue and perform the Works to completion in all respects according to the Contract (unless the Contract or Works be determined by IIMN) and the Contractor shall remain liable and bound in all respects under the Contract.

33 MISCELLANEOUS

33.1 Personal Acts and Liabilities

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- (a) No director, officer or other employee of IIMN shall in any manner be personally bound or liable to the Contractor for acts, commissions or obligations of IIMN under the Contract or otherwise or be personally answerable to the Contractor for any default or omission in the performance of any act(s), deed(s) or things to be observed and/or performed by IIMN under the Contract.
- (b) The Contractor shall not be entitled to any increase in the rate(s) mentioned in the Price Schedule or to any other payment by reason of any representation, explanation or assurance given or alleged to have been given by the Engineer-in-Charge or any employee, representative, consultant or agent of IIMN.
- (c) No director, officer or other employee of IIMN shall be personally liable to the Contractor for any representation, explanation, statement or assurance given or alleged to have been given by him to the Contractor in connection with the Contract.
- (d) The Contractor shall not, under any circumstances, pay or advance to any officer(s), servant(s) or agent(s) of IIMN any money on any account without the prior Approval of IIMN and any payment without such Approval shall be entirely at the risk of the Contractor and IIMN shall have no liability in this regard.
- (e) Any money paid to any director, attorney, agent, officer or employee of the Contractor and any receipt, settlement, acknowledgement of liability or other arrangement, agreement or document whatsoever signed by any such director, attorney, agent, officer or employee of the Contractor or erstwhile director, attorney, agent, officer or employee (without notice of his cessation of interest) or by any person held to be a director, attorney, agent, officer or employee of the Contractor authorized to act on behalf of the Contractor shall, as between the Contractor and IIMN, be binding upon the Contractor and shall constitute a full release and discharge to IIMN and/or a valid settlement, acknowledgement of obligation of the Contractor, as the case may be.

- (f) Any money paid to or dealing had with any partner or member of the Contractor (if a firm or consortium) and any receipt, settlement, acknowledgement of liability or other arrangement, agreement or document whatsoever signed by any one of the partners of the firm or members of the consortium or erstwhile partner of the firm or member of the consortium (without notice of the cessation of his interest) or with any person held to be a partner of the firm or member of the consortium shall be binding on the Contractor and shall constitute a full release and discharge to IIMN and/or a valid settlement, acknowledgement of obligation of the Contractor, as the case may be, provided that IIMN shall always have the right to call upon all or any of the partners/members of the Contractor's firm/consortium to sign any receipt, settlement, acknowledgement or other document and all or any of the partners of the firm or members of the consortium shall, when called upon to do so by IIMN, immediately sign the receipt, settlement, acknowledgement or other document required to be so signed.

33.2 Assignment

The Contractor shall not assign, novate or charge the whole or any part of the Contract or create any encumbrance over the Facility, without the prior written consent of IIMN. In the event of an assignment or novation by the Contractor, any stamp duty and all costs and expenses payable in respect of such documents, required to be signed by IIMN, shall be to the account of the Contractor. IIMN shall be entitled to assign and/or transfer its rights and obligations under the Contract to any party, without requirement of any further consent of the Contractor.

33.3 Partnership

Nothing contained or implied in Contract shall constitute or be deemed to constitute a partnership or agency between the Parties and none of the Parties shall have any authority to bind, commit or make any representations on behalf of the other Party.

33.4 Severability

If any provision of the Contract shall be determined to be invalid, illegal or unenforceable under Applicable Laws, all other provisions of the Contract shall continue in full force and effect unless such invalidity or unenforceability adversely affects the underlying intent of the Contract or unless the invalid or unenforceable provision comprises an integral part of, or is inseparable from the remainder of the Contract. In such circumstances the Parties shall negotiate in good faith with a view to agreeing upon one or more provisions which may be substituted for such invalid, illegal or unenforceable provisions, as nearly as is practicable. Provided failure to agree upon any such provisions shall not be subject to dispute resolution under this Contract or otherwise.

33.5 Entire Agreement

The Contract contains all covenants stipulations and provisions agreed by the Parties, and constitutes the entire Contract between the Parties hereto and supersedes any oral or written representations, understandings, proposals, or communications heretofore entered into by or on account of the Parties and may not be changed, modified, or amended except in writing and

signed by the Parties hereto.

33.6 Reservation of Rights

No forbearance, indulgence, relaxation or inaction by IIMN at any time to require performance of any of the provisions of the Contract shall in any way affect, diminish or prejudice the right of IIMN to require performance of that provision, and no delay in exercising or omission to exercise any right, power or remedy accruing to IIMN upon any default or otherwise under the Contract shall impair any such right, power or remedy or shall be construed to be a waiver thereof or any acquiescence in such default, nor shall the action or inaction of IIMN in respect of any default or any acquiescence by it in any default, affect or impair any right, power or remedy of IIMN in respect of any other default.

33.7 Abnormally High Rates (AHR items)

In item rate contract where the quoted rates for the items exceed 50% (fifty percent) of the IIMN's estimated rates, such items will be considered as Abnormally High Rates Items (AHR) and payment of AHR items beyond the contracted quantities shall be made at the lower of the following rates:

- (a) Rates as per the Schedule of Rates, quoted by the Contractor.
- (b) Rate of the item, derived as follows:
 - (i) Based on rates of machine and labour as available from the Contract (which includes Contractor's supervision, profit, overheads and other expenses).
 - (ii) In case rates are not available in the Contract, rates will be calculated based on prevailing market rates of machine/equipments, material and labour plus 15% (fifteen percent) to cover Contractor's supervision profit, overhead & other expenses

33.8 Corrupt and Fraudulent Practices

33.8.1 Bidders are required to furnish the complete and correct information/ documents required for evaluation of their bids. If the information/ documents forming basis of evaluation is found to be false/ fake/ forged, the same shall be considered adequate ground for rejection of the bids and forfeiture of earnest money deposit.

33.8.2 IIMN requires that the Contractor observes the highest standard of ethics during the execution of Contract. In pursuance of this policy, IIMN defines, for the purposes of this provision, the terms set forth below as follows:

- (a) "Corrupt Practice" means the offering, giving, receiving, or soliciting of anything of value to influence the action of public official in contract execution; and
- (b) "Fraudulent Practice" means a misrepresentation of facts in order to influence the execution of a Contract to the detriment of IIMN, and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive IIMN of the benefits of free and open competition.
- (c) "False/Fake" means to make or construct falsely. "Faked alibi" is a made, manufactured,

or false alibi. Something that is not what is purports to be; counterfeit, an imposter.

- (d) “Forgery” means the false making or the material altering of a document with the intent to defraud. A signature of a person that is made without the person’s consent and without the person otherwise authorizing it. A person is guilty of forgery if, with the purpose to defraud or injure anyone or with knowledge that he is facilitating a fraud or injury to be perpetrated by anyone, the actor (i) alters any writing of another without his authority (ii) makes, completes, authenticates, executes, issues or transfers any writing, so that it purports to be the act of another who did not authorize that act or to have been executed at a time or place or in a numbered sequence other than was in fact the case, or to, be a copy of an original when no such original exists. Utters any writing which he knows to be false in a manner specified in (i) & (ii) above.

33.8.3 IIMN may terminate the Contract if it discovers subsequently that the Contractor had engaged in Corrupt Practices, or Fraudulent Practices in competing for the Contract.

33.8.4 The Contractor is required to execute the “Integrity Pact” attached in the Bid Document as a condition precedent to execution of the Contract.

33.8.5 In case, the information/ document furnished by the Contractor forming basis of evaluation of its Bid is found to be false / fake/ forged after the award of the Contract, IIMN shall have the right to terminate the Contract and get the remaining Works executed by a third party at the risk & Cost of the Contractor and without any prejudice to other rights available to IIMN under the Contract such as forfeiture of the Contract Performance Bank Guarantee, withholding of payment etc.

33.8.6 In case, this issue of submission of false/fake documents comes to the notice after execution of the Works, IIMN shall have full right to forfeit any amount due to the Contractor along with forfeiture of the Contract Performance Bank Guarantee furnished by the Contractor.

33.8.7 Further, any Contractor which is found guilty of any Corrupt or Fraudulent Practice or submission of false/fake /forged documents, shall be put on the negative/ holiday list of IIMN debarring them from future business with IIMN.

33.9 Liability of Government of India

- (a) It is expressly understood that Govt. of India is not a party to this Contract and has no liability, obligations or rights hereunder. It is expressly understood that IIMN is an independent legal entity with power and authority to enter into the Contract solely on its behalf under the Applicable Laws and general principles of contract law.
- (b) The Contractor expressly agrees and acknowledges and understands that IIMN is not an agent, representative or delegate of Government of India.

33.10 Computerized Contractor's Billing System

Contractor should follow the following billing system:

- (a) The Running Bills will be prepared by the Contractor on their personal computers as per the standard formats and codification scheme proposed by IIMN. The Contractor will be

provided with data entry software to capture the relevant billing data for subsequent processing. The Contractor will submit these data to IIMN in an electronic media along with the hard copy of the bill, necessary enclosures and documents. The Contractor will also ensure the correctness and consistency of data so entered with the hard copy of the bill submitted for payment.

- (b) IIMN will utilize this data for processing and verification of the Running Bills of the Contractor.

33.11 Terms applicable to Consortium Contractors

Where the Contractor is a consortium, the lead member of the consortium shall represent the Contractor in all dealings with IIMN and shall do all acts, deeds, matters and things required to be done by the Contractor under the Contract, including (but not limited to) exchange of correspondence, raising invoices, drawings, documents and receiving payments.

- (a) All dealings had with and/or all acts, deeds, matters and things and things done by or payments made to and invoices/documents drawn and/or negotiated by the lead member shall be binding upon the Contractor and each member of the consortium, and in so far as IIMN shall require a discharge in respect of any dealing had or act, deed, matter or thing done or payment made as aforesaid, the same shall constitute a valid discharge to IIMN.
- (b) Each and every member of the consortium shall be jointly and separately liable to IIMN for and in respect of all liabilities obligations of the Contractor under the Contract.

The constitution of the Consortium or the relative distribution of the Work(s) and/or activities amongst the consortium members as approved by IIMN shall not be altered or assigned, as the case may be except with the prior written consent of IIMN and any contrary alteration or re-assignment shall be deemed to be an unauthorized assignment of the Contract with attendant liabilities including termination of the Contract.

33.12 Government Controlled Materials

In respect of all Government controlled or other scarce/imported materials in respect of which licenses, release orders, permits or authorizations have been granted in the name of IIMN, the Contractor shall be deemed to be acting on behalf of IIMN and as agent of IIMN in respect of deliveries taken by the Contractor against any licences, release orders, permits, or authorizations issued in the name of IIMN for Government controlled materials. The ownership in such materials shall (without prejudice to the responsibility/liability of the Contractor in respect thereof as set out in the various conditions hereof) vest in IIMN from the point of time when it would have ordinarily vested in IIMN on a direct delivery to IIMN.

33.13 Distinction Between Foundation and Superstructure

To distinguish between work in foundations and superstructures, the following criteria shall apply:

- (b) For all equipment pedestals, pipe racks, other foundation and R.C.C. Structures, work done upto 300 mm level above finished grade level will be taken as work in foundations and work above this level will be treated as work in superstructures and payments would be made accordingly.
- (c) For buildings only, all works up to plinth level corresponding to finished floor level shall be treated as 'work in foundation' and all works above the finished floor level shall be treated as "work in superstructure".
- (d) Irrespective of what has been stated above, all pavements, R.C.C. retaining wall, all pipe sleepers and any similar item would be taken as work done in foundations irrespective of locations, nomenclature and levels given anywhere.
- (e) Where not specifically pointed out all works in cellars/ sumps, tank pads, cable trenches, or such similar item would be taken as work in foundation.

33.14 Excavation by Blasting

The Contractor shall obtain licence from the relevant Authorities for undertaking blasting work as well as for obtaining and storing the explosive as per Explosive Rules 2008 (as made under the Explosives Act, 1884), as amended from time to time. The Contractor shall purchase the explosives, fuses, detonators etc. only from a licensed dealer and shall be responsible for the safe custody and proper accounting of the explosive materials. The Engineer-in-Charge and his authorized representative shall have access to check the Contractor's store of explosives and its accounts. In case where the explosives are required to be transported and stored at Site, relevant clauses of the Explosives Rules 2008 as amended subsequently shall apply. The Contractor shall be responsible for any accident to workman, public or property, due to blasting operations.

33.15 Import Licence

Contractor shall arrange for the import of all materials required for permanent incorporation in the Works as well as construction equipment as per the guidelines laid down by the Government of India. IIMN shall not provide import licence.

33.16 Retired Government or Company Directors

No Director of IIMN is allowed to tender for a contract to be awarded by IIMN for a period of 2 (two) years after his retirement from the employment of IIMN, without the previous permission of IIMN. The Contract if awarded is liable to be cancelled if the Contractor is found at any time to be such a person and has not obtained the permission of the IIMN before submission of the tender. Any tender by a person aforesaid shall carry a disclosure thereof on the tender, and shall be accompanied by a copy of the document by which the requisite consent is given. Such disqualifications shall apply to every partner of a partnership firm.

33.17 Other Contractors

The Contractor agrees and acknowledges that that access to the Site and access routes thereto, has been granted to the Contractor on a non-exclusive basis, and that IIMN, may at its sole

discretion, grant access thereto, to other Persons (“**Other Contractors**”) to undertake thereon, any works other than those contemplated under the Contract. Further, the Contractor shall at all times undertake its works in such manner, as to not cause minimal disturbance to the Other Contractors, in the performance of the works allocated to such Other Contractors.³

33.18 Survival

The termination of the Contract shall not relieve the Contractor or IIMN of any obligations hereunder which expressly or by implication survives termination. Further, except as otherwise provided in any provision of the Contract expressly limiting the liability of either Party, the termination of the Contract shall not relieve either Party of any obligations or liabilities for loss or damage to the other Party arising out of or caused by acts or omission of such Party prior to the effectiveness of such termination or arising out of such termination.

34 FINAL COMPLETION CERTIFICATE

Upon the expiry of the Defect Liability Period (or Extended Defect Liability Period, as applicable), but subject to there being no outstanding obligation of the Contractor to rectify the defects notified during such period, IIMN shall issue the Final Completion Certificate to the Contractor (“**Final Completion Certificate**”). The Contract shall not be considered to have been completed until the Final Completion Certificate has been signed by IIMN and delivered to the Contractor, stating the date on which the Contractor has completed its obligations under the Contract. Only the Final Completion Certificate shall be deemed to constitute Approval of the Works by IIMN.

APPENDIX I: FORM OF CONTRACT PERFORMANCE BANK GUARANTEE

[REFER SPECIAL CONDITIONS OF CONTRACT]

APPENDIX II: FORM OF MOBILIZATION ADVANCE GUARANTEE

[ON APPROPRIATE STAMP PAPER]

Beneficiary: INDIAN INSTITUTE MANAGEMENT NAGPUR

Bank Guarantee No. [.....●]

THIS DEED OF GUARANTEE is executed on this [.....*insert day*] day of [.....*insert month and year*] at [.....*insert place*] by [.....**INSERT NAME OF BANK**] having its head/registered office at [.....*insert address*], (hereinafter referred to as the "**Guarantor**", which expression shall unless it is repugnant to the subject or context thereof include successors and assigns)

IN FAVOUR OF

"INDIAN INSTITUTE MANAGEMENT NAGPUR, an autonomous institute established in 2015 by Government of India, having its principal office at VNIT Campus, South Ambazari Road, Nagpur, Maharashtra, India- 440010 (herein after referred to as "IIM Nagpur" or "IIMN" or "Owner" , which expression shall unless it is repugnant to the subject or context thereof include successors and assigns).

WHEREAS

- A. [.....■] with its registered office at [.....■] (hereinafter referred to as the "**Contractor**", which expression shall unless repugnant to the context thereof, be deemed to include its successors-in-interest and permitted assigns) has been awarded a contract by IIMN for [the engineering, procurement, construction, testing and commissioning] of the Facility ("**Contract**").
- B. In terms of Clause 9.4.1 of the Contract, Contractor is required to furnish a Mobilization Advance Guarantee to IIMN in the form of an unconditional, irrevocable, on demand bank guarantee for securing the Mobilization Advance made to Contractor in accordance with the Contract ("**Mobilization Advance Guarantee**") for INR [.....*insert amount*] or US\$ [.....*insert amount*] ("**Guaranteed Amount**").
- C. At the request of the Contractor and for sufficient consideration, the Guarantor has agreed to issue this guarantee in favour of IIMN.

NOW THEREFORE THIS DEED WITNESSETH AS FOLLOWS:

1. Capitalized terms used herein but not defined shall have the meaning ascribed to them in the Contract.

The Guarantor shall upon a written demand from IIMN informing the Guarantor that the Mobilization Advance made to the Contractor has not been adequately adjusted, pay to IIMN, within 5 (five) days of receipt of such written demand from IIMN, without further proof or conditions and without contest, recourse, demur or protest and without any enquiry to IIMN or the Contractor, forthwith and in full amount, without any deductions or set off or counter claims whatsoever, the sum claimed by IIMN in such demand not exceeding an amount equivalent to the Guaranteed Amount. The Guarantor will pay the amount specified in the demand notwithstanding any direction to the contrary given or any dispute raised by the Contractor or any other person.

The Guarantor agrees that this Mobilization Advance Guarantee does not limit the number of claims that may be made by IIMN against the Guarantor provided that such claims taken together shall not exceed the Guaranteed Amount.

Any payment made hereunder shall be made free and clear of and without deduction for, or on account of, any present or future Taxes, deductions or withholdings of any nature whatsoever and by whomsoever imposed, and where any withholding on a payment is required by any Applicable Law, the Guarantor shall comply with such withholding obligations and shall pay such additional amount in respect of such payment such that IIMN receives the full amount due hereunder as if no such withholding had occurred.

2. This Mobilization Advance Guarantee shall be a continuing guarantee during its currency and shall remain in force and effect until the earlier of: (i) date when the Mobilization Advance has been fully recovered; and (ii) [.....insert date], upon which the obligations of the Guarantor under this Mobilization Advance Guarantee shall stand discharged.
3. The obligations of the Guarantor herein are absolute and unconditional, irrespective of the value, genuineness, validity, regularity or enforceability of the Contract or the insolvency, bankruptcy, reorganization, dissolution or liquidation of the Contractor or any change in ownership of the Contractor or any purported assignment by the Contractor or any other circumstance whatsoever which might otherwise constitute a discharge or defence of a guarantor or a surety.

Further, this Mobilization Advance Guarantee is in no way conditional upon any requirement that IIMN first attempts to procure the Guaranteed Amount from the Contractor or any other person, or resort to any other means of obtaining payment of the Guaranteed Amount, prior to making recourse to this Guarantee.

4. The Guarantor shall not be required to go into the veracity of any breach or failure on the part of the Contractor or validity of demand so made by IIMN and shall pay the amount specified in the demand notwithstanding any direction to the contrary given or any dispute whatsoever raised by the Contractor or any other Person. The Guarantor's obligations hereunder shall subsist until all such demands are duly met and discharged in accordance with the provisions hereof.
5. The Guarantor hereby agrees that its liability under this Mobilization Advance Guarantee shall not be discharged by virtue of any agreement between the Contractor and IIMN, whether with or

without the Guarantor's knowledge, or by reason of IIMN showing any indulgence or forbearance to the Contractor.

6. The Guarantor's obligations under this Mobilization Advance Guarantee for the Guaranteed Amount is primary, independent and absolute and not by way of surety only.
7. The obligations of the Guarantor under this Mobilization Advance Guarantee shall not be affected by any act, omission, matter or thing which, but for this provision, would prejudice or diminish the Guaranteed Amount in whole or in part, including (whether or not known to it or IIMN):
 - (a) any time or waiver granted to, or composition with, the Contractor or any other person;
 - (b) any incapacity or lack of powers, authority or legal personality of or dissolutions, or insolvency or bankruptcy, or change in the status of the Contractor or any other Person;
 - (c) any variation of the Contract so that references to the Contract in this Mobilization Advance Guarantee shall include each variation;
 - (d) any unenforceability, illegality or invalidity of any obligation of any person under the Contract or any unenforceability, illegality or invalidity of the obligations of the Guarantor under this Mobilization Advance Guarantee or the unenforceability, illegality or invalidity of the obligations of any person under any other document or guarantee, to the extent that each obligation under this Mobilization Advance Guarantee shall remain in full force as a separate, continuing and primary obligation, and its obligations be construed accordingly, as if there were no unenforceability, illegality or invalidity;
 - (e) any extension, waiver, or amendment whatsoever which may release a guarantor or the Guarantor (other than performance or indefeasible payment of a Guaranteed Amount);
or
 - (f) any part performance of the Contract by the Contractor or by any failure by IIMN to timely pay or perform any of its obligations under the Contract.
8. So long as any sum remains owing by the Contractor to IIMN, the Guarantor shall not exercise any right of subrogation or any other rights of a guarantor or enforce any guarantee or other right or claim against the Contractor (whether in respect of its liability under this Mobilization Advance Guarantee or otherwise) or claim in the insolvency or liquidation of the Contractor or any such other person in competition with IIMN. If the Guarantor receives any payment or benefit in breach of this Clause, it shall hold the same in trust for IIMN.
9. The Guarantor represents, warrants and undertakes to IIMN that:
 - (a) it has the power to execute, deliver and perform the terms and provisions of this Mobilization Advance Guarantee and has taken all necessary action(s) to authorize the execution, delivery and performance by it of this Mobilization Advance Guarantee;
 - (b) the Guarantor has duly executed and delivered this Mobilization Advance Guarantee, and this Mobilization Advance Guarantee constitutes its legal, valid and binding obligation enforceable in accordance with its terms except as the enforceability thereof

may be limited by applicable bankruptcy, insolvency, moratorium or other similar laws affecting the enforcement of creditors' rights generally and by general equitable principles;

- (c) neither the execution, delivery or performance by the Guarantor of this Mobilization Advance Guarantee, nor compliance by it with the terms and provisions hereof will: (i) contravene any material provision of any law, statute, rule or regulations or any order, writ, injunction or decree of any court or governmental instrumentality; (ii) conflict or be inconsistent with or result in any breach of any of the material terms, covenants, conditions or provisions of, or constitute a default under any agreement, contract or instrument to which the Guarantor is a party or by which it or any of its property or assets is bound; or (iii) violate any provision of the Guarantor's constituent documents;
 - (d) no order, consent, approval, license, authorization or validation of, or filing, recording or registration with (except as have been obtained or made prior to the date hereof), or exemption by, any governmental or public body or authority, or any subdivision thereof, is required to authorize, or is required in connection with: (i) the execution, delivery and performance of this Mobilization Advance Guarantee; or (ii) the legality, validity, binding effect or enforceability of this Mobilization Advance Guarantee; and
 - (e) this Mobilization Advance Guarantee will be enforceable when presented for payment to a Scheduled Bank (as defined by the Reserve Bank of India Act, 1934) in [.....*Insert name of place*].
10. This Mobilization Advance Guarantee is a continuing one and all liabilities to which it applies or may apply under the terms hereof shall be conclusively presumed to have been created in reliance hereon. No failure or delay on the part of IIMN in exercising any right, power or privilege hereunder and no course of dealing between IIMN and the Guarantor, or the Contractor, shall operate as a waiver thereof, nor shall any single or partial exercise of any right, power or privilege hereunder preclude any other or further exercise thereof or the exercise of any other right, power or privilege.
11. If any one or more of the provisions contained in this Mobilization Advance Guarantee are or become invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby, and the Guarantor shall enter into good faith negotiations with IIMN to replace the invalid, illegal or unenforceable provision.
12. The Guarantor hereby agrees to execute and deliver all such instruments and take all such actions as may be necessary to make effective fully the purposes of this Mobilization Advance Guarantee.
13. This Mobilization Advance Guarantee may be executed in one or more duplicate counterparts, and when executed and delivered by the Guarantor and IIMN shall constitute a single binding agreement.
14. Any demand, notice, request or other communication to be given or made under this Mobilization

Advance Guarantee shall be deemed to have been duly given or served:

- (i) Upon IIMN, at [.....*insert address*] marked for the attention of [.....*insert name*];
- (ii) Upon a Scheduled Bank (as defined by the Reserve Bank of India Act, 1934), at [.....*insert*], India.

15. The Guarantor:

- (a) acknowledges that the Lenders will review this Mobilization Advance Guarantee and may require changes thereto as a condition of granting financing and/or providing political risk insurance; and
- (b) shall consider any such requirements in good faith.

16. This Mobilization Advance Guarantee shall be governed by, and construed in accordance with, the laws of India. The Guarantor irrevocably agrees that any legal action, suit or proceeding arising out of or relating to this Mobilization Advance Guarantee may be brought in the courts in Nagpur.

17. IIMN may assign or transfer all or any part of its interest herein together with the Contract to any other person with prior intimation to the Guarantor. The Guarantor may not assign or transfer any of its rights or obligations under this Mobilization Advance Guarantee.

IN WITNESS WHEREOF the Guarantor has set its hands hereunto on the day, month and year first hereinabove written.

Signed and delivered by [.....*insert name of Guarantor*] Guarantor by hand

Name:

Designation:

APPENDIX III: SAFETY CODE
[To be inserted]

1. GENERAL

- 1.1 The CONTRACTOR shall adhere to safe construction practices and guard against hazardous and unsafe working conditions and shall comply with IIMN's safety rules as set forth herein.
- 1.2 In this Section any reference to the Facility shall wherever applicable include any existing plant, unit or installation in or adjacent to which the Site or any part thereof is located.

2. FIRST AID AND INDUSTRIAL INJURIES

- 2.1. The Contractor shall maintain first aid facilities for its employees and those of its sub- contractors.
- 2.2. The Contractor shall make outside arrangements for ambulance service and for the treatment of industrial injuries. Names of those providing these services shall be furnished to the Engineer- in-Charge prior to start of construction, and their telephone numbers shall be prominently posted in Contractor's field office.
- 2.3. All critical industrial injuries shall be reported promptly to the Engineer-in-Charge, and a copy of Contractor's report covering each personal injury requiring the attention of a physician shall be furnished to IIMN.

3. GENERAL RULES

Carrying/Striking of matches, lighters within the Site, smoking within the Site, tank, farm, or dock limits are strictly prohibited. Violators of the "No Smoking" rules shall be discharged immediately. Within the operation area, no hot work shall be permitted without valid gas safety/fire permits. The Contractor shall be held liable and responsible for all lapses of his subcontractors/employees in this regard.

4. CONTRACTOR'S BARRICADES

- 4.1. The CONTRACTOR shall erect and maintain barricades required in connection with his operation to guard or protect:
- (i) Excavation
 - (ii) Hoisting areas
 - (iii) Areas adjudged hazardous by the Contractor's or IIMN's inspectors.
 - (iv) IIMN's existing property liable to damage by Contractor's operations, in the opinion of Engineer-in-Charge.
 - (v) Railroad unloading spots.
- 4.2. The Contractor's employees and those of its sub-contractors shall become acquainted with IIMN's barricading practices and shall respect the provisions thereof.

- 4.3. Barricades and hazardous areas adjacent to but not located in normal routes of travel shall be marked by red flasher lanterns at nights.

5. SCAFFOLDING

- 5.1. Suitable scaffolding shall be provided for workmen for all works that cannot safely be done from the ground or from solid construction except such short period work as can be done safely from ladders. When a ladder is used, an extra person shall be engaged for holding the ladder and if the ladder is used for carrying materials as well, suitable footholds and handholds shall be provided on the ladder and the ladder shall be given an inclination not steeper than 1 in 4 (1 horizontal 4 vertical).
- 5.2. Scaffolding or staging more than 12' (twelve feet) above the ground floor, swung or suspended from an overhead support or erected with stationary support shall have a guard rail properly attached, bolted, braced and otherwise reminded at least 3' high above the floor or platform of scaffolding or staging and extending along the entire length of the outside and ends thereof with only such openings as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the building or structure.
- 5.3. Working platforms, gangways and stairways should be so constructed that they should not sag unduly or unequally and if the height of the platform or the gangway or the stairway is more than 12' above ground level or floor level, they should be closely boarded, should have adequate width and should be suitably fastened as described in Clause 5.2 above.
- 5.4. Every opening in the floor of a building or in a working platform shall be provided with suitable fencing or railing whose minimum height shall be 3 feet to prevent the fall of persons or materials by providing.

Safe means of access shall be provided to all working platforms and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 30' in length while the width between the side rails in rung ladder shall in no case be less than 11.5" for ladder up to and including 10' in length. For longer ladders this width would be increased by at least ¼" for each additional foot of length. Uniform step spacing shall not exceed 12". Adequate precautions shall be taken to prevent danger from electrical equipment. No materials on any site of work shall be so stacked or placed as to cause danger or inconvenience to any person or public. The Contractor shall also provide all necessary fencing and lights to protect the workers and staff from accidents, and shall be bound to bear the expenses of defense of every suit, action or other proceedings, that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay damages and costs which may be awarded in any such suit or action or proceedings to such person, or which may with the consent of the Contractor be paid to compromise any claim by any person.

6. EXCAVATION AND TRENCHING

- 6.1. All trenches 4' (Four feet) or more in depth, shall at all times be supplied with at least one ladder for each 100' length or fraction thereof.

- 6.2. The Ladder shall be extended from bottom of the trench to at least 3' 3" above the surface of the ground. The site of the trenches which is 5' (Five feet) or more in depth shall be stepped back to give suitable slope, or securely held by timber bracing, so as to avoid the danger of sides to collapse. Cutting shall be done from top to bottom. Under no circumstances shall undermining or undercutting be done.

7. DEMOLITION

- 7.1. Before any demolition work is commenced and also during the process of such works all roads and open areas adjacent to the Site shall either be closed or suitably protected.
- 7.2. No electric cable or apparatus which is liable to be a source of danger over a cable or apparatus used by the operator shall remain electrically charged.
- 7.3. All practical steps shall be taken to prevent danger to persons employed, from risk of fire or explosion or flooding. No floor or other part of the building shall be so overloaded with debris or material as to render it unsafe.

8. SAFETY EQUIPMENT

- 8.1. All necessary personal safety equipment as considered adequate by the Engineer-in-Charge should be made available for the use to the persons employed on the Site and maintained in a condition suitable for immediate use, and the Contractor should take adequate steps to ensure proper use of equipment by those concerned.
- 8.2. Workers employed on mixing asphaltic materials, cement and lime mortars shall be provided with protective footwear and protective gloves.
- 8.3. Those engaged in white washing and mixing or stacking of cement bags or any materials which are injurious to the eyes shall be provided with protective goggles.
- 8.4. Those engaged in welding and cutting works shall be provided with protective face and eye-shields, and gloves, etc.
- 8.5. Stone breakers shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.
- 8.6. When workers are employed in sewers and manholes, which are in use, the Contractor shall ensure that the manhole covers are opened and are ventilated at least for an hour before the workers are allowed to get into the manholes, and the manholes so opened shall be cordoned off with suitable railing and provided with warning signals or boards to prevent accident.
- 8.7. The Contractor shall not employ men below the age of 18 years and women on the work of painting or products containing lead in any form. Wherever men above the age of 18 years are employed on the work of lead painting, the following precautions should be taken:
- (a) No paint containing lead product shall be used except in the form of paste or readymade

- paint.
- (b) Suitable face masks shall be supplied for use by the workers when paint is applied in the form of spray or if a surface having lead paint dry rubbed and scrapped.
 - (c) Overalls shall be supplied by the Contractor to workmen and adequate facilities shall be provided to enable the working painters to wash during and on cessation of Work.

9. RISKY PLACES

When the work is done near any place where there is a risk of drowning, all necessary safety equipment's shall be provided and kept ready for use and all necessary steps taken for prompt rescue of any person in danger and adequate provision should be made for prompt first aid treatment of all injuries likely to be sustained during the course of the work.

10. HOISTING EQUIPMENT

Use of hoisting machines and tackle including their attachments, anchorage and supports shall conform to the following standards or conditions:

- (a) These shall be of good mechanical construction, sound materials and adequate strength and free from patent defect and shall be kept in good condition and in good working order.
- (b) Every rope used in hoisting or lowering materials or as a means of suspension shall be of durable quality and adequate strength and free from patent defects.
- (c) Every crane driver or hoisting appliance operator shall be properly qualified and no person under the age of 21 years should be in charge of any hoisting machine including any scaffolding winch or to give signals to the operator.
- (d) In case of every hoisting machine and of every chain, ring, hook, shackle, swivel and pulley block used in hoisting or lowering or as a means of suspension, the safe working load shall be ascertained by adequate means.
- (e) Every hoisting machine and all gear referred to above shall be plainly marked with the safe working load and the condition under which it is applicable shall be clearly indicated. No part of any machine or any gear referred to above in this paragraph shall be loaded beyond the safe working load except for the purpose of testing.
- (f) In case of departmental machines, the safe working load shall be notified by the Engineer-in-Charge. As regards Contractor's machines, the Contractor shall notify the safe working load of the machine to the Engineer-in-Charge, whenever he brings any machinery to Site of work and get it verified by the Engineer-in-Charge concerned.

11. ELECTRICAL EQUIPMENT

Motor, Gearing, Transmission, wiring and other dangerous parts of hoisting appliances shall be provided with efficient safeguards. Hoisting appliances should be provided with such means as will reduce to the minimum, the risk of accidental descent of the load. Adequate precautions shall be taken to reduce to the minimum the risk of any part of a suspended load becoming accidentally displaced. When workers are employed on electrical installations which are already energized, insulating mats, wearing apparel, such as gloves and boots as may be necessary shall be provided. The workers shall not wear any rings, watches and carry keys or other materials which are good conductors of electricity.

12. MAINTENANCE OF SAFETY DEVICES

All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in safe conditions and no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities should be provided at or near the place of work.

13. DISPLAY OF SAFETY INSTRUCTIONS

These safety provisions should be brought to the notice of all concerned by display on a notice board at a prominent place at the Site. The person responsible for compliance of the safety code shall be named therein by the CONTRACTOR.

14. ENFORCEMENT OF SAFETY REGULATIONS

To ensure effective enforcement of the rules and regulations relating to safety precautions, the arrangements made by the Contractor shall be open to inspection by the Welfare Officer, Engineer-in-Charge or Safety Engineer of IIMN or their representatives.

15. NO EXEMPTION

15.1. Notwithstanding anything provided in this Appendix 3, the Contractor shall be bound by the provisions of any other Act or rules in force in the Republic of India, with a view that the provisions hereof shall be in addition thereto and not in lieu thereof.

15.2. The works throughout including any temporary works shall be carried on in such a manner as not to interfere in any way whatsoever with the traffic on any roads or footpaths at the Site or in the vicinity thereof or with any existing works whether the property of IIMN or of a third party.

15.3. The Contractor shall also arrange to obtain valid gate passes for his men and equipment from the concerned Authorities.

15.4. No man/material/equipment not covered by valid passes shall be permitted within the Site no material/equipment shall be permitted to be taken out of the Site, unless authorized by the concerned Authorities. The Contractor shall be held fully responsible for any or all delays/ losses/ damages that may result consequent on any lapse(s) that may occur on the part of his subcontractors/employees in this regard.

16. ENTRY PASSES

- 16.1. The CONTRACTOR has to apply for photo Entry Passes for his workers and staff and the workers and staff of his Sub-Contractors in a prescribed proforma provided by IIMN. The Application shall be accompanied by a Statement and Declaration in the form prescribed by IIMN signed by the employees for whom the Entry Passes are sought and confirmed by the employer. The photo Entry Passes shall be issued by IIMN for a maximum period of 3 (three) months, which will be extendable upon the Contractor's application. As a special case, Temporary Passes may be issued for a maximum period of 7 (seven) days.
- 16.2. Unutilized/expired Entry Passes/Identity Cards shall have to be immediately surrendered to IIMN.
- 16.3. In case of the loss of an Entry Pass/Identity Card, the Contractor shall immediately lodge an FIR with the local police station and inform the Engineer-in-Charge of the loss and shall pay a charge of Rs.150/- against Entry Pass/Identity Card lost. The Contractor is required to keep an account and track of all Entry Passes issued and surrendered.

Gate Passes/Identity Cards issued by the Security Section should always be displayed by the Contractor's or Sub-contractor's employees while working inside the Plant.

17. GATE PASSES

- 17.1. To bring materials, equipment, tools and tackle and other things inside the Site for construction Work, the Contractor has to produce proper documents of title or authority relative thereto for inspection by IIMN's personnel at the gate. These shall be checked thoroughly by IIMN's personnel at the Gate and recorded in their Register before permitting the same to be brought inside within the Site. It is the Contractor's responsibility to see that the entry is duly recorded in the Register with proper Entry Number, date and signature of IIMN's authorized representative and that the supporting challans/documents are stamped and signed by IIMN's personnel at the gate at the time of entry.

Those materials which need repairing/ replacement as per Site condition will be allowed to move beyond IIMN's battery limit only after exchange of good equivalent material.

18. WORK PERMIT

- 18.1. In order to keep IIMN informed of the various jobs being undertaken within the Site and to enable IIMN to regulate the same to ensure the observance of safety regulations relative thereto, when Work is to be carried out in hazardous areas, a Hot Work Permit is to be obtained by the Contractor from IIMN before start of Work on jobs which are capable of generating a flame, spark or heat e.g., gas cutting, grinding, welding, use of any electrical, diesel, petrol or battery operated prime mover, machine, tool or equipment or generator set, mixer machine, drilling machine, pump, crane, fork lift or hand truck or trailer or chipping or breaking of rocks or concrete or hacksaw cutting and drilling. Similarly, the Contractor shall obtain a Cold Work Permit from IIMN for jobs which do not come under the category of hot work and in respect of which there is no risk of fire, e.g., transportation, backfilling of ordinary soil by manual process, pile testing, hydro-testing, shuttering, fixing of reinforcement, hand mixed concreting, plastering and brickwork.
- 18.2. Depending on the nature of the Work and the equipment's and tools involved, the Contractor shall apply for Cold/Hot Permit in a prescribed format at least 7(seven) days before the Work is

planned to start. No Work Permit shall be issued by IIMN unless proper arrangement is made by the Contractor to ensure safe performance of the Work inside the Site limit. Job-wise and area-wise permits shall be issued to the Contractor and for Work against each permit the Contractor shall post at Site at least one Construction Supervisor and one Safety Supervisor of required level to ensure the due observance of all safety requirements.

19. VEHICLE PERMIT

Permits are to be obtained separately for entry/use of vehicles/trailers and other mobile equipment inside the Site limits. All the Contractor's vehicles should have a valid 'PUC Certificate'. The following requirements are to be met to obtain vehicle permit:

- (i) Vehicle/Equipment shall be in good condition and fitted with spark arrestor.
- (ii) Vehicles should carry, wherever applicable, valid Road Tax Certificate and Fitness Certificate from the competent authority and insurance policy.
- (iii) Valid operating/driving license of driver/operator.

20. VALIDITY OF THE PERMIT

- (i) Any Hot or Cold Work Permit issued is valid only for 24 hours.
- (ii) Thereafter the validity of the Permit must be renewed for each shift (morning & evening) by the shift in-charge/ shift representative of IIMN.
- (iii) The permit may be renewed for a maximum period of one month from the date of issue and if extension is required, the Contractor has to apply for a fresh permit.
- (iv) A permit is not valid for Work on holidays unless special permission of IIMN is obtained for the purpose.

21. SPECIAL SAFETY REGULATIONS

21.1. REGARDING WORK PERMIT

- (a) The Work shall be carried out inside the Site to conform to the IIMN's safety section and in accordance with any instructions of the Engineer-in-Charge issued from time to time. Sometimes working hours may be drastically reduced or increased to satisfy safety requirements and the Contractor shall meet these requirements without any time and cost implications. No claim for idling of machinery, plant, manpower or equipment shall be entertained for reason of delay in the issue of a Work Permit and it shall be the exclusive responsibility of the Contractor to apply for, pursue and obtain the requisite Work Permit(s) well in advance of the relative requirement(s).
- (b) The Contractor shall abide by all safety regulations of the Plant and ensure that safety equipment for specific jobs as stipulated in the Factories Act Safety Handbook is issued to all employees during the execution of Work, failing which all the works at Site shall be suspended.

21.2. REGARDING HOT WORK

- (a) When doing hot work inside the plant, the Contractor must ensure that the fire hose is hooked up with the fire water system and extended to the Site. In addition, at least one fire extinguisher must be kept near the working spot. The area around and below the place of hot work must be adequately protected from sparks and hot metals by a booth made of asbestos cloth/sheet and by wetting with water. In addition, depending on the location and hazard of the work, the Contractor shall at its own Cost arrange sufficient number of additional fire hoses and such firefighting equipment of approved quality as may be required to carry out hot job inside the plant.
- (b) Welding & electrical cables should be of approved quality and no jointing or loose connection shall be permitted.
- (c) At the end of the working day the Contractor must inform the electrical section to switch off power at sub-station end.
- (d) The Contractor must provide cotton clothes, safety shoes, safety helmet, safety belt, and hand gloves of approved quality to his workers to meet the safety requirement of various jobs to be carried out inside the Plant.

21.3. REGARDING USE OF VEHICLE

- (a) Vehicle must not ply on any road within the Site at a speed exceeding 20 KM/hr.
- (b) Mobile cranes, loaded trucks and trailers must not exceed the speed limit of 15 KM/hr inside the plant.
- (c) No crane is allowed to move inside the plant with load.
- (d) No vehicle is allowed to be parked inside the plant.
- (e) Limited number of vehicles will be permitted inside the battery area due to security reasons.

22. DEDUCTIONS FROM CONTRACT PRICE

22.1. In addition to price reduction and deductions as provided for, IIMN shall be entitled to deduct from any payment due to the Contractor, any amount claimed by IIMN under the Contract and any costs, damages or expenses for which the Contractor is liable under the Contract.

22.2. In addition to price reduction and deductions as provided for in the Contract, IIMN shall be entitled to deduct from any payment due to the Contractor, for violations of safety provisions, as per details given below:

- (vi) Violation of applicable safety, health and environment related norm, a price reduction of INR5000/- per occasion
- (vii) Violation as above resulting in (a) Any physical injury - a price reduction of 0.5% of the Contract Price (maximum of INR 2,00,000) per injury in addition to INR 5,000/-; or
(b) Fatal accident - a price reduction of 1% of the Contract Price (maximum of INR

10,00,000) per fatality in addition to INR 5,000/-

23. SPECIAL CONTRIBUTIONS

With a view to ensure the formulation and enforcement of a safety code by the Contractor, it is stipulated that in the event of any act, omission or accident at the Site which results in the death of a person, the Contractor shall contribute a sum of INR 5,00,000/- (Rupees five lakh only), or which results in the permanent disablement of a person, the Contractor shall contribute a sum of INR 3,00,000/- (Rupees three lakh only) in addition to any other sum(s) required to be paid by the Contractor under any law or other contract, to a welfare fund to be established by IIMN for, inter alia, such contributions, and until such fund is established, to a charity nominated by IIMN.

**APPENDIX IV: INDEMNITY BOND
(TO BE NOTORISED AND ON STAMP PAPER OF APPROPRIATE VALUE)**

To

Indian Institute of Management Nagpur
(Address as applicable)

Dear Sirs,

WHEREAS IIMN and address
(hereinafter called “the Indemnified” which expression shall include its successors and assigns) has awarded to M/s..... a Partnership Firm/ Sole Proprietor Business/ a company having its Registered Office at (hereinafter called “the Indemnifier”, which expression shall include its successors and assigns) a contract for conditions set out, inter-alia, in “the Indemnified” Purchase Order No. dated..... (hereinafter referred to as “the said Contract”) to “the Indemnifier”.

AND WHEREAS “the Indemnified” has agreed to supply to “the Indemnifier” raw material/ components to the value of INR..... (Rupees..... only) for incorporation in fabrication by “the Indemnifier” in terms of “the said contract”, the components/ raw material to be supplied by “the Indemnified” to “the Indemnifier” for the said fabrication, (hereinafter, or the sake of brevity, referred to as “the said material”) and pending fabrication and delivery at job-site of the completed fabricated work(s) incorporating “the said material” and accounting for “the said material” shall be under the sole custody and charge of “the Indemnifier” and shall be kept, stored, altered, worked upon and/ or fabricated at the sole risk and expenses of “the Indemnifier”.

As a Pre-condition to the supply of “the said material” by “the Indemnified” to “the Indemnifier”, the Indemnified” has required “the Indemnifier” to furnish to “the Indemnified” security in the manner and upon terms and conditions hereinafter indicated:

NOW THEREFORE, in consideration of the premises aforesaid “the Indemnifier” Shri....., Shri..... all Directors/ Partners/ Sole proprietor of “the Indemnifier” in consideration of aforesaid “contract” hereby irrevocably and unconditionally and jointly and severally undertake to indemnify and always keep “the Indemnified” from and against all loss, damage and destruction (inclusive but not limited to any or all loss or damage or destruction to or of “the said material” or any item or part thereof) by theft, fire, flood, storm, tempest, lightning, explosion, storage, chemical or physical action or reaction, bending, wrapping, exposure, rusting, faulty workmanship, faulty fabrication or faulty method of technique of fabrication, riot, civil commotion or other act of omission or commission whatsoever within or beyond the control of “the Indemnifier”, misuse and misappropriation by “the Indemnifier’s” servants and/or agents whatsoever to, of or in “the said material” or any part or item thereof between the date that the same or relative part or item thereof was supplied to “the Indemnifier” up to and until the return to “the Indemnified” on due

dates of “the said material” or relative part or item thereof or completed fabricated work(s) incorporating the said material AND jointly and severally undertake to pay to “the indemnified” forthwith on first demand in writing without protest or demur the value of “the said material” or item part thereof lost, damaged, destroyed, misused and/or misappropriated, as the case may be, inclusive of “the Indemnified” ’s cost and expenses (inclusive but not limited to handling, transportation, cartage, insurance, freight, packing and inspection costs and/ or expenses) as specified in the said demand.

AND “the Indemnifier” hereby agree with “the Indemnified” that :

1. This Indemnity shall remain valid and irrevocable until the settlement of all claims of “the Indemnified” arising hereunder.
2. This Indemnity shall be in addition to any other Indemnity, Guarantee or Security whatsoever that “the Indemnified” may now or any time anywise have in relation to “the Indemnifier” ’s obligations/ liabilities under and/ or in connection with the said contract inclusive of “the said material” and “the Indemnified” shall have full authority to take recourse to or enforce this security in preference to the other security (ies) at its sole discretion, and no failure on the part of “the Indemnified” in enforcing or requiring enforcement of any other security shall have the effect of releasing “the Indemnifier” from its full liability hereunder:
3. “The Indemnified” shall be at liberty without reference to “the Indemnifier” and without affecting the full liability of “the Indemnifier” hereunder to take any other such security in respect of “the Indemnifier’s” obligations and/or liabilities under or in connection with the “said contract” inclusive of “the said material” and to vary the terms vis-a-vis “the Indemnifier” of “the said contract” or to grant time and/or indulgence to “the Indemnifier” or to reduce or to increase or otherwise vary the prices or the total contract value or the quantity, quality, description or value of the said material or to release or to forbear from endorsement of all or any of the obligations of “the Indemnifier” under the said contract (inclusive of anything in respect of “the said material”) and/or to remedies of “the Indemnified” under any other security (ies) now or hereinafter held by “the Indemnified” and no such dealing(s), variations(s), reduction(s), increase (s) or other indulgence (s) or arrangement(s) with “the Indemnifier” or release “the Indemnifier” from their full liability to “the Indemnified” hereunder or of anywise prejudicing rights of “the Indemnified” against “the Indemnifier” and “the Indemnifier” hereby waive all rights, if any, at any time, inconsistent with the terms of this Indemnity.
4. This Indemnity shall not be determined or affected by the liquidation or winding up, dissolution, or change of constitution or bankruptcy or insolvency of “the Indemnifier” and the obligations of “the Indemnifier” in terms hereof shall not be anywise affected or suspended by reason of any dispute or disputes having been raised by “the Indemnifier” (whether now pending before any Arbitrator, Officer, Tribunal or Court) or any denial of liability by “the Indemnifier” or any other order or communication whatsoever by “the Indemnifier” or any other order or communication whatsoever by “the Indemnifier” stopping or preventing or purporting to stop or prevent any payment by “the Indemnifier” to “the Indemnified” in terms hereof.
5. The mere statement made by or on behalf of “the Indemnified” in any notice or demand or other writing addressed to “the Indemnifier” as to any of “the said material” or item or part thereof supplied

to “the Indemnifier” having been lost, damaged, destroyed, misused or misappropriated while in the custody of “the Indemnifier” before or after completion of the completed fabricated work(s) incorporating “the said material” and delivery at job site thereof shall as between “the Indemnifier” and “the Indemnified” be conclusive of the factum of “the said material” or item or part thereof having been supplied to “the Indemnifier” and/or the loss, damage, destruction, misuse or misappropriation thereof, as the case may be, while in the custody of “the Indemnifier” and/or prior to the completion of the completed fabricated work(s) and delivery to job site thereof without necessity on the part of “the Indemnified” to produce any documentary proof or other evidence whatsoever in support of this.

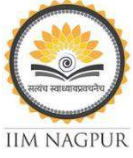
6. The amount stated in any notice of demand addressed by “the Indemnified” to “the Indemnifier” as the value of any of “the said material”, lost, damaged, destroyed or misused or misappropriated, inclusive relative to the cost and expenses incurred by “the Indemnified” in connection therewith shall as between “the Indemnifier” and “the Indemnified” be conclusive of the value of such “said material” and the said costs and expenses as also of the amount liable to be paid by “the Indemnifier” to “the Indemnified” in terms and for the purpose of, without necessity for “the Indemnified” to produce any voucher, bill or other documentation or evidence whatsoever in support thereof.

In witness whereof “the Indemnifier” have hereunto set and subscribed his hand this day and year first hereinabove written in the presence of witnesses.

Yours faithfully,

- 1.
- 2.
- 3.

WITNESSES:



APPENDIX V (FORMAT-I & FORMAT-II)

NOT APPLICABLE - DELETED

PART B

FORMAT-II

NOT APPLICABLE - DELETED



APPENDIX VI
FORMAT-III
NOT APPLICABLE - DELETED

**APPENDIX VII
FORMAT-IV**

NOT APPLICABLE - DELETED



**APPENDIX VIII
FORMAT-V**

NOT APPLICABLE - DELETED

**APPENDIX-IX: PROFORMA OF BANK GUARANTEE
EARNEST MONEY DEPOSIT / BID SECURITY**

(To be submitted on non-judicial stamp paper of appropriate value to be purchased in the name of the issuing Bank)

To
INDIAN INSTITUTE OF MANAGEMENT NAGPUR”
VNIT Campus, South Ambazari Road,
Nagpur, Maharashtra,
India- 440010

BG No.: _____

Date of Issue: _____

Date of Expiry: _____
(5 Months as per provision)

Date of Claim: _____

Bank Name : _____

Dear Sirs,

1. In consideration of “INDIAN INSTITUTE OF MANAGEMENT NAGPUR”, an autonomous institute established in 2015 by Government of India, having its principal office at VNIT Campus, South Ambazari Road, Nagpur, Maharashtra, India- 440010 (hereinafter referred to as the “**Company**” which expression shall unless repugnant to the context or meaning thereof, include all its Successors, Administrators, Executors and permitted Assignees), has floated/issued a Tender/ Bidding Document for

(Name of work)

[Bidding Document No.:

through press notification/ on limited basis, (hereinafter referred to as the “**Tender**” which expression shall include all the amendments thereto) and M/s _____(Name of Bidder) having its Head/Registered Office at

(herein after referred to as the “**Bidder**” which expression unless repugnant to the context or meaning thereof, shall include all its successors, administrators, executors and permitted assignees) have submitted a Bid in response to the Tender enquiry and the Bidder having agreed to furnish as a condition precedent for participation in the said Tender an unconditional and irrevocable Bank Guarantee [hereinafter shall be referred to as this “**Guarantee**”] of value _____[in fig. as per currency indicated in Notice/Letter Inviting Bid] [in words _____] for the due performance of the Bidder’s obligations as contained in the Instructions to Bidder [ITB] and other terms and conditions contained in the Tender document supplied by the Company which amount is liable to be forfeited on the happening of any of the contingencies mentioned in the said Tender document.



2. We _____ (Name of Bank) established /registered under the laws of _____ (Name of the Country and Act/Laws) having its registered office at _____ (hereinafter referred to as the “**Bank**” which expression shall, unless repugnant to the context or meaning thereof, include all its successors, administrators, executors and permitted assignees) do hereby guarantee on behalf of the Bidder and undertake to pay immediately on demand signed by the Company’ s duly authorized officer, to the Company any money or all money up to the extent of the value of this Guarantee, at the time but in any case not exceeding _____ (in Fig. with Currency) _____ (in words with Currency) in aggregate at any time without any demur, reservation, recourse, contest and/or without any reference to the Bidder. Any such demand made by the Company on the Bank shall be conclusive and binding on the Bank irrespective of any dispute or difference raised by the Bidder or any dispute pending before any Court, Tribunal, Arbitrator or any other authority.
3. The Bank confirms that this Guarantee has been issued in accordance with the appropriate laws in India [the country of issue]¹.
1 Note: Please confirm if this is to be India, or any other country would be acceptable.
4. The Bank also agrees that this Guarantee herein contained shall be irrevocable and shall continue to be enforceable in accordance with the Indian Laws and subject to exclusive jurisdiction of Indian Courts as per the conditions stipulated in Tender Document.
5. The Bank also agrees that the Company at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance, without proceeding against the Bidder and without any reference to the Bidder and notwithstanding any security or other Guarantee that the Company may have in relation to the Bidder’ s liabilities.
6. The Bank further agrees that this Guarantee herein contained shall remain in full force up to and including two months after the expiry of the Period of Bid validity i.e. upto _____ [02 Months beyond the bid validity] that is taken as the obligation of the Bidder as per Tender document and it shall continue to be enforceable until all the dues of the Company, if any, under or by virtue of this Guarantee have been fully paid and its claim satisfied or discharged.
7. The Bank further agrees that this Guarantee shall not be determined or affected by the liquidation or winding up, dissolution or change of constitution or insolvency of the Bidder during the period this Guarantee is in force, but shall be in all respects and for all purposes be binding and operative until payment of all money due to the Company in respect of such liability or liabilities is paid or no claim is lodged by the Company to the Bank within the claim period after the Guarantee expires.
8. The Bank further agrees that this Guarantee shall not be affected by any change in the Bank’ s Constitution. The Bank also undertakes not to revoke this Guarantee during its currency.
9. The Bank further agrees that to fulfill the Bidder’ s liability during the bidding process, and if requested by the Bidder in writing, the Bank shall issue an amendment to this Guarantee, as and when required, incorporating the extended date of validity and/or other amendment.
10. Notwithstanding anything contained herein above:
 - a. The Bank’ s liability under this Guarantee is limited to - _____ (in Fig with currency) _____ (in words with currency) in aggregate;
 - b. This Guarantee shall remain in full force up to and including 60 (sixty) days after the expiry of the Period of Bid validity i.e. up to _____ [Date] and any extension(s) thereof on written instruction from the Bidder on whose behalf this Guarantee has been given, in which case it shall remain in full force up to and including 60 (Sixty) days after the extended date; and



c. The Bank shall be released and discharged from all its liabilities and obligations under this Guarantee unless a written claim or demand is issued to the Bank on or before _____[Date] or within the 60 (Sixty) days of the date of expiry of the extended date and the Company's right under this Guarantee will cease.

11. The Bank further agrees that all claims under this Guarantee are payable to the Company in favour of the above said account number at .Nagpur, Maharashtra,

12. The Bank has the power to issue this Guarantee under its Memorandum and Articles of Association and the undersigned is authorized to sign this Guarantee on behalf of the Bank and to bind the Bank thereby.

IN WITNESS whereof, the Bank _____ has executed this Guarantee at _____ (Place) on _____ (Date)

Signed and Sealed by Constituted Attorney
(Signature of a person authorized to sign on behalf of the Bank)

Name:
Designation:
Bank Name:

In presence of witness:

1. Signature _____
Name & Designation:

2. Signature _____
Name & Designation:

[Note: The Bank shall issue the confirmation letter of providing this Guarantee on behalf of the Contractor directly to the beneficiary at the above mentioned address]

**APPENDIX-X : PROFORMA OF CONTRACT AGREEMENT**

This Contract Agreement (“**Contract Agreement**”) for the work OF _____
DATED _____ 20_____(Two Thousand_____) (“**Effective Date**”) between M/s _____ under the Indian Companies Act, and having its registered office at _____ in the town of _____ (hereinafter referred to as the “**Contractor**” which expression shall unless excluded by or repugnant to the subject or context include its successors and permitted assignees) as one part and INDIAN INSTITUTE MANAGEMENT NAGPUR, (hereinafter referred to as “**IIMN**” which term shall, unless excluded or repugnant to the subject or context including its successors and assignees) as other part.

(IIMN and Contractor, are hereinafter collectively referred to as “**Parties**” and individually as “**Party**”)

WHEREAS:

- A.** IIMN being desirous of having provided and executed certain works mentioned, enumerated or referred to in the Bidding Document No. dated (the “**Bidding Document**”, which expression shall include all amendments and/ or modifications thereto) to undertake certain works and services as specified under Bidding Document (the “**Works**”).
- B.** The Contractor has inspected the site and surroundings of the works specified in the Bid Documents and has satisfied himself by careful examination, before submitting his tender, as to the nature of the surface strata, soil, sub-soil and ground, the form and nature of site and local conditions, the quantities, nature and magnitude of the work, the availability of labour and materials necessary for the execution of work, the means of access to site, the supply of power and water thereto and the accommodation it may require and has made local and independent enquiries and obtained complete information as to the matters and things referred to, or implied in the tender documents or having any connection therewith, and has considered the nature and extent of all probable and possible situations, delays, hindrances or interferences to or with the execution and completion of the work to be carried out under the Contract, and has examined and considered all other matters, conditions and things and probable and possible contingencies, and generally all matters incidental thereto and ancillary thereof affecting the execution and completion of the work and which might have influenced him in making his Bid.
- C.** The Contractor submitted the highest evaluated bid, for the provision and the execution of the said Work, at the rates stated in the Schedule of Quantities of Works and finally approved by IIMN (hereinafter called the “**Price Schedule**”) upon the terms and subject to the conditions of Contract, and was selected by IIMN as the selected Bidder vide the Letter of Award/ Fax of Acceptance dated_____.
- D.** IIMN is desirous of granting to the Contractor, and the Contractor is desirous of undertaking for IIMN, the Works, on the on the terms and conditions set forth hereinafter.

NOW THEREFORE, in consideration of the mutual covenants, terms and conditions and understandings set forth in this Agreement and other good and valuable consideration (the receipt



and adequacy of which are hereby mutually acknowledged), the Parties with the intent to be legally bound, hereby agree as follows:

1. In consideration of the payment of the Contract Price, of _____ [*insert amount in figures and numbers*], the Contractor hereby covenants with IIMN that the Contractor shall duly provide, execute and complete the Works and shall do and perform all other acts and things in the Contract mentioned or described or which are to be implied therein or may be reasonably necessary for the completion of the said Works, and at the said times and in the manner and subject to the terms, conditions and stipulations mentioned in the Contract.
2. In consideration of the due provision, execution and completion of the said works, IIMN does hereby agree with the Contractor that IIMN will pay to the Contractor the respective amounts for the Work actually done by it and approved by IIMN at the Schedule of Rates and such other sum payable to the Contractor under the provisions of the Contract; such payment to be made at such time and in such manner as provided for in the Contract.
3. In consideration of the due provision, execution and completion of the said works, the Contractor does hereby agree to pay such sums as may be due to IIMN for the service rendered by IIMN to the Contractor, such as power supply, water supply and others as set forth in the said contract and such other sums as may become payable to IIMN towards the controlled items of consumables materials or towards loss, damage to the equipment, materials, construction plant and machinery of IIMN; such payments to be made at such time and in such manner as is provided in the Contract. It is specifically and distinctly understood and agreed between IIMN and the Contractor, that the Contractor shall have no right, title or interest in the site made available by IIMN for execution of the works or in the building structures or works executed on the said site by the Contractor or in the goods, articles, materials, etc. brought on the said site (unless the same specifically belongs to the Contractor) and the Contractor shall not have or deemed to have any lien whatsoever or any charge for unpaid bills nor will be entitled to assume or retain possession or control of the site or structures and IIMN shall have an absolute and unfettered right to take full possession of the site and to remove the Contractor, his servants, agents and materials belonging to the Contractor and lying on the site.

The Contractor shall be allowed to enter upon the site for execution of the works only as a licensee simplicitor and shall not have any claim, right, title or interest in the site or the structure erected thereon and IIMN shall be entitled to terminate such license at any time without assigning any reason.

The materials including sand, gravel, stone, loose, earth, rock, etc. dug up or excavated from the site shall, unless otherwise expressly agreed under this contract, exclusively belong to the IIMN and the Contractor shall have no right to claim over the same and such excavations and materials should be disposed of on account of IIMN according to the instructions in writing issued from time to time by the Engineer-in-Charge.

4. Each of the Parties agrees and undertakes to perform their respective obligations, and give effect to the rights and entitlements of the other Party, in the manner and subject to the terms, conditions and stipulations mentioned in the Agreement, and to otherwise comply with the terms of the Agreement.
5. The Parties agree and acknowledge that this Contract shall be effective on and from the date of issuance of the Letter of Award/ Fax of Acceptance, i.e. on and from



- 6. All the terms and conditions of the letter of acceptance and its enclosures including bidding document and addendum(s) (if any) thereto shall be applicable and binding on the Parties to this Contract Agreement.
- 7. Capitalized terms utilized herein but not defined shall, unless repugnant to the context thereof, have the meaning ascribed thereto in the Contract.

IN WITNESS whereof the parties have executed these presents in duplicate the day and the year first above written.

SIGNED AND DELIVERED FOR
AND ON BEHALF OF
*CONTRACTOR

SIGNED AND DELIVERED FOR AND ON
BEHALF OF IIMN.

DATE: _____

DATE: _____

PLACE: _____

PLACE: _____

In the presence of :

1. Name: _____

1. Name: _____

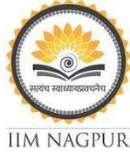
2. Address: _____

2. Address: _____

(Witness)

(Witness)

* In the case of partnership to be signed by all partners or by one partner holding a General Power of Attorney.



APPENDIX-XI : INTEGRITY PACT

To,

.....,
.....,
.....

Sub: SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF
AUDIO VISUAL EQUIPMENTS FOR IIM NAGPUR NEW CAMPUS (PHASE-1) AT MIHAN,
NAGPUR

Dear Sir,

It is here by declared that IIM Nagpur is committed to follow the principle of transparency, equity and competitiveness in public procurement. The subject Notice Inviting Tender (NIT) is an invitation to offer made on the condition that the Bidder will sign the integrity Agreement, which is an integral part of tender/bid documents, failing which the tenderer/bidder will stand disqualified from the tendering process and the bid of the bidder would be summarily rejected.

This declaration shall form part and parcel of the Integrity Agreement and signing of the same shall be deemed as acceptance and signing of the Integrity Agreement on behalf of the IIM Nagpur.

Yours faithfully

Chief Administrative Officer
IIM Nagpur.

INTEGRITY PACT (IP)

(Bidder shall submit the Integrity Pact on a non-judicial stamp paper of ₹100/- duly signed by the person(s) signing the bid)

This Integrity Agreement is made at on this day of
20__

BETWEEN

The Director, IIM Nagpur represented through _____, (Hereinafter referred as the IIM Nagpur, VNIT Campus South Ambazari Road, Nagpur 440010. 'Principal/Owner', which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

AND

.....
.
..... (Name and Address of the Individual/firm/Company)
through.....
. (Hereinafter referred to as the (Details of duly authorized signatory) "Bidder/Contractor" and which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

Preamble

WHEREAS the Principal / Owner has floated the Tender (Bidding document No. IIMN/Project/ICT/2019-20/03) (hereinafter referred to as "Tender/Bid") and intends to award, under laid down organizational procedure, contract for "SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF AUDIO VISUAL EQUIPMENTS FOR IIM NAGPUR NEW CAMPUS (PHASE-1) AT MIHAN, NAGPUR hereinafter referred to as the "Contract".

AND WHEREAS the Principal/Owner values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relationship with its Bidder(s) and Contractor(s).

AND WHEREAS to meet the purpose aforesaid both the parties have agreed to enter into this Integrity Agreement (hereinafter referred to as "Integrity Pact" or "Pact"), the terms and conditions of which shall also be read as integral part and parcel of the Tender/Bid documents and Contract between the parties.

NOW, THEREFORE, in consideration of mutual covenants contained in this Pact, the parties hereby agree as follows and this Pact witnesses as under:

Article 1: Commitment of the Principal/Owner

The Principal/Owner commits itself to take all measures necessary to prevent corruption and to observe the following principles:

1. No employee of the Principal/Owner, personally or through any of his/her family members, will in connection with the Tender, or the execution of the 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;
2. The Principal/Owner will, during the Tender process, treat all Bidder(s) with equity and reason. The Principal/Owner 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.
3. The Principal/Owner shall endeavor to exclude from the Tender process any person, whose conduct in the past has been of biased nature. If the Principal/Owner obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal code (IPC)/Prevention of Corruption Act, 1988 (PC Act) or is in violation of the principles herein mentioned or if there be a substantive suspicion in this regard, the Principal/Owner will inform the competent vigilance official and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures.

Article 2: Commitment of the Bidder(s)/Contractor(s)

1. It is required that each Bidder/Contractor (including their respective officers, employees and agents) adhere to the highest ethical standards, and report to the IIM Nagpur / Department all suspected acts of fraud or corruption or Coercion or Collusion of which it has knowledge or becomes aware, during the tendering process and throughout the negotiation or award of a contract.
2. The Bidder(s)/Contractor(s) commits himself 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/Owner's employees involved in the Tender process or 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 Bidder(s) 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 cartelize 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 the purpose of competition or personal gain), or pass on to others, any information or documents provided by the Principal/Owner 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 names and addresses of agents/representatives in India, if any. Similarly, Bidder(s)/Contractor(s) of Indian Nationality shall disclose names and addresses of foreign agents/representatives, if any. Either the Indian agent on behalf of the foreign principal or the foreign principal directly could bid in a tender but not both. Further, in cases where an agent participates in a tender on behalf of one manufacturer, he shall not be allowed to quote on behalf of another manufacturer along with the first manufacturer in a subsequent/parallel tender for the same item.
- 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.
- f) The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.
- g) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm indulge in fraudulent practice means a willful misrepresentation or omission of facts or submission of fake/forged documents in order to induce public official to act in reliance thereof, with the purpose of obtaining unjust advantage by or causing damage to justified interest of

others and/or to influence the procurement process to the detriment of the IIM Nagpur interests.

- h) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm use Coercive Practices (means the act of obtaining something, compelling an action or influencing a decision through intimidation, threat or the use of force directly or indirectly, where potential or actual injury may befall upon a person, his/her reputation or property to influence their participation in the tendering process).

Article 3: Consequences of Breach

Without prejudice to any rights that may be available to the Principal/Owner under law or the Contract or its established policies and laid down procedures, the Principal/Owner shall have the following rights in case of breach of this Integrity Pact by the Bidder(s)/Contractor(s) and the Bidder/ Contractor accepts and undertakes to respect and uphold the Principal/Owner's absolute right:

1. If the Bidder(s)/Contractor(s), either before award or during execution of Contract has committed a transgression through a violation of Article 2 above or in any other form, such as to put his reliability or credibility in question, the Principal/Owner after giving 14 days' notice to the contractor shall have powers to disqualify the Bidder(s)/Contractor(s) from the Tender process or terminate/determine the Contract, if already executed or exclude the Bidder/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of transgression and determined by the Principal/Owner. Such exclusion may be forever or for a limited period as decided by the Principal/Owner.
2. Forfeiture of EMD/Performance Guarantee/Security Deposit: If the Principal/Owner has disqualified the Bidder(s) from the Tender process prior to the award of the Contract or terminated/determined the Contract or has accrued the right to terminate/determine the Contract according to Article 3(1), the Principal/Owner apart from exercising any legal rights that may have accrued to the Principal/Owner, may in its considered opinion forfeit the entire amount of Earnest Money Deposit, Performance Guarantee and Security Deposit of the Bidder/Contractor.
3. Criminal Liability: If the Principal/Owner obtains knowledge of conduct of a Bidder or Contractor, or of an employee or a representative or an associate of a Bidder or Contractor which constitutes corruption within the meaning of IPC Act, or if the Principal/Owner has substantive suspicion in this regard, the Principal/Owner will inform the same to law enforcing agencies for further investigation.

Article 4: Previous Transgression

- 1) The Bidder declares that no previous transgressions occurred in the last 5 years with any other Company in any country confirming to the anticorruption approach or with Central Government or State Government or any other Central/State Public Sector Enterprises in India that could justify his exclusion from the Tender process.
- 2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the Tender process or action can be taken for banning of business dealings/ holiday listing of the Bidder/Contractor as deemed fit by the Principal/ Owner.
- 3) If the Bidder/Contractor can prove that he has resorted / recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal/Owner may, at its own discretion, revoke the exclusion prematurely.

Article 5: Equal Treatment of all Bidders/Contractors/Subcontractors

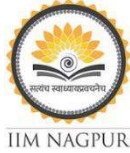
- 1) The Bidder(s)/Contractor(s) undertake(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact. The Bidder/Contractor shall be responsible for any violation(s) of the principles laid down in this agreement/Pact by any of its Subcontractors/sub-vendors.
- 2) The Principal/Owner will enter into Pacts on identical terms as this one with all Bidders and Contractors.
- 3) The Principal/Owner will disqualify Bidders, who do not submit, the duly signed Pact between the Principal/ Owner and the bidder, along with the Tender or violate its provisions at any stage of the Tender process, from the Tender process.

Article 6- Duration of the Pact

This Pact begins when both the parties have legally signed it. It expires for the Contractor/Vendor 12 months after the completion of work under the contract or till the continuation of defect liability period, whichever is more and for all other bidders, till the Contract has been awarded. If any claim is made/lodged during the time, the same shall be binding and continue to be valid despite the lapse of this Pacts as specified above, unless it is discharged/determined by the Competent Authority, IIM Nagpur.

Article 7- Other Provisions

- 1) This Pact is subject to Indian Law, place of performance and jurisdiction is the Headquarters of the Division of the Principal/Owner, who has floated the Tender.
- 2) Changes and supplements need to be made in writing. Side agreements have not been made.
- 3) If the Contractor is a partnership or a consortium, this Pact must be signed by all the partners or by one or more partner holding power of attorney signed by all partners and consortium members. In case of a Company, the Pact must be signed by a representative duly authorized by board resolution.
- 4) Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- 5) It is an agreed term and condition that any dispute or difference arising between the parties with regard to the terms of this Integrity Agreement / Pact, any action taken by the Owner/Principal in accordance with this Integrity Agreement/ Pact or interpretation thereof shall not be subject to arbitration.



Article 8- LEGAL AND PRIOR RIGHTS

All rights and remedies of the parties hereto shall be in addition to all the other legal rights and remedies belonging to such parties under the Contract and/or law and the same shall be deemed to be cumulative and not alternative to such legal rights and remedies aforesaid. For the sake of brevity, both the Parties agree that this Integrity Pact will have precedence over the Tender/Contact documents with regard any of the provisions covered under this Integrity Pact.

IN WITNESS WHEREOF the parties have signed and executed this Integrity Pact at the place and date first above mentioned in the presence of following witnesses:

..... (For and on behalf of
Principal/Owner)

..... (For and on behalf of
Bidder/Contractor)

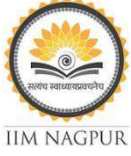
WITNESSES:

1..... (Signature, name and address)

2..... (Signature, name and address)

Place:

Dated:



**SPECIAL CONDITIONS
OF
CONTRACT**

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1.0 GENERAL

- 1.1 The “Owner” shall mean the “INDIAN INSTITUTE OF MANAGEMENT NAGPUR”, an autonomous institute established in 2015 by Government of India, having its principal office at VNIT Campus, South Ambazari Road, Nagpur, Maharashtra, India- 440010 and shall include its successor and assigns (herein after referred as IIM Nagpur or IIMN or Owner).
- 1.2 Engineers India Limited, a company incorporated in India and having its registered office at 1, Bhikaiji Cama Place, New Delhi- 66 is Project Management Consultant (PMC) and shall act as Engineer-in-Charge.
- 1.3 Special Conditions of Contract shall be read in Conjunction with the General conditions of Contract, Schedule of Rates, scope of work , design basis reports, technical specification , Drawings and any other document forming part of this Contract wherever the context so require.
- 1.4 Every part Supplementary: Notwithstanding the sub-division of the document into these separate sections and volumes every part of each shall be deemed to be supplementary to and complementary of every other part and shall be read with and into the Contract so far as it may be practicable to do so.
- 1.5 GCC in variance with SCC: Where any portion of the General Conditions of Contract is repugnant to or at variance with any provisions of the Special Conditions of Contract, then unless a different intention appears, the provision(s) of the special Conditions of Contract shall be deemed to over-ride the provision(s) of the General Conditions of Contract only to the extent that such repugnancy of variations in the Special Conditions of Contract are not possible of being reconciled with the provisions of GCC.
- 1.6 Cost inclusive without specific provision: Wherever it is stated in this Bidding Document that such and such a supply is to be effected or such and such a work is to be carried out, it shall be understood that the same shall be effected/carried out by the CONTRACTOR at his own cost, unless a different intention is specifically and expressly stated herein or otherwise explicit from the context. Contract value (also referred to as Contract Price) shall be deemed to have included such cost.
- 1.7 Materials, design and workmanship: The materials, design and workmanship shall satisfy the applicable relevant Indian Standards, the job specifications (technical) contained herein & codes referred to. Where the job specifications stipulate requirements in addition to those contained in the standard codes and specifications, these additional requirements shall also be satisfied. In the absence of any Standard/ Specifications/Codes of practice for detailed specifications covering any part of the work covered in this Bidding Document, the instructions/directions of Engineer-in-Charge will be binding on the CONTRACTOR.
- 1.8 Absence of any Specifications: In the absence of any Specifications covering any material, design or work(s) the same shall be performed/ supplied/ executed in accordance with CPWD Specifications and/or standard Engineering practice as per the instructions/directions of the Engineer-in-Charge, which will be binding on the CONTRACTOR.
- 1.9 It will be Contractor’s responsibility to bring to the notice of Engineer-In-Charge any irreconcilable conflict in the contract documents before starting the work(s) or making the supply with reference to, which the conflict exists.

2.0 SCOPE OF WORK

The scope of work covered in this contract will be as described in **Annexure-I to SCC**.

3.0 SCOPE OF SUPPLY

The scope of supply covered in this contract will be as described in **Annexure-II to SCC**.

4.0 SUPPLY OF WATER, POWER & OTHER UTILITIES

Provisions of clause no. 9.19 of GCC stands modified to the following extent:

4.1 Construction Water and Construction Power shall not be provided to the Contractor by the Owner. The Contractor shall make his own arrangements for construction water and construction power at his own cost. Contractor shall make his own arrangements for establishing distribution network of Construction Power and water within the quoted rates.

4.2 The contractor shall make necessary efforts to ensure efficient use of potable water during construction and reduce the use of water.

4.3 All supply & installations / fixtures & fittings / cabling for construction power/Water shall be in the scope of the contractor without any additional cost to the Owner.

4.4 If required, the Contractor shall keep acoustic DG sets of adequate capacity at his cost at different locations to keep the work in progress.

4.5 OWNER shall provide space for Contractor field office, fabrication yard and storage yard, labour Hutments etc. only at site as per availability of land (free of cost). Land provided by Owner shall not create any right, title or interest whatsoever in the contract. The CONTRACTOR shall remove all temporary buildings/ facilities etc. immediately after completion of works in all respects.

4.6 Prices quoted by the bidder shall include the above without any additional cost to the Owner

5.0 START DATE OF CONTRACT

5.1 The start date of contract shall be reckoned from date of award of work or handing over of the front, whichever is later.

6.0 TIME OF COMPLETION

6.1 The work shall be executed strictly as per time Schedule mentioned in **Annexure-VIII to SCC**. The period of completion given includes the time required for mobilization as well as, design, engineering, procurement, installation and completion in all respects to the entire satisfaction of the Engineer-in-Charge.

6.2 The Contractor will prepare a programme of execution of work. This programme will take into account the time of completion mentioned above. The same shall be reviewed and approved by Engineer In-charge.

6.3 Monthly / weekly execution/construction programme will be drawn up by the Contractor based on availability of work fronts and the execution/construction programmes as above. The Contractor shall strictly adhere to this Targets/ Programme. Each programme shall be reviewed by Engineer In Charge and the changes in the programme as deemed fit by Engineer In charge, shall be incorporated by contractor and shall strictly adhere to the finalised programme.

- 6.4 Contractor shall give every day report on category wise labour and equipment deployed along with the progress of work done on previous day in the proforma prescribed by the Engineer-in-Charge.
- 6.5 Contractor shall submit the Monthly/Weekly Progress Reports, format for the reports shall be finalized in consultation with Engineer-In-Charge.
- 7.0 TAXES & DUTIES**
- 7.1 Clause No. 19 of GCC, as applicable, regarding Taxes & Duties is partially modified to following extent:
- 7.2 The contract price is inclusive of all taxes, duties, cess, statutory levies and labour cess payable under any law by the contractor in connection with execution of the Contract.
- 7.3 The contractor shall ensure payment of appropriate tax on the supplies made under the contract. The contractor shall take registration under the applicable enactment levying tax on supply of goods or services under the contract and issue invoice having all the particulars prescribed under the applicable provisions of the law, including description of goods/services, rate and amount of tax paid or payable on the supplies made under the contract, so that Owner can avail credit of such tax, wherever applicable. The contractor shall comply with all applicable provision of Goods and Service Tax (GST) levied by Union Government and State Governments (CGST, UTGST, SGST and IGST). The contractor shall get himself registered and discharge his obligations for payment of taxes, filing of returns etc. under the appropriate provisions of law in respect of all the taxes, duties, levies, cess, etc. Owner would have right to seek necessary evidence that the contractor is registered under the law and duly discharging its obligations under the tax law, enabling Owner to avail input tax credit.
- 7.4 In particular, if any tax credit, refund or any other benefit is denied / delayed to Owner due to any non-compliance / delayed compliance by the Contractor under the Goods & Service Tax Act (including but not limited to failure to upload the details of the sale on the GSTN portal, failure to pay GST to the Government or due to non-furnishing or furnishing of incorrect or incomplete documents, non-filing of GST return by the Contractor), the Contractor shall be liable to reimburse Owner for all such losses and other consequences including, but not limited to the tax loss, interest and penalty. Owner shall be entitled to recover such amount from the Contractor by way of adjustment from dues to the contractor, encashment of PBG or by way of any other means
- 7.5 In case any law requires Owner to pay tax on the contract price on reverse charge basis, the amount of tax deposited by Owner would be considered as paid to the contractor and, accordingly, the price payable to the contractor would stand reduced to that extent.
- 7.6 Where Owner has the obligation to discharge GST liability under reverse charge mechanism and Owner has paid or is liable to pay GST to the Government on which interest or penalties including GST thereon becomes payable as per GST laws for any reason which is not attributable to Owner or Input Tax credit (ITC) with respect to such payments is not available to Owner for any reason which is not attributable to Owner, then Owner shall be entitled to deduct/ setoff / recover such amounts against any amounts paid or payable by Owner to Contractor/Supplier.
- 7.7 In case the contractor does not deposit the tax payable on execution of the contract, or has not provided the tax invoice to Owner showing the amount of tax,

- or has not uploaded the document in computerised tax network as per prevailing law, leading to non-availability of inputs credit of the tax to Owner, the amount equivalent to such tax shall be deducted from the contract price. .
- 7.8 Stamp duty and registration charges, if any, payable on the executed contract document, shall be borne by the contractor. .
- 7.9 Tax deduction at source, if any, shall be made by Owner as per law applicable from time to time from the amount payable to the contractor.
- 7.10 The contractor will be liable to ensure to have registered with the respective tax authorities and to submit self-attested copy of such registration certificates and the Contractor will be responsible for procurement of material in its own registration (GSTIN) and also to issue/arrange its own Road Permit/E-way Bill, if applicable, and comply with the statutory Laws of the concerned state.
- 7.11 Any error of interpretation of applicability of taxes/ duties by the contractor shall be to bidder's account. The classification of goods & services as per GST act and charging of correct rate of tax as prescribed under the respective tax laws should be correctly done by the contractor to ensure that input credit benefit is not lost to Owner on account of any error on the part of the Contractor or its Sub-Contractor / Vendor. Owner will not have any additional liability towards payment of applicable taxes & duties as a result of wrong assessment/interpretation of applicable taxes & duties by the bidder. Except as herein specified above, the contractor shall be liable for and shall pay any and all fees, cesses, taxes, duties and levies assessable against contractor in respect of or pursuant to the Contract.
- 7.12 In addition, the Contractor shall be responsible for payment of all duties, levies, and taxes assessable against the Contractor or Contractor's employees or Sub-contractor's whether corporate or personal or applicable in respect of property.
- 7.13 The Contractor shall accept full and exclusive liability at his own cost for the payment of any and all taxes, duties, cesses and levies howsoever designated, as are payable to any government, local or statutory authority in any country other than India as are now in force or as are hereafter imposed, increased or modified and as are payable by the Contractor, his agents, Sub-contractors and Suppliers and its/their respective employees for or in relation to the performance of this Contract. The Contractor shall be deemed to have been fully informed with respect to all such liabilities and shall further be deemed to have considered and included the same in his bid and the quoted Price shall not be varied in any way on this account.
- 7.14 **Tax Deduction at Source (TDS), if applicable**
- 7.14.1 TDS under GST, if applicable, shall be deducted from contractor's/vendor's bill at applicable rate and a certificate as per rules for tax so deducted shall be provided to the contractor/vendor.
- 7.14.2 The CONTRACTOR shall be exclusively responsible and liable to deduct TDS, if applicable, from the sub-contractors / sub-vendors and remit the same to the Govt. within the due date, as per GST legislation(s).
- 7.15 **INCOME TAX**
- 7.15.1 The CONTRACTOR shall be exclusively responsible and liable to pay all direct Taxes, including income tax, profession tax and wealth tax on any payments arising out of the Contract, whether payable in India or in any other jurisdiction.
- 7.15.2 The Indian CONTRACTOR shall be responsible for ensuring compliance with all

provisions of the direct tax laws of India including, but not limited to, the filing of appropriate Returns and shall promptly provide all information required by the Owner for discharging any of its responsibilities under such laws in relation to or arising out of the CONTRACT.

- 7.15.3 Contractor shall indemnify company against any and all liabilities or claims arising out of this contract for such taxes including interest and penalty which any such tax authority may assess or levy against the Owner.
- 7.15.4 Tax shall be deducted at source by Owner from all sums due to an Indian tax resident Contractor—in accordance with the provisions of Indian Income Tax Act/Rules as in force at the relevant point of time.
- 7.15.5 Corporate Tax Liability, if any, shall be to Contractor's account.
- 7.15.6 Owner shall issue a Tax deduction certificate to the Contractor evidencing the Tax deducted or withheld and deposited by Owner on payments made to the Contractor to enable the Contractor to claim the credit of the Tax deducted by Owner.

7.16 **CONSTRUCTION WORKERS CESS / LABOUR CESS**

- 7.16.1 The Contractor shall comply with the Building and Other Construction Workers' Welfare Cess Act, 1996, the Building and other Construction Workers' Rules, 1998 and the Building and Other Construction Workers Welfare Cess Rules, 1998.
- 7.16.2 Prices quoted by the bidder shall deemed to be inclusive of construction workers cess / labour cess.
- 7.16.3 Cess as per the prevailing rate, shall be deducted at source from bills of the Contractor and remitted to the "Secretary, Building and Other Construction Workers Welfare Board" of the concerned State by the Owner as per the regulations. The Contractor shall be responsible to submit final assessment return of the cess amount to the assessing officer after adjusting the cess deducted at source.

7.17 **CUSTOMS DUTY**

- 7.17.1 Custom duty should be included in the quoted price of the contractor after considering all eligible input tax credit to the contractor/vendor.
- 7.17.2 Owner shall not provide any documents for availing concessional rate of Basic Custom duty. Bidder shall ascertain the applicable Rate of custom duty and shall be solely responsible towards applicability and correctness of such rates. No statutory variation on the customs duty will be applicable. Prices quoted by the Bidder shall deemed to be inclusive of Basic Customs duty (as above), Custom Educational Cess (including higher educational cess) and GST as applicable on import of materials.
- 7.17.3 All demurrage, wharfage and other expenses incurred due to delayed clearance of goods, or for any other reasons, either at Indian port of entry, or at any clearing point, shall be to Contractor's account. Contractor shall be solely responsible for making all necessary arrangements for complying with all necessary formalities at the Indian port of entry.
- 7.17.4 The Contractor shall be responsible for, and shall exercise due diligence in properly classifying the goods, undertaking the payment of Custom Duties, and / or otherwise complying with all applicable laws with respect to any import of the

goods. In case Owner is exposed to any penal action (interest and / or penalties) by the Custom authorities for incorrect declaration and / or valuation of goods by the Contractor, or otherwise on account of any breach of applicable law in the course of import of goods, the Contractor shall indemnify and hold Owner harmless for any and all costs, expenses or losses suffered or incurred by Owner in this regard.

7.18 STATUTORY VARIATION

No variation on account of taxes and duties, statutory or otherwise, shall be payable to Contractor except for the following:

7.18.1 Variation due to taxes & duties (GST)

- i) GST: If after the due date of submission of last price bid and up to the contractual completion period (including extended contractual completion period for the reasons not attributable to Contractor or due to Force Majeure condition), any increase/decrease occurs in the applicable rate of GST, the variation in such GST shall be to Owner's account and shall be adjusted (increase/decrease) to /from the Contractor's Bills/invoices based on the documentary evidence.
- ii) Any increase in GST after the contractual completion period (including extended contractual completion period for the reasons attributable to the contractor) shall be to Contractor's account. However, any decrease in the rate of GST shall be passed on to Owner.

Note: Statutory variations on IGST {included in quoted prices) in case of imported materials from outside India in Contractor's name {i.e., for Indian Bidders) shall be to Contractor account.

7.19 New Taxes & Duties

All new taxes, duties, cess, levies notified or imposed after the due date of submission of bids but within Time for Completion / extended Time for Completion (by Owner due to reason attributable to Owner or due to Force Majeure condition), shall be to Owner's account. These shall be reimbursed against documentary evidence.

However, in case of delay attributable to contractor, any new or additional taxes and duties imposed after Time for Completion, as above, shall be to contractor's account.

However, if such new taxes are in substitution of other taxes, nothing shall be paid extra on this account.

8.0 FIRM PRICE

8.1 The contracted prices shall be firm and fixed till the completion of works in all respect and no escalation in prices on any account shall be admissible to the contractor except Statutory Variation due to taxes & duties as per clause **7.18**, specified above

8.2 No escalation in prices shall be allowed for any fluctuation in the market costs of labour or materials or consumables required for completion of works in all

respects and till the completion of works in all respects. No escalation shall be applicable on this contract.

- 8.3 Price quoted by the contractor will be valid for a duration of one year after completion of this contract, which will be invoked for repeat order if necessitated.

9.0 PROVIDENT FUND

- 9.1 The Contractor shall strictly comply with the provisions of Employees Provident Fund Act and register themselves with RPFC before commencing work. The Contractor shall deposit Employees and Employers contributions to the RPFC every month. The Contractor shall furnish along with each running bill, the challan/ receipt for the payment made to the RPFC for the preceding months.

10.0 MOBILISATION ADVANCE

- 10.1 Mobilization advance shall be granted in line with the provisions of clause 20.1 of GCC and modified to the extent as indicated below:

Contractor shall be paid recoverable interest bearing Mobilization Advance against bank guarantee up to maximum of 10 % of the Contract Price (excluding cost towards Operation & Maintenance Phase) as per the provisions of General Conditions of Contract (GCC) against the submission of Mobilization Advance Guarantee in accordance with proforma enclosed with General Conditions of Contract.

The mobilization advance will attract interest rate @ 9% p.a. on reducing balance basis.

On Contractor's request, Part Bank guarantee(s) submitted by Contractor against mobilization advance may be released to the contractor upon 100% recovery of commensurate part instalment of mobilization advance including interest.

The mobilization advance paid to the contractor shall be used for execution of this contract only and the contractor shall be required to furnish details of expenditure incurred towards mobilization within two months of receipt of the mobilization advance, failing which Owner reserve the right to deduct/encash the Bank Guarantee to the extent mobilization advance has not been utilized.

- 10.2 Mobilization Advance shall not be payable on Operation and Maintenance price.

11.0 STATUTORY APPROVALS

- 11.1 Obtaining statutory approvals, required as defined in Contractor's scope under Technical Scope of Work and/or as required pertaining to the execution of the scope of work defined in this contract, shall be the responsibility of the Contractor. Contractor shall arrange the inspection of the works by the authorities and necessary co-ordination and liaison work in this respect. The application on behalf of the Owner for submission to relevant authorities along with copies of required certificates complete in all respects shall be prepared and submitted by the Contractor well ahead of time so that the actual construction / commissioning of the work is not delayed for want of the approval / inspection by concerned authorities.

11.2 Statutory fee paid, if any, for all such inspections and approvals by authorities shall be deemed to be included in the quoted prices, if not specified otherwise.

11.3 All statutory approvals other than specified under 11.1 above shall be obtained by Owner.

12.0 INSTALLATION / CONSTRUCTION EQUIPMENT AND ORGANIZATION

Provisions of GCC stands modified to the following extent:

12.1 CONSTRUCTION EQUIPMENT

12.1.1 The Contractor shall without prejudice to his overall responsibility to execute and complete the work as per specifications and time schedule, progressively deploy Installation/ Construction equipment and tools & tackles as specified elsewhere in the Bidding Document as and when required and augment the same as decided by the Engineer-in-Charge depending on the exigencies of the work so as to complete all works within the contracted time schedule and without any additional cost to Owner. No installation/ construction equipment shall be supplied by the Owner.

12.2 SITE ORGANISATION

12.2.1 Subject to the provisions in the contract document and without prejudice to Contractor's liabilities and responsibilities to provide adequate qualified skilled, semiskilled and unskilled personnel on the work. The contractor shall also deploy the Indicative Key Supervisory Personnel as specified in **Annexure-VII to this SCC** and augment the same as decided by the Engineer-in-Charge depending upon the site requirement & the exigencies of work so as to complete all works within the contracted time schedule and without any additional cost to OWNER.

12.2.2 Qualification and experience requirement and penalty for non-mobilization of Key Supervisory Personnel to be deployed for this work shall be as per **Annexure-VII to this SCC**.

13.0 MEASUREMENT OF WORKS

13.1.1 In addition to the provisions of relevant clause of General Conditions of Contract (GCC) and associated provisions thereof, the provisions of **Annexure-VI to SCC** shall also apply.

14.0 TERMS OF PAYMENT

14.1 Basis and terms of payment for making "On Account Payment" shall be as set out in **Annexure-V to SCC**. All payments will be made through EFT (Electronic Fund Transfer).

15.0 ROUNDING OFF

15.1 All payments to and recoveries from the bill of CONTRACTOR shall be rounded off to the nearest Rupee. Wherever the amount to be paid/ recovered consists of a fraction of a Rupee (Paise), the amount shall be rounded off to the next higher rupee if the fraction consists of 50 (fifty) paise or more and if the fraction of a Rupee is less than 50 (fifty) paise, the same shall be ignored.

16.0 QUALITY ASSURANCE/ QUALITY CONTROL

Clause No. 9.18 of GCC regarding Quality Management System is partially modified to following extent:

- 16.1 The Contractor shall establish and maintain an effective quality assurance system outlined in recognised codes and as per the direction of Engineer in charge.
- 16.2 In case contractor fails to follow the instructions of Engineer-in-charge with respect to above clauses, next payment due to him shall not be released unless until he complies with the instructions to the full satisfaction of Engineer-in-charge.
- 16.3 The Contractor shall adhere to the quality assurance system as per Specification enclosed in the Bidding Document as **Annexure-III to SCC.**
- 16.4 After the award of the contract, detailed quality assurance programme to be followed for the execution of contract shall be submitted by CONTRACTOR.

17.0 HEALTH SAFETY AND ENVIRONMENT (HSE) MANAGEMENT

- 17.1 The Contractor, during entire duration of the Contract, shall adhere to HSE requirement as enclosed in the Bidding Document as **Annexure-IV to SCC.**
- 17.2 **Safety Regulations**
The Contractor shall abide by all safety regulations and ensure that safety equipment for specific job as stipulated in the factory act/ safety handbook is issued to workers during execution of work, failing which all the works at site shall be suspended.
- 17.3 **Security**
The Contractor shall make proper security arrangement at his own cost for the materials at site & the works till Handing Over of the works to the Owner.

18.0 LIGHTING ARRANGEMENT AT SITE

- 18.1 The contractor shall provide uninterrupted lighting of the work place and surrounding areas during the night hours. No additional payment shall be made on this account and the cost in this regard is deemed to be included in the quoted rates/price.

19.0 COORDINATION WITH OTHER AGENCIES

- 19.1 Work shall be carried out in such a manner that the work of other agencies operating at the site is not hampered due to any action of the contractor. The Contractor shall provide their inputs to the Civil and Furniture contractors regarding any fixtures/ fittings etc. related to AV Works and the Civil and Furniture works contractor shall also share their inputs related to AV Works to ensure smooth completion of works. Proper coordination with other agencies will be Contractor's responsibility. In case of any dispute, the decision of Engineer-in-Charge shall be final and binding on the Contractor.
- 19.2 If and when required for the coordination of the works with other agencies involved at site, the CONTRACTOR shall within the scope of work, re-route and/or prepare approaches and working areas as may be necessary.
- 19.3 The Contractor shall furnish inputs/interface requirements of AV Works with other works for incorporation/use of other agencies in timely manner.

20.0 EMPLOYMENT OF LOCAL LABOUR

- 20.1 The CONTRACTOR shall ensure that local labour, skilled and/or unskilled, to the extent available shall be employed in this work. In case of non-availability of suitable labour in any category out of the above persons, labour from outside may be employed.
- 20.2 The CONTRACTOR shall not recruit personnel of any category from among those who are already employed by the other agencies working at site but shall make maximum use of local labour available.

21.0 MAKE OF MATERIALS

- 21.1 The materials required to be supplied by the Contractor under this contract shall be procured only from approved vendors (List of approved manufacturer/makes are enclosed in Technical Part of the bidding document). Where the makes of materials are not indicated in the Bidding document Contractor shall furnish the details of makes and shall obtain prior approval of Engineer-in-Charge of vendors / sub vendors before placing order.

22.0 GENERAL GUIDELINES DURING AND BEFORE ERECTION

- 22.1 The CONTRACTOR shall be responsible for organising the lifting of the material/equipment/AV Works in proper sequence for orderly progress of the work and to ensure that access routes for erecting the other materials/equipments/AV Works are kept open. The installation of AV Works at different floor levels /terrace and at basement shall be carried out by contractor with due care not to damage the existing finishes of the building and shall augment if required, necessary machineries/lifting crane for installation purpose. The quoted prices shall include the cost towards the same.
- 22.2 Orientation of all foundations, elevations, lengths and disposition of anchor bolts and diameter of holes in the supports and saddles shall be checked by the CONTRACTOR well in advance of the installation. Rectifications, including chipping of foundations, shall be carried out where necessary in consultation with the Engineer-in-Charge. If a structural member needs to be dismantled to facilitate the material/equipment erection, this shall be done by the CONTRACTOR after ensuring proper stability of the main structure in consultation with the Engineer-in-Charge. All such dismantled members shall be put back in position to the satisfaction of Engineer-in-Charge after the completion of the material/equipment erection.
- 22.3 During the performance of the work the CONTRACTOR shall at his own cost keep structures, materials and equipment adequately braced by guys, struts or other approved means which shall be supplied and installed by the CONTRACTOR as required till the installation work is satisfactorily completed. Such guys, shoring, bracing, strutting, planking supports etc. shall not interfere with the work of other agencies and shall not damage or cause distortion to other works executed by the CONTRACTOR or other agencies.
- 22.4 The CONTRACTOR shall duly comply with manufacturer(s) recommendations and detailed specifications for the installation of the various equipment and machines.
Various tolerances required as marked on the drawings and/or in accordance with the specifications and/or instructions of the Engineer-in-charge shall be maintained. Verticality shall be verified with the appropriate mechanism and shall be maintained.

23.0 REGISTRATION OF THE CONTRACT WITH STATUTORY AUTHORITIES

23.1 Before submission their first invoice for Running payment, the Contractor shall register themselves and the contract at their own cost with the Reserve Bank of India, Income Tax, GST and such other statutory authorities, as may be required under the rules and regulations governing in India. The Contract Price shall be deemed to include all costs towards the same. A copy of all documents related to all such registration shall be submitted to Owner for record.

24.0 SECURED ADVANCE ON MATERIALS

24.1 No Secured Advance shall be Applicable on any items of work/ material for this contract.

25.0 PRICE REDUCTION SCHEDULE

25.1 PRICE REDUCTION DUE TO DELAY IN COMPLETION OF WORK

25.1.1 The existing clause no. 13.2.1 of GCC stands replaced with following:

If the Contractor fails to complete the Works within the Time for Completion, and/or if completion of any specific work(s) in respect of which a separate progress schedule has been established is not achieved by the date of completion thereof specified in the Works Completion Schedule (each of the said date(s) is hereinafter referred to as the “starting date for discount calculation) other than due to an event of Force Majeure or any reason solely attributable to OWNER, then the Contract Price (excluding cost towards Operation & Maintenance Phase) shall be reduced by 0.5 % (Point Five percent) per week of delay or part thereof subject to a maximum deduction of 5% (Five percent) of the Contract Price (excluding cost towards Operation & Maintenance Phase). After any adjustments made to the Contract Price pursuant to the Clause 13.2.1 of GCC , if any amount is due to OWNER from the Contractor, then such amount will either be set-off against any amount due or that becomes due to the Contractor or be recovered by invoking the Contract Performance Bank Guarantee.

The decision of the Engineer-in-Charge/IIMN in regard to applicability of price reduction shall be final and binding on the Contractor.

25.1.2 Without prejudice to the above Clause, the bidder shall note that the following intermediate milestone is also to be achieved. In case of any failure to achieve the milestone within the stipulated period, the Contract price (excluding cost towards Operation & Maintenance Phase) shall be reduced by the following:

S.N.	Intermediate Milestone	Time of completion from contract start date	Contract Value/price to be reduced by following Percentage
1	Supply, Installation, Testing & Commissioning of Audio Visual Equipments as per scope of work, specifications, SoR etc for Priority-1 Buildings as below: (i.e Admin Block, Faculty block, Multi-Purpose Exam Hall, Academic Block – North, Academic Block- South, Student & Faculty Dining, Essentials & Health Centre, Hostel P1,	40 days	1%

	Hostel P2, Estate Manager Office, Visitor Centre, Guard Room, Services Plant Room & Engg Centre and Service Plant Room Resd. Area.)		
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Amounts shall be deducted from the Contractor's R. A bills for failure to achieve the milestones by the Contractor due to any reason whatsoever, other than due to an event of Force Majeure or any reason solely attributable to Owner.

The decision of the Engineer-in-charge shall be final and binding on the contractor w.r.t assessment whether the milestone was achieved by the contractor or not.

The deduction of amount on failure to achieve the milestone shall be automatic without any notice to the contractor.

The deductions towards non-achievement of milestone shall not be in addition to the "Price reduction" mentioned at Clause 24.1.1 above and the overall liability of the contractor towards "Price reduction" shall be limited to 5.0 % of the Contract value.

25.1.3 Following new Sub-Clause 13.2.5 is added in Clause 13.2 of GCC:

"Also in case Time extension is granted during execution of the contract pending detailed delay analysis, Payment against RA bill shall be released to the contractor without deducting PRS subject to condition that Contractor submits the additional BG to cover the PRS amount or on certification of Engineer –In-Charge that sufficient amount for deduction of PRS is available on account of work done, in the eventuality of applicability of PRS."

26.0 PRICE REDUCTION DURING DEFECT LIABILITY PERIOD (DLP) AND OPERATION AND MAINTENANCE PERIOD

26.1 In case it is observed that contractor, during DLP and/or O&M period, fails to attend the Operation of equipment/systems and/or rectification /complaint within the prescribed/reasonable time to the full satisfaction of the OWNER/IIMN, then the Owner/IIMN shall be at full liberty to impose a price reduction of Rs.5000/- per day per complaint. The penalty/price reduction shall be affected from the amounts kept under hold towards the DLP/O&M or from the Bank Guarantee submitted towards DLP/O&M. In case deficiencies persist the Owner shall be at full liberty to get the rectification executed at the Risk and Cost of The Contractor.

26.2 The cumulative maximum deduction on account of failure to attending the complaints during DLP/ O&M period shall be limited to 10.0% of the Contract Price for O&M Phase (i.e Part B of SOR).

27.0 INSURANCE

The existing clause no. 30 of GCC stands replaced with following:

27.1 Before commencing the execution of work, the Contractor shall obtain "Contractor's All Risk" (CAR) Policy for the contract value at his own cost & expense in the joint names of Owner & Contractor (Owner shall be the first beneficiary).

27.2 All other insurance required under Indian Law and Regulations including workmen compensation, employer's liability insurance, Third Party Liability etc. if these are not covered in "CAR" policy shall be taken by Contractor. The Contractor shall keep all the Insurance Policies as mentioned above valid till the Completion of work.

28.0 CONTRACT PERFORMANCE BANK GUARANTEE / SECURITY DEPOSIT

28.1 CONTRACT PERFORMANCE BANK GUARANTEE / SECURITY DEPOSIT (CPBG/ SD) FOR EXECUTION PHASE (i.e. PART-A OF SOR)

Clause No. 9.4.2 of GCC regarding Contract Performance Bank Guarantee is replaced as follows:

- 28.1.1 The Contractor shall within 15 days of **start date of contract**, deposit with the OWNER an interest free Security Deposit (SD) for an amount equivalent to 10% of the contract value excluding cost towards Comprehensive Operation & Maintenance in the form of Bank draft/ Pay Order/ Bank Guarantee (BG). If the Security Deposit is submitted in the form of Bank Guarantee, the bank guarantee towards security deposit shall be from a Scheduled Bank and kept valid till 3 months beyond the expiry of the Extended Defects Liability period. It shall be submitted as per the format included in the Bidding document. Alternatively, Contractor shall have the option of converting the EMD into initial Security deposit. In such a case, Contractor shall, within 15 days of issue of FOA / LOA, furnish a letter exercising the option of converting EMD in to Initial Security deposit. The Bank Guarantee furnished towards EMD shall appropriately be amended including extension till three months beyond the expiry of the Extended Defects Liability period for claim period so that the same can be treated as initial security deposit. MSME Bidder/Bidders who are exempted from EMD shall have option of submitting BG equivalent to the EMD amount as an initial security Deposit under this clause.
- 28.1.2 In addition to the above initial security deposit, from each RA bills a differential amount in percentage (equal to 10% of estimated contract value minus EMD amount) shall be deducted towards security deposit @ 10% from each RA bill till the entire CPBG amount is recovered . Thus, RA bill payments shall be released to the Contractor after deduction of the security deposit. Non-refundable interest @ 9% p.a. shall be charged from the date the BG towards security deposit becomes due and shall be chargeable on the reducing balance left after apportioning the SD amount accumulated from each running bill, till complete SD amount of 10% is recovered from the bills.
- 28.1.3 However, contractor shall have the option to submit a BG towards SD valid till 3 months beyond the expiry of the Extended Defects Liability period for claim period, for an amount equivalent to 10% of contract value at any time during the pendency of the contract. Pursuant to this, the amount so far retained in lieu of security deposit along with BG towards initial security deposit shall be released immediately. The interest so charged shall not be refunded.
- 28.1.4 In case contractor do not opt for submission of BG towards security deposit till completion of works, the amount retained on account of SD along with BG towards initial security deposit, shall be released only after expiry of the Extended Defects Liability period and settlement of all dues in all respects, to the satisfaction of the Engineer-in-Charge and submission of 'No dues Certificate' & 'No claim Certificate' by the Contractor. The Owner reserves the right to deduct any amount due to the Owner from the Security Deposit at the time of expiry of Contract/ Termination of Contract.
- 28.1.5 The Bank guarantee towards SD (or the Initial Security deposit, as the case may be) shall be extended by such period as Owner may require if the completion is delayed/ extended beyond the schedule time as per direction of the Engineer-in-Charge. In the event, if Contract Price is increased during the Contract Validity Period for any reason whatsoever, the value of the Bank Guarantee towards SD

shall be increased proportionately by the Contractor within 7 (Seven) Days to ensure that it remains valid for an amount which is equivalent to 10% of the revised Contract value, as determined by the engineer-in-Charge else amount equivalent to the 10% of such differential between estimated Contract value and executed Contract value shall be withheld/ deducted from the RA bills on account of increase in SD.

- 28.1.6 If the Contractor fails to provide, maintain or renew the Security Deposit in accordance with the Contract, then Owner may, without prejudice to any other rights and remedies, to which it may be entitled, by giving written notice, terminate the Contract forthwith.
- 28.1.7 In case Contractor does not furnish Bank guarantee towards security deposit as per clause 28.1 or does not exercise the option of converting EMD towards Initial security deposit as per clause 28.2 above, then the EMD submitted by the contractor shall be liable to be forfeited.
- 28.1.8 In case Contractor, after confirming that he will exercise the option of converting EMD into initial security deposit, does not submit the amended bank guarantee, payment shall not be released unless the amended BG is submitted, unless full amount of security deposit along with accrued interest thereon is recovered from the running bill.
- 28.1.9 Contract Agreement shall be signed on receipt of SD from the contractor or a letter from him exercising the option of converting EMD into initial security deposit.

28.2 **PERFORMANCE BANK GUARANTEE / SECURITY DEPOSIT (SD) FOR COMPREHENSIVE OPERATION & MAINTENANCE PHASE (i.e. PART-B OF SOR)**

- 28.2.1 The Contractor, at least 30 days in advance of completion of defect liability period of work, shall submit to Owner a Security Deposit in favour of IIM Nagpur towards Comprehensive Operation & Maintenance Work in form of Bank Draft/Pay Order/Bank Guarantees for value of 10% of operation & maintenance phase cost (i.e. Part-B of SOR), valid upto a period of 3 (three) months beyond the end of the Operation & Maintenance period. If the SD is submitted in the form of BG, the same shall be submitted from any Indian Scheduled bank in an approved format provided by Owner.
- 28.2.2 This PBG/SD for comprehensive maintenance shall be in addition to the SD submitted earlier (in line with Cl. No. 28.1 of SCC) towards the performance of the Contract during Construction/Supply & Installation works and defect liability period
- 28.2.3 The CPBG/SD submitted by the Contractor for the Contract (in line with Cl. No. 28.1 of SCC) shall be released after expiry of defect liability period plus 3 months and submission of the SD for Operation & Maintenance Phase. In case the Contractor fails to submit the required SD for comprehensive operation & maintenance phase, Owner reserve the right to revoke the CPBG submitted earlier for execution of the contract, as mentioned at Cl. No. 28.1 of SCC, and recover the required amount towards SD for comprehensive maintenance.
- 28.2.4 In case of non-fulfillment of contractual obligation by the Contractor during

comprehensive operation & maintenance period, Owner at its sole discretion, may revoke the SD for comprehensive operation & maintenance phase in part or full after serving one month's written notice to the Contractor. Owner also has the right to forfeit the comprehensive operation & maintenance phase SD in the event the Contractor withdraws from the Contract on a later date during the comprehensive operation & maintenance period in addition to the recovery from other dues from the Contractor.

28.2.5 The SD for comprehensive maintenance shall be returned to the Contractor by Owner on successful completion of comprehensive operation & maintenance.

29.0 ALTERATION IN SPECIFICATIONS, PLANS, DRAWINGS AND DESIGNS, EXTRA-WORKS

29.1 Provisions mentioned in the General Conditions of Contract (GCC) stands modified to the following extent:

29.2 The work covered under this contract having to be executed by the Contractor on a lumpsum firm price / item rate quoted by him, Owner / EIL will not accept any proposals for changes in value of contract or extension in time on account of any such changes which may arise to the Contractor's scope of work as a result of detailed engineering and thereafter during the execution of Work. The only exception to this will be case where Owner / EIL requests in writing to the Contractor to upgrade the specifications or the size of any major pieces of equipments, plant or machinery beyond what is normally required to meet the scope of work as defined in the Contract document.

In such cases, a change order will be initialled by the Contractor at the appropriate time for Owner's / EIL's prior approval giving the full back-up data for their review and for final settlement of any impact on price within 30 (thirty) days thereafter.

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

a) If the rates for the additional, altered or substituted WORK are specified in the CONTRACT for the WORK, the CONTRACTOR is bound to carry on the additional, altered or substituted WORK at the same rates as specified in the CONTRACT.

b) If the rates for the additional, altered or substituted WORK are not specifically provided in the CONTRACT for the WORK, the rates will be derived from the rates for similar class of WORK as are specified in the CONTRACT for the WORK. The opinion of the ENGINEER-IN-CHARGE, as to whether or not the rates can be reasonably so derived from the items in this CONTRACT will be final and binding on the CONTRACTOR.

c) If the rates for the altered, additional or substituted WORK cannot be determined in the manner specified in sub-clause (a) and (b) above, then the CONTRACTOR shall, within 7 days of the date of receipt of instruction to carry out the WORK, inform the ENGINEER-IN-CHARGE of the rates which it is his intention to charge for such class of WORK, supported by analysis of the rate or rates claimed, and the ENGINEER-IN-CHARGE shall determine the rate or rates on the basis of the prevailing market rates, labour cost at schedule of labour rates plus 15% to cover contractor's supervision, overheads and profit and pay the CONTRACTOR accordingly. The opinion of the ENGINEER-IN-CHARGE as to current market rates of materials and the quantum of labour involved per unit of measurement will be final and binding on the CONTRACTOR.

d) Where the item of work will be executed through nominated specialist agency as approved by the ENGINEER-IN-CHARGE, then the actual amount paid to such nominated agency supported by documentary evidence and as certified by ENGINEER-IN-CHARGE shall be considered plus 15% (Fifteen percent) to cover all contingencies, overhead, profits to arrive at the rates.

e) Provisions contained in the Sub-clause (a) & (d) above shall, however, not apply for the following:-

Where the value of additions of new items together with the value of alterations, additions/deletions or substitutions does not exceed plus (+) 50% or is not less than minus (-) 25% of the VALUE OF CONTRACT, the item rates in the Schedule of Rates shall hold good for all such variations between the above mentioned limits, irrespective of any increase/decrease of quantities in the individual items of Schedule of Rates. Where the value of addition of new items together with the value of alterations, additions/deletions or substitutions reduces more than 25% of the contract value but is within the following limits the tenderer shall be paid compensation for decrease in the value of work, as follows:

S.No.	Range of Variation	Percentage compensation for decrease in the value of work in the respective
a)	Between (-) 25% up to & inclusive of (+) 50%	No increase/decrease applicable for the Schedule of Rates (The rates of the Schedule of Rates shall be valid for this increase/decrease).

	Beyond (-) 25% upto & inclusive of (-) 50%	For reduction beyond -25% contractor shall be compensated by an amount equivalent to 10% of the reduction in value of the contract as awarded. For example if the actual contract value is 70% of awarded value then compensation shall be 10% of (75-70) i.e. 0.5% of awarded contract value.
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30.0 ALTERNATIVE DISPUTE RESOLUTION

30.1 Clause 32.3.1 of GCC stands replaced with following:

If the Contractor is a CPSU or CPSE or is a Govt. Department, any disputes or differences the Contractor and Owner hereto arising out of any notified claim of the Contractor in terms hereof and/or arising out of any amount claimed by Owner (whether or not the amount claimed by Owner or any part thereof shall have been deducted from the final bill of the Contractor or any amount paid by Owner to the Contractor in respect of the work), then in suppression of the provisions of clause no 32.2 of the General Conditions of Contract, the following provisions shall apply, namely; such disputes or differences shall be resolved amicably by mutual consultation or through the good offices or empowered agencies of the Government. If such resolution is not possible, then the unresolved disputes or differences shall be referred by either party for Arbitration to the sole Arbitrator in the Department of Public Enterprises to be nominated by the Secretary to the Government of India in-charge of the Department of Public Enterprises in line with applicable DPE guidelines for settlement of commercial disputes between CPSEs or between CPSEs & Government Departments issued by Department of Public Enterprises and as modified from time to time. The Arbitration and Conciliation Act, 1996 shall not be applicable to the arbitration under this clause. The award of the arbitrator shall be binding upon parties to the dispute, provided, however any party aggrieved by such award may make a further reference for setting aside or revision of the award to Law Secretary, Department of Legal Affairs, Ministry of Law & Justice, Government of India. Upon such reference the dispute shall be decided by the Law Secretary or the Special Secretary/Additional Secretary, when so authorized by the Law Secretary, whose decision shall bind the parties finally and conclusively. The parties to the dispute will share equally the cost of arbitration as intimated by the arbitrator.

31.0 SECURITY AND SECURITY ARRANGEMENT

31.1 The Contractor for its own interest shall make adequate security arrangement for protection of the work site and to prevent unauthorised entry to protect their materials and equipment at no extra cost to the Owner. Entry into the site area may be restricted.

31.2 If at any place/site, entry is restricted by the Owner / EIL, the CONTRACTOR shall then arrange to obtain through the Engineer-in-Charge, well in advance, all necessary entry permits/ gate passes for his staffs and labourer and entry and exit of his men and materials shall be subject to vigorous checking by the security staff. The CONTRACTOR shall not be eligible for any claim or extension of time

whatsoever on this account.

- 31.3 The Contractor shall at his own cost construct their centralized store for safe keeping of the materials/equipment and for proper accounting of the material/equipment being used in this project.

32.0 SUB CONTRACTING

- 32.1 If the CONTRACTOR is required to engage a Sub-Contractor for any part of work, then such Sub-Contractors shall have prior proven experience of similar work and shall require specific approval by Engineer-in-charge.
- 32.2 Following the notification of Acceptance of Bid the CONTRACTOR will submit to the Owner/ENGINEER-IN-CHARGE for prior approval the details of Sub-Contractors for as per the format attached with SCC (**Annexure- IX** to SCC). CONTRACTOR shall ensure that very competent and resourceful agencies with proven track record and performance should be proposed for the work to be sub-contracted.
- 32.3 However, **approval of subcontracting a job to an agency does not and shall not relieve the responsibility of the Contractor from his obligations and liabilities under the Contract including timely completion of the job with desired quality as per terms and conditions of the Contract.** In such event, the Contractor shall take full control of their subcontractors' performance and shall be responsible to provide all technical, financial and infrastructure support as required from time to time for the best interest of the project irrespective of the fact that such provision is within or not in the scope of the Contractor after subcontracting it to their subcontractor. The Engineer-in-charge's decision for approving a subcontractor shall be final and binding on the Contractor.

33.0 SAMPLES OF MATERIALS

- 33.1 The contractor shall submit to the Engineer-in-Charge samples of materials as per specifications to be used in the work for approval before bringing bulk supplies and before commencing the work. These approved samples shall be preserved and retained in the custody of the Engineer-in-Charge as standard of materials till the completion of the work. The cost of such samples shall be borne by the contractor and nothing shall be payable on this account.
- 33.2 Sub-standard Material/ Work: In case any material/ work is found sub-standard the same shall be rejected by the Engineer-in-Charge and the same shall be removed from the site of work within 48 hours, failing which the same shall be got removed by the Engineer-in-Charge at the risk and cost of the contractor without giving any further notice and time.
- 33.3 Testing of Materials: Even ISI marked materials may be subjected to quality test at the discretion of the Engineer-in-Charge besides testing of other materials as per the specifications described for the item/ material. Whenever ISI marked materials are brought to the site of work the contractor shall, if required by the Engineer-in-Charge, furnish manufacturer test certificate or test certificate from approved testing laboratory (NABL Accredited Laboratory) to establish that the material procured by the contractor for incorporation in the work satisfy the provisions of IS Codes relevant to the material and/ or the work done.
- 33.4 **The contractor shall arrange carrying out of all tests required under the agreement through the third party laboratory as approved by the Engineer-in-Charge.** The cost of tests shall be borne by the contractor. In addition contractor shall establish a laboratory at site of work at his own cost. The

laboratory shall be equipped with all necessary equipment as per requirement of specification or as per direction of Engineer-in-Charge. Establishing the laboratory at site shall not absolve the contractor from fulfilling the criteria of getting the test done in independent Lab. The decision of the Engineer-in-Charge of allowing any test in the site laboratory or any other laboratory shall be final.

- 33.5 Before execution of works contractor shall get the sample approval well in advance from the Engineer-in-Charge & Owner.

34.0 PROMOTION OF MSE

- 34.1 For facilitating promotion and development of micro and small enterprises, Owner/ENGINEER-IN-CHARGE is committed to promote the procurement of supplies/ services from MSEs in Orders/ contracts awarded by OWNER/ENGINEER-IN-CHARGE. Accordingly, bidders are also encouraged to promote the same by considering MSE sub-suppliers/ sub-contractors to the extent possible under the Orders/ Contracts awarded on them by OWNER/ENGINEER-IN-CHARGE. After award of work, supplier/ contractor shall furnish a statement along with copies of orders/ FOAs placed by them on their sub-suppliers/ sub-contractors who are MSEs, to Owner/ENGINEER-IN-CHARGE Project Manager/ RCM, as applicable.

35.0 SUSPENSION OF WORKS

- 35.1 Clause 23 of GCC is modified to the following extent:

Beyond 5 days of continuous suspension or beyond 30 days of Cumulative suspension, Contractor shall be entitled for an extension of the time equal to the period of suspension plus 25% of cumulative suspension period.

In case continuous suspension exceeds 30 days, a contractor shall be entitled for both Time and Cost compensation. The cost compensation shall be worked based on mutual discussions and acceptance.

The above clause of suspension will be applicable only if it is done for the reasons solely attributable to OWNER.

36.0 CALIBRATION REQUIREMENT AT SITE

- 36.1 All the monitoring and measuring device at site shall be calibrated and maintained as per manufacturer recommendations and records of calibration shall be maintained by the contractor and submit to the engineer-in-charge on quarterly basis.

37.0 FORM OF CONTRACT PERFORMANCE BANK GUARANTEE

- 37.1 The 'FORM OF CONTRACT PERFORMANCE BANK GUARANTEE' attached as Appendix 1 to General Conditions of Contract (GCC) stands replaced with Annexure-X to the Special Conditions of Contract (SCC).

38.0 VERIFICATION OF CREDENTIALS

- 38.1 Verification of the documents submitted by the L1 Bidder (the bidder whose total evaluated price is lowest) and used for qualification shall be done immediately after establishing L1 Bidder. On intimation, bidder shall produce the original documents at designated place/ office within the specified time period. Any failure on part of bidder may lead to rejection of the Bids / termination of the Contract, as the case may be. The first payment to the Contractor shall be released only upon completion of verification.

- 38.2 The provisions of the Bidding Document stand modified to the above extent.
- 39.0 Deleted**
- 40.0 GRIHA CERTIFICATION FOR GREEN BUILDINGS**
- 40.1 The IIM-Nagpur campus/Project is to be developed & certified as Minimum GRIHA- 4 Star rating. Bidder to familiarize himself with the requirements and implement all requirements of GRIHA- 4 Star rating, pertaining to Design, Construction & Operation, for achieving the above targeted rating including providing energy efficient material/equipment for all the services and simulations as per GRIHA requirement.
- 40.2 The contractor to submit the all the relevant inputs/submissions required for GRIHA as per the GRIHA guidelines.
- 40.3 The contractor to submit inputs for Monthly GRIHA Report covering the GRIHA activities during the execution/construction stage in the format approved by Engineer –In-Charge.
- 41.0 BASIC COST/RATE**
- 41.1 The term “Basic Cost/Basic Rate” referred in BIDDING DOCUMENT shall mean Cost of material excluding taxes, freight charges, loading, unloading charges etc. and the basic cost/rate of the material is applicable till completion of work.
- 41.2 Contractor shall make all efforts to supply the materials costing not less than the basic cost in case given in the bidding document. Nothing shall be paid extra for providing the materials costing more than the basic cost mentioned in the bidding document. In case of supply of material costing less than the basic cost, proportionate rebate shall be applicable and shall be deducted from Contractor’s bills.
- 41.3 Basic cost of materials shall be established by the committee consisting of representatives of OWNER, PMC & CONTRACTOR through market survey.
- 42.0 APPROVED EQUIVALENT**
- 42.1 The term Approved Equivalent shall mean the material meeting all technical properties and parameters of the make/specification mentioned in the bidding document.
- 42.2 In case technical specification of any item/material/equipment is not specifically mentioned in the bidding document, the same shall be provided by the contractor as per the specification of CPWD with prior approval of engineer-in-Charge. Decision of Engineer-In-Charge in this regard shall be final and binding on the contractor.
- 43.0 COMPREHENSIVE OPERATION AND MAINTENANCE SERVICES**
- 43.1 Comprehensive Operation & Maintenance of complete equipments, components, systems including all associated equipment, executed by the contractor under this contract, shall be carried out by the contractor. Manpower as specified in ANNEXURE - VII TO SPECIAL CONDITIONS OF CONTRACT of the bidding document shall be deployed by the contractor during O&M period. All necessary spares, tools and tackles for undertaking the Operation and Maintenance services during O&M period shall be supplied/provided by the contractor
- 43.2 Comprehensive Operation & Maintenance of equipments shall start from the date of Completion mentioned in the Completion Certificate” and shall be carried out in

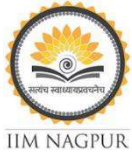
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- line with the provisions mentioned in the bidding document and SOR.
- 43.3 On completion of works, the contractor shall submit the operation and maintenance schedule along with maintenance guidelines, which shall be approved by IIMN. Decision of IIMN shall be final in this regard & binding on the contractor.
- 43.4 All the Consumables utilised during O&M shall be provided/supplied by the Contractor. Contractor also needs to maintain stock register for all the consumables.
- 43.5 In case, the Contractor fails to perform the Operation and Maintenance of the facilities to the satisfaction of Owner, the Performance Bank Guarantee/ Bank Guarantee towards O&M submitted by the contractor shall be revoked / encased in part/full by the Owner.
- 43.6 The Contractor shall replace the equipment/systems in case non repairable defects during O&M period are observed.
- 43.7 During the defect liability period of 12 months, the Contractor shall undertake Operations and other services/works covered in Comprehensive Operation & Maintenance. Under the SOR item for O&M during DLP, the Bidder to quote only the price of Operations and other scope of O&M services which are not covered in the provisions stipulated in clause No. 16 (Defect Liability Period) of GCC and other relevant clauses for DLP in the bidding document.

ANNEXURE TO SCC

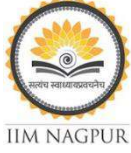
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|---|-------------------|
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SCOPE OF WORK
[ANNEXURE - I TO SPECIAL CONDITIONS OF CONTRACT]



Scope of work shall be as specified in Technical Section of the Bidding Document.



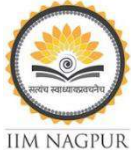
SCOPE OF SUPPLY

[ANNEXURE - II TO SPECIAL CONDITIONS OF CONTRACT]

SCOPE OF SUPPLY

1. Scope of Supply shall be as specified in Technical Section of the bidding document.
2. All materials, equipment, consumables etc. required for successful completion of the works are to be supplied by the Contractor at their sole cost and expense.
3. Owner shall not issue or supply any materials either as “Free Issue or on chargeable basis”.
4. All materials, equipments, labour & consumables required for successful completion of work as per the description of item in Schedule of Rates shall be supplied by the Contractor and the cost of such supply shall be deemed to be included in the quoted rates without any additional liability on the part of the Owner except for the material (if any) specifically covered under Owner's Scope of Supply.
5. The equipment tools and tackles to facilitate construction/installation and after final commissioning, performance guarantee test run shall be in Contractor's scope.

The Contractor may arrange it through purchase/hire/lease basis and such equipment, tools, tackles shall remain the property of the Contractor and it shall be removed from site after its requirement is over. No additional payment shall be made for mobilisation and/or demobilisation of such equipment, tools, tackles etc.



QUALITY ASSURANCE SYSTEM

[ANNEXURE - III TO SPECIAL CONDITIONS OF CONTRACT]

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1. SPECIFICATION FOR QUALITY MANAGEMENT SYSTEM REQUIREMENT FROM BIDDERS

1.1. SCOPE

This specification establishes the Quality Management System requirements to be met by contractor after award of work/ during contract execution.

1.2. QUALITY MANAGEMENT SYSTEM — GENERAL

Unless otherwise agreed with Owner, the BIDDER proposed quality system shall fully satisfy all relevant requirements of ISO 9001 "Quality Management Systems — Requirements." Evidence of compliance shall be current certificate of quality system registration to ISO 9001 or a recent compliance audit recommending registration from a certification agency. The quality system shall provide the planned and systematic control of all quality related activities for execution of contract. Implementation of the system shall be in accordance with BIDDER'S Quality Manual and PROJECT specific Quality Plan.

1.3. QUALITY SYSTEM REQUIREMENTS

- 1.3.1. BIDDER shall prepare and submit for review / record, Project Quality Plan / Quality Assurance Plan for contracted scope / job. The BIDDER'S Quality Plan shall address all of the applicable elements of ISO 9001, identify responsible parties within BIDDER'S organization, for the implementation / control of each area, reference the applicable procedures used to control / assure each area, and verify the documents produced for each area. The Project Quality Plan shall necessarily define control or make reference to the relevant procedures, for design and engineering, purchase, documentation, record control, bid evaluation, inspection, production/manufacturing, preservation, packaging and storage, quality control at construction site, pre-commissioning, commissioning and handing over (as applicable) in line with contract requirement and scope of work.
- 1.3.2. BIDDER shall identify all specified or implied statutory and regulatory requirements and communicate the same to all concerned in his organization and his sub contractor's organization for compliance.
- 1.3.3. BIDDER shall deploy competent and trained personnel for various activities for fulfilment of contract. BIDDER shall arrange adequate infrastructure and work environment to ensure that the specification and quality of the deliverable are maintained.
- 1.3.4. BIDDER shall do the quality planning for all activities involved in delivery of order. The quality planning shall cover as minimum the following:

- 1.3.4.1. Resources
- 1.3.4.2. Product / deliverable characteristics to be controlled.
- 1.3.4.3. Process characteristics to ensure the identified product characteristics are realized
- 1.3.4.4. Identification of any measurement requirements, acceptance criteria
- 1.3.4.5. Records to be generated
- 1.3.4.6. Need for any documented procedure

The quality planning shall result into the quality assurance plan, inspection and test plans (ITPs) and job procedures for the project activities in the scope of bidder. These documents shall be submitted to Engineer –In-Charge/Owner for review/approval, before commencement of work.

- 1.3.5. Requirements for sub-contracting / purchasing of services specified in contract / tender shall be adhered to. In general, all outsourced items will be from approved vendors. Wherever requirements are not specified, or approved sub vendors do not exist, the sub-contractor shall establish and maintain a system for purchasing / sub-contracting to ensure that purchased product / service conforms to specified requirements. Criteria for selection of sub-contractor, evaluation, re-evaluation, maintenance of purchasing data and verification of purchased product (subcontractor services), constitute important components of this requirement.
- 1.3.6. BIDDER shall plan and carry production and service provision under controlled conditions. Controlled conditions shall include, as applicable.
 - 1.3.6.1. The availability of information that describes the characteristics of the product
 - 1.3.6.2. The availability of work instructions
 - 1.3.6.3. The use of suitable equipment
 - 1.3.6.4. The availability and use of monitoring and measuring devices
 - 1.3.6.5. The implementation of monitoring and measurement
 - 1.3.6.6. The implementation of release, delivery and post-delivery activities
- 1.3.7. BIDDER shall validate any processes for production and service provision where resulting output cannot be verified by subsequent monitoring and measurement. This includes any process where deficiencies become apparent only after the product is in use or service has been delivered.
- 1.3.8. BIDDER shall establish a system for identification and traceability of product /deliverable throughout product realization. Product status with respect to inspection and testing requirements shall be identified.

- 1.3.9. BIDDER shall identify, verify, protect and safeguard IIMN / Owner property (material / document) provided for use or incorporation into the product. If any Owner / IIMN property is lost, damaged or otherwise found to be unsuitable for use, this shall be reported to the IIMN / Owner.
- 1.3.10. BIDDER shall ensure the conformity of product / deliverable during internal processing and delivery to the intended destination. Requirements mentioned in the tender shall be adhered to.
- 1.3.11. BIDDER shall establish system to ensure that inspection and testing activities are carried out in line with requirements. Where necessary, measuring equipment's shall be calibrated at specified frequency, against national or international measurement standards; where no such standard exists, the basis used for calibration shall be recorded. The measuring equipment's shall be protected from damage during handling, maintenance and storage.
- 1.3.12. BIDDER shall ensure effective monitoring, using suitable methods, of the processes involved in production and other related processes for delivery of the scope of contract.
- 1.3.13. BIDDER shall monitor and measure the characteristics of the product/deliverable to verify that product requirement has been met. The inspection (stage as well as final) by BIDDER and PMC/IIMN personnel shall be carried out strictly as per the ITPs forming part of the contract. Product release or service delivery shall not proceed until the planned arrangements have been satisfactorily completed, unless otherwise approved by relevant authority and where applicable by PMC/ IIMN.
- 1.3.14. BIDDER shall establish and maintain a documented procedure to ensure that the product which does not conform to requirements is identified and controlled to prevent its unintended use or delivery
- 1.3.15. All non-conformities (NCs) / deficiencies found by the BIDDER'S inspection / surveillance staff shall be duly recorded, including their disposal action shall be recorded and resolved suitably. Effective corrective and preventive action shall be implemented by the BIDDER so that similar NCs including deficiencies do not recur.
- 1.3.16. All deficiencies noticed and reported by PMC/ Owner shall be analysed by the BIDDER and appropriate corrective and preventive actions shall be implemented. BIDDER shall intimate PMC / Owner of all such corrective and preventive action implemented by him.
- 1.3.17. BIDDER should follow the standards, specifications and approved drawings. Concessions/Deviations shall be allowed only in case of unavoidable

circumstances. In such situations Concession/deviation request must be made by the BIDDER for approval of IIMN/PMC/Engineer-In-Charge.

1.3.18. BIDDER shall have documented procedure for control of documents.

1.3.19. All project records shall be carefully kept, maintained and protected for any damage or loss until the project completion, then handed over to IIMN / Owner as per contract requirement (Specification for Documentation Requirements from Contractors and Specification for Documentation Requirements from Suppliers), or disposed as per relevant project procedure.

1.4. AUDITS

BIDDER shall plan and carry out the QMS audit for the job. Quality audit programme shall cover design, procurement, construction management and commissioning as applicable including activities carried out by sub-vendors and sub-contractors. This shall be additional to the certification body surveillance audits carried out under BIDDER'S own ISO 9001 certification scheme.

The audit programmes and audit reports shall be available with bidder for scrutiny by PMC/ Owner. PMC or Owner's representative reserves the right to attend, as a witness, any audit conducted during the execution of the WORKS.

In addition to above PMC, Owner and third party appointed by IIMN/Owner may also perform Quality and Technical compliance audits. BIDDER shall provide assistance and access to their systems and sub-contractor / vendor systems as required for this purpose. Any deficiencies noted shall be immediately rectified by BIDDER.

1.5. DOCUMENTATION REQUIREMENTS

BIDDER shall submit following QMS documents immediately after award of work (Within Two weeks) for record / review by PMC/Owner.

- Organization chart (for complete organization structure and for the project)
- Project Quality Plan/Quality Assurance Plan
- Job specific Inspection Test Plans, if not attached with PR
- Job Procedures
- Inspection/Test Formats.

In addition to above QMS documents, following documentation shall be maintained by the BIDDER for submission to PMC/ Owner on demand at any point of time during execution of the project

- Quality Manual
- Certificate of approval for compliance to ISO: 9001 standard
- Procedure for Control of Non-Conforming Product
- Procedure for Control of Documents
- Sample audit report of the QMS internal and external audits conducted during last one year
- Customer satisfaction reports from at least 2 customers, during the last one year
- Project QMS audit report
- Technical audit reports for the project
- Corrective action report on the audits

Documents as specified above are minimum requirements. BIDDER shall submit any other document/data required for completion of the job as per PMC/Owner instructions.

2. SPECIFICATION FOR DOCUMENTATION REQUIREMENTS FROM CONTRACTORS

2.1. SCOPE

This specification establishes the Documentation Requirements from Contractors. All documents/data against the Tender / Contract shall be developed and submitted to owner by the contractor for review / records, in line with this specification.

2.2. DOCUMENTS/DATA TO BE SUBMITTED BY THE CONTRACTOR

2.2.1. The contractor shall submit the documents and data against the Tender/Contract as per the list specified in respective Tender/Contract.

2.2.2. Review of the contractor drawings by PMC/IIMN would be only to review the compatibility with basic designs and concepts and in no way absolve the contractor of his responsibility/contractual obligation to comply with Tender/Contract requirements, applicable codes, specifications and statutory rules/regulations. Any error/deficiency noticed during any stage of manufacturing/execution/installation shall be promptly corrected by the contractor without any extra cost or time, whether or not comments on the same were received from PMC/IIMN during the drawing review stage.

2.2.3. Unless otherwise specified, submission of documents for Review/Records shall commence as follows from the CONTRACT START DATE:

- QMS - 2 weeks
- Drawing/Document Control Index - 2weeks
- Other Documents/Drawings -As per approved Drawing/Document Control Index/Schedule

2.2.4. Documents as specified in Tender/Contract are minimum requirements. Contractor shall submit any other document/data required for completion of the job as per PMC/Owner instructions.

2.3. STYLE AND FORMATTING

2.3.1. All Documents shall be in ENGLISH language and in M.K.S System of units.

2.3.2. Before submitting the drawings and documents, contractor shall ensure that the following information are properly entered in each drawing:

- Tender Number
- Name of Equipment
- Equipment/ Package Tag No.
- Name of Project
- Owner
- Main Contractor (if work is sub-contracted)
- Drawing / Document Title
- Drawing / Document No.
- Drawing / Document Revision No. and Date

2.4. REVIEW AND APPROVAL OF DOCUMENTS BY CONTRACTOR

2.4.1. The Drawing/Documents shall be reviewed, checked, approved and duly signed/stamped by contractor before submission. Revision number shall be changed during submission of the revised contractor documents and all revisions shall be highlighted by clouds. Whenever the contractor require any sub- contractor drawings to be reviewed by PMC/IIMN, the same shall be submitted by the contractor after duly reviewed, approved and stamped by the contractor. Direct submission of subcontractor's drawings without contractor's approval shall not be entertained.

2.5. DOCUMENT CATEGORY

2.5.1. Review Category

Following review codes shall be used for review of contractor Drawings/Documents:

Review Code 1	:	No comments. Proceed with manufacture/ fabrication/ Construction as per the document.
Review Code 2	:	Proceed with manufacture/ fabrication/ Construction as per commented document. Revised document required
Review Code 3	:	Document does not conform to basic requirements as marked. Resubmit for review

R	:	Document is retained for Records. Proceed with manufacture/ fabrication
V	:	Void

2.6. METHODOLOGY FOR SUBMISSION OF DOCUMENTS TO IIMN/OWNER

2.6.1. Document Control Index (DCI)

Contractor shall submit Document Control Index (DCI) for review based on contract along with schedule date of submission of each drawing/document to IIMN/PMC/Engineer-In-Charge. The DCI shall be specific with regard to drawing/document no. and the exact title. Proper sequencing of the drawings/documents should be ensured in schedule date of submission.

2.6.2. Submission of Drawings/Documents

Drawings/documents and data (soft copies and hard copies) shall be submitted to IIMN/Engineer-In-Charge.

2.6.3. Statutory Approvals

Wherever approval by any statutory body is required to be taken by Contractor, the Contractor shall submit copy of approval by the authority to IIMN/PMC.

2.6.4. Details of Contact Persons of Contractor

After placement of order contractor shall assign a Project Manager for that order. The details are to be submitted to Engineer-In-Charge/PMC/Owner. The details include, power of attorney, e-mail address, mailing address, telephone nos., fax nos. and name of Project Manager. All the system generated emails pertaining to that order shall be sent to the assigned Project Manager.

2.6.5. Schedule and Progress Reporting

Contractor shall submit weekly and monthly progress report and updated procurement, engineering and manufacturing status (schedule vs. actual) every month. First report shall be submitted within 4 weeks from CONTRACT START DATE. In case of exigencies, IIMN/Owner can ask for report submission as required on weekly/fortnightly/adhoc basis depending upon supply status and contractor shall furnish such reports promptly without any price implication. Format for progress report shall be submitted by the contractor during kick off meeting or within Two weeks from CONTRACT START DATE, whichever is earlier.

2.6.6. Quality Assurance Plan/Inspection and Test Plan

Inspection and test plans attached if any, to the tender are generic and indicative only. Immediately after receipt of the order, contractor shall submit

within two weeks of CONTRACT START DATE, job specific ITPs based on the indicative ITPs. Further, contractor shall also submit Quality Assurance Plan for project activities in the scope of contract, starting from manufacturing to handing over/ commissioning, these plans shall cover/identify the activities, relevant procedure, if any, code of conformance, resources for performance and checking/monitoring, approval requirements and authority, records to be generated and audit scope by PMC/IIMN/Owner.

The contractor shall prepare a list of items/ equipment's and their inspection categorization plans for all items included in the scope of supply immediately after receipt of order and obtain approval for the same from PMC/IIMN. The items shall be categorized into different categories depending upon their criticality for the scope of inspection of TPIA and/or PMC.

2.6.7. Inspection Release Note (IRN)/ Inspection Certificate (IC)

Contractor shall ensure that all documents viz. documents reviewed, manufacture's test certificate etc., mentioned in Inspection Release Note(IRN), issued by PMC/third party against the materials supplied by contractor., are sent to PMC/IIMN along with the IRN.

IRN/ IC shall be issued by PMC Inspector/ third party inspection agency only after all the drawings/documents as per DCI are submitted and are accepted under review code-1 & code R. Material/Equipment's dispatch from contractor's/sub vender's works shall not commence till above condition is met.

Note: Non fulfilling above requirement shall result into appropriate penalty or withholding of payment as per conditions of Tender/Contract.

2.7. FINAL DOCUMENTATION

2.7.1. As built Drawings

Shop/Site changes made by contractor after approval of drawings under 'Code 1' by PMC and deviations granted, if any, shall be marked in hard copies of drawings which shall then be stamped 'As-built' by the contractor. These 'As-built' drawings shall be reviewed and stamped by PMC also. Contractor shall prepare scanned images files of all marked-up 'As-Built' drawings. Simultaneously contractor shall incorporate the shop/site changes in the native soft files of the drawings also.

2.7.2. As built Final Documents

As built final documents shall be submitted as listed in Tender/Contract.

2.7.3. Packing/Presentation of Final Documents

Final Documents shall be legible photocopies in A4, A3 size only. Drawings will be inserted in plastic pockets (both sides transparent, sheet thickness

minimum 0.1 mm) with an extra strip of 12 mm wide for punching so that drawings are well placed.

Final Documentation shall be bound in hard board plastic folder(s) of size 265 mm x315 mm (10 1/2 inch x 12 1/2 inch) and shall not be more than 75 mm thick. It may be of several volumes and each volume shall have a volume number, index of volumes and index of contents of that particular volume. Where numbers of volumes are more, 90mm thickness can be used. Each volume shall have top PVC sheet of minimum 0.15 mm thick duly fixed and pressed on folder cover and will have 2 lever clips. In case of imported items documents, 4 lever clip shall also be accepted. All four corners of folders shall be properly metal clamped. Indexing of contents with page numbering must be incorporated by contractor. Spiral/Spico bound documents shall not be acceptable. As mentioned above, books should be in hard board plastic folders with sheets punched and having 2/4 lever clips arrangement. Each volume shall contain on cover a title block indicating Tender No., name of project, name of customer, package equipment tag no. & name (if applicable). Each volume will have hard front cover and a reinforced spine to fit thickness of book. These spines will also have the title printed on them. Title shall include also volume number (say 11 of 15) etc.

2.7.4. Submission of Soft copies

Contractor shall submit to PMC/IIMN, the scanned images files as well as the native files of drawings/documents, along with proper index.

In addition to hard copies, contractor shall submit electronic file Covering soft copies of all the final drawings and documents, all text documents prepared on computer, scanned images of all important documents (not available as soft files), all relevant catalogues, manuals available as soft files (editable copies of drawings/text documents, while for catalogues/manuals/proprietary information and data PDF files can be furnished).

2.7.5. Completeness of Final Documentation

Contractor shall get the completeness of final documentation verified by IIMN/PMC



SPECIFICATION FOR HEALTH, SAFETY & ENVIRONMENTAL (HSE) MANAGEMENT

ANNEXURE - IV TO SPECIAL CONDITIONS OF CONTRACT



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1.0 SCOPE

This specification establishes the Health, Safety and Environment (HSE) management requirement to be complied by Contractors/Vendors including their sub-contractor's/sub vendors during construction.

This specification is not intended to replace the necessary professional judgment needed to design & implement an effective HSE system for construction activities and the contractor is expected to fulfill HSE requirements in this specification as a minimum. It is expected that contractor shall implement best HSE practices beyond whatever are mentioned in this specification.

Requirements stipulated in this specification shall supplement the requirements of HSE Management given in relevant Act(s)/ Legislations, General Conditions of Contract (GCC), Special Conditions of Contract (SCC) and Job (Technical) Specifications. Where different documents stipulate different requirements, the most stringent shall apply.

2.0 REFERENCES

The document should be read in conjunction with following:

- General Conditions of Contract (GCC)
- Special Conditions of Contract (SCC)
- Building and other construction workers Act,
- Indian Factories Act
- Job (Technical) specifications
- Relevant International/ National Codes (refer Appendix-A for standards/codes on HSE)
- Relevant State & National Statutory requirements.
- Operating Manuals Recommendation of Manufacturer of various construction Machineries
- Occupation Health and Safety Management System (OHSAS 18001:2007) and Environmental Management System (ISO 14001:2015)

3.0 REQUIREMENTS OF HEALTH, SAFETY & ENVIRONMENTAL (HSE) MANAGEMENT SYSTEM TO BE COMPLIED BY BIDDERS

3.1 Management Responsibility

3.1.1 HSE Policy & Objectives

The Contractor should have a documented and duly approved HSE policy & objectives to demonstrate commitment of their organization to ensure health, safety and environmental aspects in their line of operations.

3.1.2 Management System

The HSE management system of the Contractor shall cover the HSE requirements & commitments to fulfill them, including but not limited to what have been specified under clauses 1.0 and 2.0 above. The Contractor shall obtain the approval of its site specific HSE Plan from IIMN/ Owner prior to commencement of any site works. Corporate as well as Site management of the Contractor shall ensure compliance of their HSE Plan at work sites in its entirety in true spirit.

3.1.3 Indemnification

Contractor shall indemnify & hold harmless, Owner/IIMN & their representatives, free from any and all liabilities arising out of non-fulfillment of HSE requirements or its consequences.

3.1.4 Deployment & Qualifications of Safety Personnel

The Contractor shall designate / deploy various categories of HSE personnel at site as indicated below in sufficient number. In no case, deployment of safety Supervisor / Safety Steward shall substitute deployment of Safety Officer / Safety Engineer what is indicated in relevant statute of BOCW Act i.e. deployment of safety officer/Safety Engineer is compulsory at project site. The Safety supervisors, Safety stewards/Observer etc. would facilitate the HSE tasks at grass root level for construction sites and shall assist Safety Officer /Engineers.

Contractor shall appoint safety personnel as given below for every work shift (As per table below):

- (i) Safety Observer/Steward: Contractor shall depute one Safety Observer/Steward for every 100 workers and additionally thereon.
- (ii) Safety Supervisor: In addition to above (i), contractor shall depute one Safety Supervisor for every 250 workers and additionally thereon.
- (iii) Safety Engineer: In addition to above (i & ii), one safety engineer/ officer for every 1000 workers and additionally thereon.

No. of Workers deployed	Requirement of Safety Personnel for every shift		
	Safety Observer/Steward	Safety Supervisor	Safety Engineer/ Officer
1-100	One	One (1-250)	One
101-200	Two	Two (250-500)	
201-300	Three		
301-400	Four		
401-500	Five		
Up to 1000	Ten	Four	
Up to 2000	Twenty	Eight	Two

In case any of the safety personnel leave the contractor the same shall be intimated to the owner/ Consultant/ IIMN. The contractor shall recruit new personnel and fill up the vacancy.

a) Safety Steward/Observer

As a minimum, he shall possess class XII pass certificate and trained in fire-fighting as well as in safety/occupational health related subjects, with minimum two year of practical experience in construction work environment and should have adequate knowledge of the local language spoken by majority of the workers at the construction site.

b) Safety Supervisor

As a minimum, he shall possess a recognized graduation Degree in Science (with Physics & Chemistry) or a Diploma in Engg. Or Tech. with minimum Two years of practical experience in construction work environment and should possess requisite skills to deal with construction safety & fire related day-to-day issues.

c) Safety Officer / Safety Engineer

Safety Officer/Engineer should possess following qualification & experience:

- (i) Recognized degree in any branch of Engg. or Tech. or Architecture with practical experience of working in a building or other construction work in supervisory capacity for a period of not less than two years, **or** possessing recognized diploma in any branch of Engg. or Tech with practical experience of working in a building or other construction work in supervisory capacity for a period of not less than five years.
- (ii) Recognized degree or one year diploma in Industrial safety (from any Indian Institutes recognized by AICTE or State Council of Tech. Education of any Indian State / Union territory) with at least one paper in construction safety (as an elective subject).
- (iii) Preferably have adequate knowledge of the language spoken by majority of the workers at the construction site.

Alternately

- (i) Person possessing Graduation Degree in Science with Physics & Chemistry and degree or one-year diploma in Industrial Safety (from any Indian institutes recognized by AICTE or State Council of Tech. Education of any Indian State/ Union Territory) with practical experience of working in a building, plant or other construction works (as Safety Officer, in line with Indian Factories Act, 1958) for a period of not less than five years, may be considered as Safety Officer.

d) HSE In-Charge

In case there is more than one Safety Officer at any project construction site, one of them, who is senior most by experience (in HSE discipline), may be designated as HSE In-Charge. Duties & responsibilities of such person shall be commensurate with that of relevant statute and primarily to coordinate with top management of IIMN/Client and contractors.

In case the statutory requirements i.e. State or Central Acts and / or Rules as applicable like the Building and Other Construction Workers' Regulation of Employment and Conditions of Service- Act,1996 or State Rules (wherever notified), the Factories Act, 1948 or Rules (wherever notified), etc. are more stringent than above clarifications, the same shall be followed.

Contractors shall ensure physical availability of safety personnel at the place of specific work location, where Hot Work Permit is required/granted. No work shall be started at any of the project sites until above safety personnel & concerned Site Engineer of Contractor are physically deployed at site. The Contractor shall submit a HSE Organogram clearly indicating the lines of responsibility and reporting system and elaborate the responsibilities of safety personnel in their HSE Plan.

The Contractor shall verify & authenticate credentials of such safety personnel and furnish Bio-Data/Resume/Curriculum Vitae of the safety personnel as above for IIMN/Owner's approval, at least 1 month before the mobilization. The Contractor, whenever required, shall arrange submission of original testimonials/certificates of their Safety personnel, to IIMN/Owner (for verification/scrutiny, etc.)

Imposition/ Realization of penalty shall not absolve the Contractor from his/her responsibility of deploying competent safety officer at site.

Adequate planning and deployment of safety personnel shall be ensured by the Contractor so that field activities do not get affected because of non-deployment of competent & qualified safety personnel in appropriate numbers.

3.1.5 Implementation, Inspection/Monitoring

- a) The Contractor shall be fully responsible for planning, reporting, implementing and monitoring all HSE requirements and compliance of all laws & statutory requirements.
- b) The Contractor shall also ensure that the HSE requirements are clearly understood & implemented conscientiously by their site personnel at all levels at site.
- c) The Contractor shall ensure physical presence of their field engineers / supervisors, during the continuation of their contract works / site activities including all material transportation activities. Physical absence of experienced field engineers / supervisors of Contractor at critical work spot during the course of work may invite halting / stoppage of work.
- d) The Contractor shall regularly review inspection report internally and implement all practical steps / actions for improving the status continuously.
- e) Contractor skilled workmen like riggers, scaffold erectors, welders, crane operators etc. should have sufficient past experience and skill on the relevant job.
- f) The Contractor shall ensure important safety checks right from beginning of works at every work site locations and to this effect format No. HSE-10 “Daily Safety Check List” shall be prepared by field engineer & duly checked by safety personnel for conformance.
- g) The Contractor shall carry out inspection to identify various unsafe conditions of work sites/machinery/equipments as well as unsafe acts on the part of workmen/supervisor/engineer while carrying out different project related works.
- h) Adequate records for all inspections shall be maintained by the Contractor and the same shall be furnished to IIMN/Owner, whenever sought.
- i) To demonstrate involvement/commitment of site management of Contractor, at least one Safety Walk through in a month shall be carried out by Contractor’s head of site (along with his area manager/field engineers) and a report shall be furnished to IIMN/Owner as per format No: HSE-1” Safety walk through report” followed by compliance for unsatisfactory remarks.
- j) As a general practice lifting tools/tackles, machinery, accessories etc. shall be inspected, tested and examined by competent person (approved by concerned State authorities) before being used at site and also at periodical interval (e.g. during replacement, extension, modification, elongation/reduction of machine/parts, etc.) as per relevant statutes. Hydra, cranes, lifting machinery, mobile equipment’s/ machinery/ vehicles, etc. shall be inspected regularly by only competent / experienced personnel at site and requisite records for such inspections shall be maintained by contractor. Contractor shall also maintain records of maintenance of all other site machinery (e.g. generators, rectifiers, compressors, cutters, etc.) & portable tools/equipment’s being used at project related works (e.g. drills, abrasive wheels, punches, chisels, spanners, etc.).The Contractor shall not make use of arbitrarily fabricated ‘derricks’ at project site for lifting/ lowering of construction materials.
- k) Site facilities /temporary. installations, e.g. batching plant, cement godown, DG-room, temporary electrical panels/distribution boards, shot-blasting booth, fabrication yards, etc. and site welfare facilities, like labour colonies, canteen/pantry, rest-shelters, motor cycle/bicycle-shed, First-aid centers, urinals/toilets, etc. should be periodically inspected by Contractor (preferably utilizing HR/Admin. personnel to inspect site welfare facilities) and records to be maintained.

3.1.6 Behaviour Based Safety

- a) The contractor shall develop a system to implement Behavior-Based Safety (BBS) through which work groups can identify, measure and change the behaviors of employees and workers towards construction safety aspects.
- b) The BBS process shall include the following:
 - Identify the behaviors critical to achieve required safety performance.
 - Communicate the behaviors and how they are performed correctly by all
 - Observe the work force and record safe/at risk behaviors. Intervene with workers to give positive reinforcement when unsafe behaviors are observed. Provide coaching/correction when at risk behaviors are observed
 - Collect and record observation data
 - Summarize and analyze observation data
 - Communicate observation data and analysis results to all employees
 - Provide recognition or celebrate when safe behaviour improvements occur
 - Change behaviours to be observed or change activators or change consequences as appropriate.
 - Communicate any changes to workforce
- c) Contractor through its own HSE committee shall implement the above process.
- d) The necessary procedures and Monthly reporting formats shall be developed by the contractor for approval by IIMN/Owner.
- e) Contractor shall assess & recognize the behavioral change of its site engineers / supervisors once in a six month and constantly motivate / encourage them to implement HSE practices at project works
- f) The HSE committee of contractor shall observe individual's behavior for safe practices adapted for utilization/execution of work for followings a minimum: -
 - PPE
 - Tools & equipment's
 - Hazard Identification & control
 - House keeping
 - Confined space entry
 - Hot works
 - Excavation
 - Loading & unloading
 - Work at height
 - Stacking & storage
 - Ergonomics

3.1.7 Awareness and Motivation

- a) The Contractor shall promote and develop awareness on Health, Safety and Environmental protection among all personnel working for the Contractor.
- b) The contractor shall display safety statistics board at all prominent location. Also shall provide dedicated notice board for displaying of safety alerts or any other safety related notices for awareness site workforces.
- c) Regular awareness programs and fabrication shop/work site meetings at least on monthly basis shall be arranged on HSE activities to cover hazards/risks involved in various operations during construction.
- d) Contractor to motivate & encourage the workmen & supervisory staff by issuing/ awarding them with tokens/ gifts/ mementos/ monetary incentives/ certificates etc. The motivational program shall be organized on regular basis.

3.1.8 Fire Prevention & First-Aid

- a) The Contractor shall arrange suitable First-aid measures such as First Aid Box (Refer Appendix-B for details), stand-by Emergency Vehicle. Additionally, separate ambulance with trained personnel/male or female nurse to administer First Aid shall be provided by the Contractor beyond deployment of 500 workmen during day/night working hours. At least one fire extinguisher shall be placed at each location of DG Set, Hot works, electrical booth etc.
- b) The Contractor shall arrange installation of fire protection measures such as adequate number of steel buckets with sand & water and adequate number of appropriate portable fire extinguishers (Refer Appendix-C for details) to the satisfaction of IIMN/Owner.
- c) The Contractor shall arrange EMERGENCY MOCK DRILL like fire, bomb threat, gas leakage, earth quake, etc. at each site at least once in three months, involving site workmen and site supervisory personnel & engineers. The Contractor shall maintain record of such mock drills at project site.
- d) The contractor shall require to tie-up with the hospitals located in the neighborhood for attending medical emergency.

3.1.9 Documentation

The Contractor shall evolve a comprehensive, planned and documented system covering the following as a minimum for implementation and monitoring of the HSE requirements and the same shall be submitted for approval by owner/IIMN.

- HSE Organogram
- Site specific HSE Plan
- Safety Procedures, forms and Checklist. Indicative list of HSE procedures is attached as Appendix: H
- Inspections and Test Plan
- HIRAC Register as per Format no: HSE-19 to identify, assess, analyze & mitigate the construction hazards& incorporate relevant control measures before actually executing site works.
- Environmental Aspect Impact Register as per Format no: HSE-18 (identify, assess, analyze & mitigate the environmental impact & incorporate relevant control measures).
- Legal Register to identify and comply to all applicable HSE related legal requirements.

The monitoring for implementation shall be done by regular inspections and compliance of the observations thereof. The Contractor shall get similar HSE requirements implemented at his sub-contractor(s) work site/office, if applicable. However, compliance of HSE requirements shall be the responsibility of the Contractor. Any review/approval by IIMN/Owner shall not absolve contractor of his responsibility/liability in relation to fulfilling all HSE requirements.

3.1.10 Audit

The Contractor shall submit an Audit Plan to IIMN/Owner indicating the type of audits covering following as minimum:

- a) Internal HSE audits regularly on six monthly basis by engaging internal qualified auditors (viz safety officers/Construction personnel having 5years experience in construction safety and Lead Auditor Course: OSHA 18001certification). However, minimum two internal HSE audit will have to be conducted irrespective of time period of the contract.
- b) External HSE audits regularly on yearly basis by engaging authorized auditing agencies (viz. National Safety Council etc.) or qualified external auditors (viz safety officers/Construction

personnel having 10years experience in construction safety and Lead Auditor Course: OHSAS 18001certification). However, minimum one external HSE audit will have to be conducted irrespective of time period of the contract.

All HSE shortfalls/ non-conformances on HSE matters brought out during review/audit, shall be resolved forthwith (generally within a week) by Contractor& compliance report shall be submitted to IIMN/Owner.

In addition to above audits by contractor, the contractor's work shall be subjected to HSE audit by IIMN/Owner at any point of time during the pendency of contract. The Contractor shall take all actions required to comply with the findings of the Audit Report and issue regular Compliance Reports for the same to OWNER/ IIMN till all the findings of the Audit Report are fully complied.

Failure to carry-out HSE Audits& its compliance (internal & external) by Contractor, shall invite penalization.

3.1.11 Meetings

- i. The Contractor shall ensure participation of his top most executive at site (viz. Resident Construction Manager / Resident Engineer/ Project Manager / Site-in-Charge) in Safety Committee/HSE Committee meetings arranged by IIMN/Owner usually on monthly basis or as and when called for. In case Contractor's top most executive at site is not in a position to attend such meeting, he shall inform IIMN/Owner in writing before the commencement of such meeting indicating reasons of his absence and nominate his representative – failure to do so may invite very stringent penalization against the specific Contractor, as deemed fit as per Contract. The obligation of compliance of any observations during the meeting shall be always time bound. The Contractor shall always assist IIMN/Owner to achieve the targets set by them on HSE management during the project implementation.
- ii. In addition, the Contractor shall also arrange internal HSE meetings chaired by his top most executive at site on fortnightly basis and maintain records. Such internal HSE meetings shall essentially be attended by field engineers / supervisors including safety personnel of the Contractor and its associates. Records of such internal HSE meetings shall be maintained by the Contractor for review by IIMN/Owner or for any HSE Audits.
- iii. Agenda of internal HSE meeting should broadly cover: -
 - a) Confirmation of record notes /minutes of previous meeting
 - b) Discussion on outstanding subjects of previous points / subjects, if any
 - c) Incidents / Accidents (of all types) at project site, if any
 - d) Current topics related to site activities / subjects of discussion
 - e) House keeping
 - f) Behavioral Safety
 - g) Information / views / deliberations of member's / site sub-contractors
 - h) Report from Owner / Client
 - i) Status of Safety awareness, Induction programs & Training programs

The time frame for such HSE meeting shall be religiously maintained by one and all.

3.1.12 Intoxicating drinks & drugs and smoking

- a) The Contractor shall ensure that his staff members & workers (permanent as well casual) shall not be in a state of intoxication during working hours and shall abide by any law relating to consumption & possession of intoxicating drinks or drugs in force.
- b) The Contractor shall not allow any workman to commence any work at any locations of project activity who is/are influenced / effected with the intake of alcohol, drugs or any other intoxicating items being consumed prior to start of work or working day.
- c) Awareness about local laws on this issue shall form part of the Induction Training and compulsory work-site discipline.
- d) The Contractor shall ensure that all personnel working for him comply with “No-Smoking” requirements of the Owner as notified from time to time. Cigarettes, lighters, auto ignition tools or appliances as well as intoxicating drugs, dry tobacco powder, etc. shall not be allowed inside the project / plant complex.
- e) Smoking shall be permitted only inside smoking booths, if any, exclusively designated & authorized by the Owner/IIMN.

3.1.13 Penalty

The Contractor shall adhere consistently to all provisions of HSE requirements. In case of non-compliances and also for repeated failure in implementation of any of the HSE provisions, IIMN/Owner may impose stoppage of work without any cost & time implication to the Owner and/or impose a suitable penalty.

The amount of penalty to be levied against defaulted Contractor shall be up to a cumulative limit of

2.0% (Two percent) of the contract value for Item Rate or Composite contracts.

0.5% (Zero decimal five percent) of the contract value for LSTK, OBE, EPC, EPCC or Package contracts.

This penalty shall be in addition to all other penalties specified elsewhere in the contract. The decision of imposing stop-work-instruction and imposition of penalty shall rest with IIMN/Owner. The same shall be binding on the Contractor. Imposition of penalty does not make the Contractor eligible to continue the work in unsafe manner.

The amount of penalty applicable for the Contractor on different types of HSE violations is specified below:

Sl. No.	Violation of HSE Norms	Penalty Amount
1.	For not using personal protective equipment like Helmet, Safety Shoes, and other safety gadgets as applicable as per nature of work.	Rs.500/- per day/Item / Person
2.	Working without Work Permit/Clearance	Rs.20,000/- per occasion
3	Execution of work without deployment of requisite field engineer / supervisor at work spot	Rs.5,000/- per violation per day
4.	Unsafe electrical practices (not installing ELCB, using poor joints of cables, using naked wire without top plug into socket, laying wire/cables on the roads, electrical jobs by incompetent person, etc.)	Rs.10,000/- per item per day

Sl. No.	Violation of HSE Norms	Penalty Amount
5.	Working at height without full body harness, using non-standard/ rejected scaffolding and not arranging fall protection arrangement as required, like hand-rails, life-lines, Safety Nets etc.	Rs.10,000/- per case per day
6.	Unsafe handling of compressed gas cylinders (No trolley, jubilee clips double gauge regulator, and not keeping cylinders vertical during storage/handling, not using safety cap of cylinder).	Rs.1,000/- per item per day
7.	Use of domestic LPG for cutting purpose / not using flash back arresters on both the hoses/tubes on both ends.	Rs.5,000/-per occasion
8.	No fencing/barricading of excavated areas / trenches.	Rs.5,000/- per occasion
9.	Not providing shoring/strutting/proper slope and not keeping the excavated earth at least 1.5M away from excavated area.	Rs.5,000/-per occasion
10.	Non display of scaffold tags, caution boards on erected scaffolds.	Rs.1,000/- per occasion per day
11.	Traffic rules violations like over speeding of vehicles, rash driving, talking on mobile phones during vehicle driving, wrong parking, not using seat belts, vehicles not fitted with reverse horn / warning alarms / flicker lamps during foggy weather.	Rs.3,000/-per occasion per day
12.	Absence of Contractor's RCM/SIC or his nominated representative (prior approval must be taken for each meeting for nomination) from site HSE meetings whenever called by IIMN/Owner & failure to nominate his immediate deputy for such HSE meetings.	Rs.10,000/- per meeting
13.	Failure to maintain HSE records by Contractor Safety personnel, in line with approved HSE Plan/Procedures/Contract specifications.	Rs.10,000/- per month
14.	Failure to conduct daily site safety inspection (by Contractor's Site Engineer & safety officer), internal HSE meeting, internal HSE Awareness/Motivation Program and Site HSE Training at predefined frequencies (as approved in HSE Plan).	Rs.10,000/- per occasion
15.	Failure to fill online/submit the monthly HSE report by 5 th of subsequent month to Engineer-in-Charge/ Owner	Rs10,000/-per occasion and Rs.1,000/-per day of further delay
16.	Poor House Keeping	Rs.5,000 /- per occasion per subject
17.	Failure to report & follow-up accident (including Near Miss) reporting system within specific time-frame.	Rs.20,000/- per occasion
18.	Degradation of environment (not confining toxic spills, spilling oil/lubricants onto ground)	Rs.10,000/- per occasion

Sl. No.	Violation of HSE Norms	Penalty Amount
19.	Not medically examining the workers before allowing them to work at height / to work in confined space / to work in shot-blasting / to work for painting / to work in bitumen or asphalt works, not providing ear muffs while allowing them to work in noise polluted areas, made them to work in air polluted areas without respiratory protective devices, etc.	Rs.5,000/- per occasion per worker
20.	Violation of any other safety condition as per job HSE plan / work permit and HSE conditions of contract (e.g. using crowbar on cable trenches, improper welding booth, not keeping fire extinguisher ready at hot work site, unsafe rigging practices, non-availability of First-Aid box at site, not providing dead man handle switch for blasting, whiplash arrestor for the compressor line, not using hood with respiratory devices by blaster for shot//grit blasting, etc.)	Rs.5,000/- per occasion
21.	Penalty for non-deployment of ambulance in case of man-power more than 500 or not providing dedicated emergency vehicle in case of man-power less than 500.	Rs.3,000 per day
22.	Failure to carry-out Safety audit in time (internal & external), close-out of identified shortfalls of Observations of Safety Aspects(OSA), etc.	Rs. 20,000/- per occasion (for internal audit & OSA). Rs.30,000/-per occasion for external audit
23.	Carrying out sand blasting instead of grit/shot blasting	Rs.50,000/- per day
24.	Failure to deploy adequately qualified and competent Safety Officer	Rs.10,000/- per day per Officer
25.	Utilization of hydra/back-hoe loader for material shifting or any other unauthorized /unsafe lifting works	Rs.25,000/- per occasion
26.	Any Fatal Accident	Rs.10,00,000/-per fatality
27.	Any violation not covered above	To be decided by IIMN/Owner.

Note: Penalty amount deducted from the contractor shall be utilized by owner/EIC for the promotion of the safety during the currency of the project.

The Contractor shall make his field engineers/supervisors fully aware of the fact that they keep track with the site workmen for their behavior and compliance of various HSE requirements. Safety lapses / defects of project construction site shall be attributable to the concerned job supervisor / engineer of the Contractor, (who remains directly responsible for safely executing field works). For repeated HSE violations, concerned job supervisor / engineer shall be reprimanded or appropriate action, as deemed fit, shall be initiated (with information to IIMN & Owner) by the concerned Contractor.

Contractor shall initiate verbal warning shall be given to the worker/employee during his first HSE violation. A written warning shall be issued on second violation and specific training shall be arranged / provided by the Contractor to enhance HSE awareness/skill including feedback on the mistakes/ flaws. Any further violation of HSE stipulations by the erring individuals shall call for his forthright debar from the specific construction site. A record of warnings for each worker/employee shall be maintained by the Contractor, like by punching their cards / Gate passes or by displaying their names at the Project entry gate. Warnings, penalizations, appreciations etc. shall be discussed in HSE Committee meetings by site Head of the Contractor.

3.1.14 Accident/ Incident investigation

All accidents/incidents shall be informed to IIMN/Owner at least telephonically by Contractor immediately and in writing within 24 hours on Format No. HSE-2 as applicable, by Contractor. Thereafter, a Supplementary Accident/Incident investigation Report on Format No. HSE-3 shall be submitted to IIMN/Owner within 72 hours. Near Miss incident(s), Dangerous accidents/incident shall also be reported on Format No. HSE-4 within 24 hours. The accident/incident shall be investigated by a team of Contractor's senior Site personnel (involving Site-in-Charge or at least by his deputy) for establishing root-cause and recommending corrective & preventive actions. Findings shall be documented and suitable actions taken to avoid recurrences shall be communicated to IIMN/Owner. Owner/IIMN shall have the liberty to independently investigate such occurrences and the Contractor shall extend all necessary help and cooperation in this regard. IIMN/Owner shall have the right to share the content of this report with the outside world.

3.2 House Keeping

The Contractor shall ensure that a high degree of housekeeping is maintained and shall ensure inter-alia; the followings:

- a) All surplus earth and debris are removed/disposed-off from the working areas to designated location(s).
- b) Unused/surplus cables, steel items and steel scrap lying scattered at different places within the working areas are removed to identify location(s).
- c) All wooden scrap, empty wooden cable drums and other combustible packing materials, shall be removed from work place to identified location(s).
- d) Roads shall be kept clear and materials like pipes, steel, sand, boulders, concrete, chips and bricks etc. shall not be allowed on the roads to obstruct free movement of men & machineries.
- e) Fabricated steel structural, pipes & piping materials shall be stacked properly.
- f) Water logging on roads shall not be allowed.
- g) No parking of trucks/trolleys, cranes and trailers etc. shall be allowed on roads, which may obstruct the traffic movement.
- h) Utmost care shall be taken to ensure over all cleanliness and proper upkeep of the working areas.
- i) Protective measures to be ensured with projected rebar by suitable means.
- j) Trucks carrying sand, earth and pulverized materials etc. shall be covered while moving within the plant area/ or these materials shall be transported with top surface wet.
- k) The contractor shall ensure that the atmosphere in plant area and on roads is free from particulate matter like dust, sand, etc. by keeping the top surface wet for ease in breathing.

- l) At least two exits for any unit area shall be assured at all times – same arrangement is preferable for digging pits/ trench excavation/ elevated work platforms/ confined spaces etc.
- m) Welding cables and the power cable must be segregated and properly stored and used. The same shall be laid away from the area of movement and shall be free from obstruction.
- n) Schedule for upkeep /cleaning of site to be firmed up and implemented on regular basis.

The Contractor shall carry-out regular checks (minimum one per fortnight) as per format No. HSE-11 for maintaining high standard of housekeeping and maintain records for the same. The Contractor shall provide supervisor for housekeeping exclusively for management of day-to-day housekeeping activities.

3.3 HSE Measures

3.3.1 Construction Hazards

The Contractor shall ensure identification of all Occupational Health, Safety & Environmental hazards in the type of work he is going to undertake and enlist mitigation measures. Contractor shall carry out HIRAC specifically for high risk jobs/critical jobs like

- a) Working at height (+2.0 Mts height) for cold (incl. colour washing, painting, insulation etc.) & hot works.
- b) Work in confined space,
- c) Deep excavations & trench cutting (depth > 2.0 mts.)
- d) Operation & Maintenance of Batching Plant.
- e) Shuttering / concreting (in single or multiple pour) for columns, parapets & roofs.
- f) Erection & maintenance of Tower Crane.
- g) Erection of structural steel members / roof-trusses / pipes at height more than 2.0 Mts. with or without crane.
- h) Erection of pipes (full length or fabricated) at height more than 2.0 Mts. height with Crane of 100T capacity.
- i) All lifts using 100T Crane plus mechanical pulling.
- j) All lifts using two cranes in unison (Tandem Lifting).
- k) Any lift exceeding 80% capacity of the lifting equipments (hydra, crane etc.).
- l) Laying of pipes (isolated or fabricated) in deep narrow trenches – manually or mechanically.
- m) Maintenance of crane / extension or reduction of crane-boom on roads or in yards.
- n) Erection of any item at >2.0 Mts. height using 100T crane or of higher capacity
- o) Hydrostatic test of pipes, vessels & columns and water-flushing.
- p) Radiography jobs (in-plant & open field)
- q) Work in Live Electrical installations / circuits
- r) Handling of explosives & Blasting operations
- s) Demolishing/ dismantling activities
- t) Welding/ gas cutting jobs at height (+2.0 Mts.)
- u) Lifting/placing roof-girders at height (+2.0 Mts.)
- v) Lifting & laying of metallic / non-metallic sheet over roof/structures.
- w) Lifting of pipes, gratings, equipments/vessels at heights (+2.0 Mts.) with & without using cranes
- x) Calibration of equipment, instruments and functional tests at yards / work-sites.
- y) Operability test of Pump, Motors (after coupling) & Compressors.
- z) Cold or Hot works inside Confined Space.
- aa) Transportation & shifting of ODC consignments into project areas.
- bb) Working in “Charged/Live” elect. Panels

- cc) Stress Relieving works (Electrically or by Gas-burners).
- dd) Pneumatic Tests
- ee) Card board blasting
- ff) Grit Blasting activity
- gg) Catalyst loading/unloading
- hh) Erection/dismantling of scaffolding
- ii) Chemical cleaning

The necessary HSE measures devised shall be put in place, prior to start of an activity & also shall be maintained during the course of works, by the Contractor. Copies of such HIRAC shall be kept available at work sites by the Contractor to enable all concerned carrying out checks / verification.

A list of typical construction hazards along with their effects & preventive measures is given in **Appendix-E**.

3.3.2 Accessibility

- e) The Contractor shall provide safe means of access (in sufficient numbers) & efficient exit to any working place including provisions of suitable and sufficient scaffolding at various stages during all operations of the work for the safety of his workmen and IIMN/Owner.
- f) The Contractor shall implement use of all measures including use of “life line”, “fall-arresters”, “retractable fall arresters”, “safety nets” etc. during the course of using all safe accesses & exits, so that in no case any individual remains at risk of slip & fall during their travel.
- g) A ladder or step- ladder must have a level and firm footing, in case of use of fixed ladders, sufficient foot hold and hand hold to be provided.
- h) The access to operating plant / project complex shall be strictly regulated. Any person or vehicle entering such complex shall undergo identification check, as per the procedures in force / requirement of IIMN/Owner.
- i) Accessibility to ‘confined space’ shall be governed by specific system / regulation, as established at project site.

3.3.3 Personal Protective Equipment (PPEs)

- a) The Contractor workmen shall be permitted entry inside the project premises only with proper PPEs.
- b) The Contractor shall ensure that all their staff, workers and visitors including their sub-contractor(s) have been issued (records to be kept) & wear appropriate PPEs like nape strap type safety helmets preferably with head & sweat band with ¾” cotton chin strap (made of industrial HDPE), High ankle safety shoes with steel toe cap and antiskid sole, Coverall, full body harness (CE marked and conforming to EN361), protective goggles, gloves, ear muffs, respiratory protective devices, etc. All these gadgets shall conform to applicable IS Specifications/CE or other applicable international standards. The Contractor shall implement a regular regime of inspecting physical conditions of the PPEs being issued / used by the workmen of their own & also its sub-agencies and the damaged / unserviceable PPEs shall be replaced forthwith.
- c) Owner/IIMN may issue a comprehensive color scheme for helmets to be used by various agencies. The Contractor shall follow the scheme issued by the owner/IIMN and shall choose colour other than white (for Owner) or blue (for IIMN). All HSE personnel shall preferably wear dark green band on their helmet or green color safety helmet so that workmen can approach them for guidance during emergencies. HSE personnel shall preferably wear such dresses with fluorescent stripes, which are noticeable during night, when light falls on them.

- d) Florescent jackets with respective company logo to be worn by the contractor workmen with different color coding for categories like supervisor and workmen.
- e) Workers required using or handling alkalis, acid or other similar corrosive substance at site shall be provided with appropriate protective equipment, in accordance with MSDS.
- f) For shot blasting, the usage of protective face shield and helmets, gauntlet and protective clothing is mandatory. Such protective clothing should conform relevant IS Specification.
- g) For off-shore jobs/contracts, contractor shall provide PPEs (new) of all types to IIMN & Owner's personnel, at his (contractor's) cost. All personnel shall wear life jacket at all time.
- h) Contractor shall arrange copy of inspection /test certificate of the newly procured PPEs from the manufacturer.
- i) An indicative list of HSE standards/codes is given under **Appendix-A**.
- j) Contractor shall ensure procurement & usage of following safety equipments/ accessories (conforming to applicable IS mark / CE standard) by their staff, workmen & visitors including their subcontractors all through the span of project construction / pre-commissioning/ Commissioning: -
 - i. PPEs (Helmet with company name/logo, Safety Goggles, Coverall, Ear-muff, Face Shield, Hand Gloves, High Ankle Safety Shoes, Gum Boot etc.)
 - ii. Barricading tape / warning signs
 - iii. Rechargeable Safety torch (flame-proof)
 - iv. Safety nets (with tie-chords)
 - v. Fall arresters
 - vi. Portable ladders (varying lengths)
 - vii. Life-lines (steel wire-rope, dia. not less than 8.0 mm)
 - viii. Full body double lanyard Safety harness with Rebar/ladder hook or scaffolding hook.
 - ix. Lanyard
 - x. Karabiner
 - xi. Retractable fall arresters (various length)
 - xii. Portable fire extinguishers (DCP type) – 5 kg&10 kg capacity
 - xiii. Portable Multi Gas detector
 - xiv. Sound level meter
 - xv. Digital lux meter
 - xvi. Fire hoses & flow nozzles
 - xvii. Fire blankets/ Fire retardant cloth (with eyelets)

3.3.4 Working at height

- a) The Contractor shall issue permit for working (PFW) at height after verifying and certifying the checkpoints as specified in the attached permit (Format No. HSE-6). He shall also undertake to ensure compliance to the conditions of the permit during the currency of the permit including adherence of personal protective equipments. Contractor's Safety Officer shall verify compliance status of the items of permit document after implementation of action is completed by Contractor's execution / field engineers at work site. HIRAC for specific works at height duly commented by IIMN/Owner, shall be kept attached with particular Permit for Work (PFW) at site for ready reference & follow-up.
- b) Such PFW shall be initially issued for one single shift or expected duration of normal work and extended further for balance duration, if required. IIMN/Owner can devise block-permit system at any specific area, in consultation with project specific HSE Committee to specify the time-period of validity of such PFW or its renewal. This permit shall be applicable in areas where specific clearance from Owner's operation Deptt./ Safety Deptt. is not required. IIMN / Owner's field Engineers/Safety Officers/Area Coordinators may verify and counter

sign this permit (as an evidence of verification) during the execution of the job.

- c) All personnel shall be medically examined & certified by registered doctor, confirming their 'medical fitness (Vertigo or epilepsy must be covered under test report) for working at height. The fitness examination shall be done once in six months.
- d) In case work is undertaken without taking sufficient precautions as given in the permit, IIMN/ Owner Engineers may exercise their authority to cancel such permit and stop the work till satisfactory compliance/rectification is arranged made. Contractors are expected to maintain a register for issuance of permit and extensions thereof including preserving the used permits for verification during audits etc.
- e) The Contractor shall arrange (at his cost) and ensure use of Fall Arrester Systems by his workers. Fall arresters are to be used while climbing/descending tall structures or vessels / columns etc. These arresters should lock automatically against the anchorage line, restricting free fall of the user. The device is to be provided with a double security opening system to ensure safe attachment or release of the user at any point of rope. In order to avoid shock, the system should be capable of keeping the person in vertical position in case of a fall. All the fall arrest systems should be cleaned after use and stored in a clean & dry area. Defective Safety Harness, lanyards & life line must be discarded from workplace and record to be maintained.
- f) The Contractor shall ensure that Full body harnesses with double lanyards conforming IS Specifications /EN361 and having authorized CE marking is used by all personnel while working at height. The lanyards and life lines should have enough tensile strength to take the load of the worker in case of a fall. One end of the lanyard shall be firmly tied with the harnesses and the other end with life line. The harness should be capable of keeping the workman vertical in case of a fall, enabling him to rescue himself.
- g) The Contractor shall provide Roof Top Walk Ladders for carrying out activities on sloping roofs in order to reduce the chances of slippages and falls.
- h) The Contractor shall ensure that a proper Safety Net System is used wherever the hazard of fall from height is present. The safety net, preferably a knotted one with mesh ropes conforming to IS 5175/ ISO 1140 shall have a border rope & tie cord of minimum 12mm dia. The Safety Net shall be located not more than 6.0 meters below the working surface extending on either side upto sufficient margin to arrest fall of persons working at different heights.
- i) In case of accidental fall of person on such Safety Net, the bottom most portion of Safety Net should not touch any structure, object or ground.
- j) Grade separators shall be provided in Pipe-rack/Tech-structures to arrest falling objects like welding spatters, welding rods, nuts, bolts, tools etc. and to facilitate U/G and A/G works simultaneously.
- k) Beam Clamps may be used for construction of localized temporary working platforms sheds for welding booths etc. at height in all types of steel structure due to faster installation and requirement of less scaffolding materials.
- l) Hanging Platform, manufactured by Standard HSE equipment vendors must be encouraged for painting of Buildings etc.
- m) All the tools used at height (like spanner, screw driver etc.) shall be provided with securing arrangement like back-pack/waist pouch to prevent accidental slippage from worker hand.
- n) The Contractor shall install temporary lightening arrester in tall structures during construction to save human life and to avoid damage to equipments & machineries. During the possibility of a thunderstorm, all the work at height where a person can be exposed to lightning shall be stopped.
- o) To the extent possible use Roller arrangement to shift overhead pipes from one end to other in Pipe Racks Area.

- p) The Contractor shall ensure positive isolation while working at different levels like in the pipe rack areas. The working platforms with toe boards & hand rails shall be sufficiently strong & shall have sufficient space to hold the workmen and tools & tackles including the equipment's required for executing the job. Such working platforms shall have mid-rails, to enable people work safely in sitting posture.

3.3.5 Scaffoldings & Barricading

- a) Suitable steel scaffoldings only shall be provided to workmen for all works that cannot be safely done from the ground or from solid construction except such short period work that can be safely done using ladders or certified (by 3rd party competent person) man-basket. When a ladder is used, an extra workman shall always be engaged for holding the ladder. The ladder shall be inspected before use for cracked or split stiles, missing, broken, loose or damaged rungs & splinters. The ladder shall be of adequate length to enable it to extend to at least 1.0m above the landing place or working point. Metallic ladders shall be only used as access.
- b) The Contractor shall ensure that the scaffolds used during construction activities shall be strong enough to take the designed load. Main Contractor shall always furnish duly approved construction-design details of scaffold & SWL (from competent designers) free of charge, before they are being installed/ constructed at site. Owner/IIMN reserves the right to ask the Contractor to submit certification and or design calculations from his Head Office/ Design/ Engineering expert regarding load carrying capacity of the scaffoldings. All steel tubing, couplers and fittings used for scaffolding shall conform to IS 3696 or an acceptable equivalent. Only metallic scaffold boards shall be allowed to use. Steel tubes shall be free from cracks, splits. Surface flaws & other defects. All couplers & fittings shall be properly oiled and maintained. Nuts shall have a free running fit on their bolts. Bolts with worn or damaged thread shall be replaced.
- c) All scaffolds shall be inspected by a competent Scaffolding Inspector (person with scaffolding related experience in construction field and having a training of scaffolding supervisor from a institute/agency like National Safety Council etc.). He shall paste a GREEN tag (duly signed by competent Scaffolding Inspector) on each scaffold found safe and a RED tag (duly signed by competent Scaffolding Inspector) on each scaffold found unsafe. Scaffolds with GREEN tag only shall be permitted to be used and Scaffolds with RED ones shall immediately be made inaccessible. Work being found continuing on scaffolds with RED tag shall be considered unauthorized work by Contractor and may invite penalization from IIMN/Owner. For every 120-125 m² /m³ area / volume or its parts thereof minimum one TAG shall be provided.
- d) The Contractor shall ensure positive barricading (indicative as well as protective) of the excavated, radiography, heavy lift, high pressure hydrostatic & pneumatic testing and other such areas. Sufficient warning signs shall be displayed along the barricading areas.
- e) Scaffolding shall be constructed using foot seals or base plates only. Base plates shall be used below each standard on surface. Sole plate of timber shall be used beneath the base plate to achieve greater load distribution.

3.3.6 Electrical installations

- a) All electrical installations/ connections shall be carried out as per the provisions of latest revision of following codes/standards, in addition to the requirements of Statutory Authorities and IE/applicable international rules & regulations:

- OISD STD 173 : Fire prevention & protection system for electrical installations

- SP 30 (BIS) : National Electric Code

- b) All electrical installations shall be approved by the concerned statutory authorities.
- c) All temporary electrical installations / facilities shall be regularly checked by the licensed/competent electricians of the Contractor and appropriate records shall be maintained in format no: HSE-12” Inspection of temporary electrical booth/installation at project construction site”. Such inspection records are to be made available to IIMN/Owner, whenever asked for.

3.3.6.1 The Contractor shall meet the following requirements:

- a. Shall make Single Line Diagram (SLD) for providing connection to each equipments & machinery and the same (duly approved by IIMN/Owner) shall be pasted on the front face of DBs (distribution boards) or JBs (Junction boxes) at every site. (A typical Switch Board Sketch is attached as Appendix -G)
- b. Ensure that electrical systems and equipment including tools & tackles used during construction phase are properly selected, installed, used and maintained as per provisions of the latest revision of the Indian Electrical/ applicable international regulations.
- c. Shall deploy qualified & licensed electricians for proper & safe installation and for regular inspection of construction power distribution system/points including their earthing. A copy of the license shall be submitted to IIMN / Owner for records. Availability of at least one competent (ITI qualified) / licensed electrician (by State Elec. authorities) shall be ensured at site round the clock to attend to the normal/emergency jobs.
- d. All switchboards / welding machines shall be kept in well-ventilated & covered shed/ with rain shed protection. The shed shall be elevated from the existing ground level to avoid water logging inside the shed. Installation of electrical switch board must be done taking care of the prevention of shock and safety of machine.
- e. No flammable materials shall be used for constructing the shed. Also flammable materials shall not be stored in and around electrical equipment / switchboard. Adequate clearances and operational space shall be provided around the equipment.
- f. Fire extinguishers and insulating mats shall be provided in all power distribution centers.
- g. Temporary electrical equipment shall not be employed in hazardous area without obtaining safety permit.
- h. Proper housekeeping shall be done around the electrical installations.
- i. All temporary installations shall be tested before energizing, to ensure proper earthing, bonding, suitability of protection system, adequacy of feeders/cables etc.
- j. All welders shall use hand gloves irrespective of holder voltage.
- k. Multilingual (Hindi, English and local language) caution boards, shock treatment charts and instruction plate containing location of isolation point for incoming supply, name & telephone No. of contact person in emergency shall be provided in substations and near all distribution boards / local panels.

- l. ELCB tester /test meter shall be used for testing the ELCBs operation. ELCBs testing shall be carried out by using ELCB tester on monthly basis but in specific cases like heavy rain as decided by owner/EIC. Record of the testing shall be maintained.
- m. Regular inspection of all installations at least once in a month. (Ref. **Format HSE-12**).

3.3.6.2 The following features shall also be ensured for all electrical installations during construction phase by the contractor:

- a. Each installation shall have a main switch with a protective device, installed in an enclosure adjacent to the metering point. The operating height of the main switch shall not exceed 1.5 M. The main switch shall be connected to the point of supply by means of armoured cable.
- b. The outgoing feeders shall be double or triple pole switches with fuses / MCBs. Loads in a three phase circuit shall be balanced as far as possible and load on neutral should not exceed 20% of load in the phase.
- c. The installation shall be adequately protected against overload, short circuit and earth leakage by the use of suitable protective devices. Fuses wherever used shall be HRC type. Use of rewirable fuses shall be strictly prohibited. ELCB/RCCB (Residual Current Circuit Breaker) must be fitted with all Electrical installation. The earth leakage device shall have an operating current not exceeding 30 mA.
- d. All connections to the hand tools / welding receptacles shall be taken through proper switches, sockets and plugs.
- e. All single phase sockets shall be minimum 3 pin type only. All unused sockets shall be provided with socket caps.
- f. Only 3 core (P+N+E) overall sheathed flexible cables with minimum conductor size of 1.5 mm² copper shall be used for all single phase hand tools.
- g. Only metallic distribution boxes with double earthing shall be used at site. No wooden boxes shall be used.
- h. All power cables shall be terminated with compression type cable glands. Tinned copper lugs shall be used for multi-strand wires / cables.
- i. Cables shall be free from any insulation damage.
- j. Minimum depth of cable trench shall be 750 mm for MV & control cables and 900 mm for HV cables. These cables shall be laid over a sand layer and covered with sand, brick & soil for ensuring mechanical protection. Cables shall not be laid in waterlogged area as far as practicable. Cable route markers shall be provided at every 25 M of buried trench route.

When laid above ground, cables shall be properly cleated or supported on rigid poles of atleast 2.1 M high. Minimum head clearance of 6 meters shall be provided at road crossings.

- k. Underground road crossings for cables shall be avoided to the extent feasible. In any case no underground power cable shall be allowed to cross the roads without pipe sleeve.

- l. All cable joints shall be done with proper jointing kit. No taped/temporary joints shall be used.
- m. An independent earthing facility should preferably be established within the temporary installation premises. All appliances and equipment shall be adequately earthed. In case of armored cables, the armour shall be bonded to the earthing system. IS: 3043 Code for earthing practices shall be followed at project site.
- n. All cables (green colour) and wire rope used for earth connections shall be terminated through tinned copper lugs.
- o. In case of local earthing, earth electrodes shall be buried near the supply point and earth continuity wire shall be connected to local earth plate for further distribution to various appliances. All insulated wires for earth connection shall have insulation of green colour.
- p. Separate core shall be provided for neutral. Earth / Structures shall not be used as a neutral in any case.
- q. ON/OFF position of all switches shall be clearly designated / painted for easy isolation in emergency.

3.3.7 Welding/ Grinding/Gas cutting

- a) Contractor shall ensure that flash back arrestors conforming to BS:6158 or equivalent are installed on all gas cylinders as well as at the torch end of the gas hose, while in use.
- b) All cylinders shall be mounted on trolleys and provided with a closing key. Empty & filled-up gas cylinders shall be stored separately with TAG, protecting them from direct sun or rain. Minimum 2 nos. of Portable DCP type fire extinguishers (10 kg) shall be maintained at the gas cylinder stores. Stacking & storing of compressed gas cylinders shall be arranged away from DG set, hot works, Elect. Panels / Elec. boards, etc.
- c) The burner and the hose placed downstream of pressure reducer shall be equipped with Flash Back Arrestor/Non Return Valve device.
- d) The hoses for acetylene and oxygen cylinders must be of different colours. Their connections to cylinders and burners shall be made with a safety collar.
- e) At end of work, the cylinders in use shall be closed and hoses depressurized.
- f) Cutting of metals using gases, other than oxygen & acetylene, shall require written concurrence from Owner.
- g) Grinding activity shall not be carried out in confined spaces without a valid work permit.
- h) All grinding/cutting machines shall be guarded and fitted with Dead-Man switch and this shall not be bypassed any time.
- i) All welding/grinding machines shall have effective earthing at least at distinctly isolated two points.
- j) In order to help maintain good housekeeping, and to reduce fire hazard, live electrode bits shall be contained safely and shall not be thrown directly on the ground.
- k) The hoses of Acetylene and Oxygen shall be kept free from entanglement & away from common pathways / walkways and preferably be hanged overhead in such a manner which can avoid contact with cranes, hydra or other mobile construction machinery.
- l) Hot spatters shall be contained / restricted appropriately (by making use of effective fire-retardant cloth/fabric) and their flying-off as well as chance of contact with near-by

flammable materials shall be stopped. The Fire retardant blanket shall be woven from ceramic yarn with eyelets.

- m) The Contractor shall arrange adequate systems & practices for accumulation / collection of metal & other scraps and remnant electrodes and their safe disposal at regular interval so as to maintain the fabrication and other areas satisfactorily clean & tidy.
- n) All gas cylinders must have a cylinder cap on at all times when not in use.

3.3.8 Ergonomics and tools & tackles

- a) The Contractor shall assign to his workmen, tasks commensurate with their qualification, experience and state of health.
- b) All lifting tools, tackles, equipment, trailers, trucks/dumpers, accessories including cranes shall be tested periodically by statutory/competent authority for their condition and load carrying capacity. Valid test & fitness certificates from the applicable authority shall be submitted to Owner/IIMN for their review/acceptance before the lifting tools, tackles, equipment, trailers, trucks/dumpers, accessories and cranes are used. Third party inspection certificate is mandatory for all lifting tools & tackles before put into use.
- c) Load testing of Cranes by competent person must be made mandatory after each modification/alteration of crane configuration/change in boom length. All heavy equipments including cranes must be maintained in good condition & record of such maintenance shall be maintained.
- d) The contractor shall not be allowed to use defective equipment or tools not adhering to safety norms.
- e) Colour coding system for lifting tools & tackles shall be followed on quarterly basis for a particular colour as mentioned below:

Period	Colour Code
January, February, March	Blue
April, May, June	Yellow
July, August, September	Green
October, November, December	Orange
For Quarantine (Unsafe Tools & Tackles)	Red

Contractor shall arrange non-sparking tools for project construction works in operating plant areas / hydrocarbon prone areas.

- i. Wherever required the Contractor shall make use of Elevated Work Platforms (EWP) or Aerial Work Platforms (mobile or stationary) to avoid ergonomical risks and workmen shall be debarred to board such elevated platform during the course of their shifting / transportation.
- ii. Contractor shall ensure installation of Safe Load Indicator (SLI) on all cranes (while in use) to minimize overloading risk. SLI shall have capability to continuously monitor and display the load on the hook, and automatically compare it with the rated crane capacity at the operating condition of the crane. The system shall also provide visual and audible warnings at set capacity levels to alert the operator in case of violations.
- iii. The contractor shall be responsible for safe operations of different equipments mobilized and used by him at the workplace like transport vehicles, Tower Crane, engines, cranes, mobile ladders, scaffoldings, work tools, etc.

- iv. Tower Crane, Crane, Hydra mobile Crane (F-15 or equivalent), Hydraulic Rig & Boom Lift shall be inspected on fortnightly basis as per Format No. HSE-20, HSE-21, HSE-22, HSE-23 & HSE-24.
- v. The Contractor shall deploy experienced operator & may arrange training program for operators of hydra mobile crane, crane, excavator, mobile machinery, Tower Crane, etc. at site by utilizing services from renowned manufacturers.
- vi. Hydra mobile crane (F-15 or equivalent) having steering control mechanism shall be permitted at construction site only for the purpose of loading/unloading. However, continuous rigger availability during marching of hydraulic crane at site shall be ensured by contractor.

3.3.9 Occupational Health

- a) The contractor shall identify all operations that can adversely affect the health of its workers and issue & implement mitigation measures.
- b) For surface cleaning operations, sand blasting shall not be permitted even if not explicitly stated elsewhere in the contract.
- c) To eliminate radiation hazard, Tungsten electrodes used for Gas Tungsten Arc Welding shall not contain Thorium.
- d) Appropriate respiratory protective devices (hood with respiratory devices) shall be used to protect workmen from inhalation of air borne contaminants like silica, asbestos, gases, fumes, etc.
- e) Workmen shall be made aware of correct methods for lifting, carrying, pushing & pulling of heavy loads. Wherever possible, manual handling shall be replaced by mechanical lifting equipments.
- f) For jobs like drilling/demolishing/dismantling where noise pollution exceeds the specified limit of 85decibels, ear muffs shall be provided to the workers.
- g) To avoid work related upper limb disorders (WRULD) and backaches, Display Screen Equipments' workplace stations shall be carefully designed & used with proper sitting postures. Power driven hand-held tools shall be maintained in good working condition to minimize their vibrating effects and personnel using these tools shall be taught how to operate them safely & how to maintain good blood circulation in hands.
- h) The Contractor shall arrange health check-up (by registered medical practitioner) for all the workers at the time of induction. Health check may have to be repeated if the nature of duty assigned to him is changed necessitating health check or doubt arises about his wellness. IIMN/Owner reserves the right to ask the contractor to submit medical test reports. Regular health check-ups are mandatory for the workers assigned with Welding, Radiography, Blasting, Painting, Heavy Lift and Height (>2m) jobs. All the health check-ups shall be conducted by registered Medical practitioner and records are to be maintained by the Contractor.
- i) The Contractor shall arrange Medical Camps at regular intervals at work sites and labor colonies to assess health condition of workers.
- j) The Contractor shall ensure vaccination of all the workers including their families, during the course of entire project span.

3.3.10 Hazardous substances

- a) Hazardous, inflammable and/or toxic materials such as solvent coating, thinners, anti-termite solutions, water proofing materials shall be stored in appropriate containers preferably with lids having spillage catchment trays and shall be stored in a good ventilated area. These containers shall be labeled with the name of the materials highlighting the hazards associated with its use and necessary precautions to be taken. Respective MSDS (Material Safety Data Sheet) shall be made available at site & may be referred whenever problem arises.
- b) Where contact or exposure of hazardous materials are likely to exceed the specified limit or otherwise have harmful effects, appropriate personal protective Equipments such as gloves, goggles/face-shields, aprons, chemical resistant clothing, respirator, etc. shall be used.
- c) The work place shall be checked prior to start of activities to identify the location, type and condition of any asbestos materials which could be disturbed during the work. In case asbestos material is detected, usage of appropriate PPEs by all personnel shall be ensured and the matter shall be reported immediately to IIMN/ Owner.

3.3.11 Slips, trips & falls

- a) The contractor shall establish a regular cleaning and basic housekeeping programme that covers all aspects of the workplace to help minimize the risk of slips, trips & falls. The contractor shall take positive measures like keeping the work area tidy, storing waste in suitable containers & harmful items separately, keeping passages, stairways, entrances & exits especially emergency ones clear, cleaning up spillages immediately and replacing damaged carpet/ floor tiles, mats & rugs at once to avoid slips, trips & falls.
- b) Grating removal permit system should be implemented during construction phase. So that after permanent gratings are installed on platforms and tech structure floors; removal of any gratings for whatever purpose (including for lifting piping material etc.) is required to be sanctioned by signed permit by HSE officers of both contractor and Engineer-in-charge. The spot where gratings are removed shall be hard-barricaded during course of work. The removed gratings shall be re-installed immediately after completion of work or at the time of cessation of work every day whichever is earlier and the permit shall be closed on daily basis. A register shall be maintained for recording all the grating removal permits and their closure shall be monitored on daily basis.

3.3.12 Radiation exposure

- a) All personnel exposed to physical agents such as ionizing & non-ionizing radiation, including ultraviolet rays or similar other physical agents shall be provided with adequate shielding or protection commensurate with the type of exposure involved.
- b) For Open Field Radiography works, requirements of Bhabha Atomic Research Centre (BARC)/ Atomic Energy Regulatory Board (AERB) shall be followed.
- c) The Contractor shall implement an effective system of control (as described in the AERB regulations) at site for handling radiography-sources & for avoiding its misuse & theft.
- d) The contractor shall generate the Format No: HSE-8 “Permit for radiation work” before start of work.
- e) In case the radiography work has to be carried out at day time, suitable methodology to be used so that other works, people are not affected.

3.3.13 Explosives/Blasting operations

- a) Blasting operations shall be carried out as per latest Explosive Rules (Indian/ International) with prior permission. The Contractor shall obtain license from Chief Controller of

Explosives (CCoE) for collection, transportation, storage of explosives as well as for carrying out blasting operations.

- b) The Contractor shall prepare exclusive method statement (in cognizance with statutory requirements) for rock blasting works & diffusing unfired explosives, if any, at project site before carrying out actual task. Nowhere blasting shall be carried out by the Contractor or its agency without the involvement of competent supervisor and licensed blaster.

3.3.14 Demolition/ Dismantling

- a) The contractor shall adhere to safe demolishing/ dismantling practices at all stages of work to guard against unsafe working practices.
- b) The contractor shall disconnect service lines (power, gas supply, water, etc.)/ make alternate arrangements prior to start of work and restore them, if required as directed by IIMN/ Owner at no extra cost.
- c) Before carrying out any demolition/dismantling work, the contractor shall take prior approval of IIMN/Owner and generate the Format No.HSE-9. For revamp jobs in operating plants where location of underground utilities is not known with certainty, the contractor shall depute an experienced engineer for supervision and shall make adequate arrangements for Fire-fighting & First-Aid during the execution of these activities.
- d) The Contractor shall arrange approved HIRAC/ Method Statement for the specific demolition / dismantling task and corresponding action plan commensurate with hazards / risks associated therein. In no case any activity related to demolition / dismantling shall be carried out by the Contractor without engaging own supervision / field engineer.

3.3.15 Road Safety

- a) The Contractor shall ensure adequately planned road transport safety management system.
- b) The vehicles shall be fitted with reverse warning alarms & flashing lights / fog-lights and usage of seat belts shall be ensured.
- c) The Contractor shall also ensure a separate pedestrian route for safety of the workers and comply with all traffic rules & regulations, including maintaining speed limit of 20 KMPH or indicated by owner for all types of vehicles / mobile machinery. The maximum allowable speed shall be adhered to.
- d) In case of an alert or emergency, the Contractor must arrange clearance of all the routes, roads, access. The Contractor shall deploy sufficient number of traffic controllers at project site routes / roads/ accesses, to alert reversing movement of vehicles & machinery as well as pedestrians. Experienced drivers/operators with valid driving license (LMV/HMV) shall be allowed to drive/operate the vehicles/equipments.
- e) Dumpers, Tippers, etc. shall not be allowed to carry workers within the plant area and also to & from the labour colony to & from project sites.
- f) Hydra mobile crane (F-15 or equivalent) shall only be allowed for handling (loading/unloading) the materials at fabrication/ storage yards and in no case shall be allowed to transport the materials over project / plant roads.
- g) The Contractor shall not deploy any such mobile machinery / Equipments, which do not have competent operator and / or experienced banks-man/signal-man. Such machinery/equipments shall have effective limit-switches, reverse-alarm, front & rear-end lights etc. and shall be maintained in good working order.
- h) The Contractor shall not carry-out maintenance of vehicles / mobile machinery occupying space on project / plant roads and shall always arrange close supervision for such works.

- i) For pipeline jobs, the contractor shall submit a comprehensive plan covering transportation, loading / unloading of pipes, movement of side booms, movement of vehicles on the ROW, etc.
- j) Contractor's shall arrange /install visible road signs, diversion boards, caution boards, etc. on project roads for safe movement of men and machinery.

3.3.16 Welfare measures

Contractor shall, at the minimum, ensure the following facilities at work sites:

- a) A crèche at site where 10 or more female workers are having children below the age of 6 years.
- b) Adequately ventilated / illuminated rooms at labour camps & its hygienic up-keeping.
- c) Reasonable canteen facilities at site and in labour camps at appropriate location depending upon site conditions. Contractor shall make use of "industrial" variety of LPG cylinder & satisfactory illumination at the canteens. Necessary arrangement for efficient disposal of wastes from canteens & urinals /toilets shall also be made and regular review shall be made to maintain the ambience satisfactorily hygienic & shall also comply with all applicable statutory requirements.
- d) Adequately lighted & ventilated Rest rooms at site (separate for male workers and female workers).
- e) Provision for suitable mobile toilets to be made available by Contractor for remote/scattered job locations.
- f) Urinals, Toilets, drinking water, washing facilities, adequate lighting at site and labour camps, commensurate with applicable Laws/ Legislation.
- g) The contractor at periodic interval shall arrange to prevent mosquito breeding by fumigation/spraying of insecticides at workplace/fabrication yard.

3.3.17 Environment Protection

Contractor shall ensure proper storage and utilization methodology of materials that are detrimental to the environment. Where required, Contractor shall ensure that only the environment friendly materials are selected and emphasize on recycling of waste materials, such as metals, plastics, glass, paper, oil & solvents. The waste that cannot be minimized, reused or recovered shall be stored and disposed of safely. In no way, toxic spills shall be allowed to percolate into the ground. The contractor shall not use the empty areas for dumping the wastes.

Contractor to submit Environmental Aspect Impact Register detailing the list of activities in his scope, the respective environmental impact and the actions taken to minimize the impact. Environmental Aspect Impact Register to be prepared as per Format HSE-18 and to be updated and maintained till job completion.

The contractor shall strive to conserve energy and water wherever feasible.

The contractor shall ensure dust free environment at workplace by sprinkling water on the ground at frequent intervals. The air quality parameters for poisonous gases, toxic releases, harmful radiations, etc. shall be checked by the contractor on daily basis and whenever need arises.

The contractor shall not be allowed to discharge chemicals, oil, silt, sewage, sullage and other waste materials directly into the controlled waters like surface drains, streams, rivers, ponds. A discharge plan suggesting the methods of treating the waste before discharging shall be submitted to IIMN/Owner for approval.

For pipeline jobs, top soil shall be stacked separately while making ROW through fields. This fertile soil shall be placed back on top after backfilling.

For offshore construction barges, arrangements shall be made for safe disposal of human, food & other wastes and applicable laws in this regard shall be followed.

3.3.18 Rules & Regulations

All persons deployed at site shall be knowledgeable of and comply with the environmental laws, rules & regulations relating to the hazardous materials, substances and wastes. Contractor shall not dump, release or otherwise discharge or disposes off any such materials without the express authorization of IIMN/Owner. An indicative list of Statutory Acts & Rules relating to HSE is given under Appendix-D.

3.3.19 Weather Protection

Contractor shall take appropriate measures to protect workers from severe storms, rain, solar radiations, poisonous gases, dust, etc. by ensuring proper usage of PPEs like Sun glasses, Sun screen lotions, respirators, dust masks, etc. and rearranging/ planning the construction activities to suit the weather conditions. Effective arrangement (without creating inconvenience to project facilities & permanent installations) for protecting workmen from hailstorm, drizzle in the form of temporary shelter shall be made at site.

3.3.20 Communication

All persons deployed at the work site shall have access to effective means of communication so that any untoward incident can be reported immediately and assistance sought by them.

All health & safety information shall be communicated in a simple & clear language easily understood by the local workforce.

For information to all, typical subjects that should be communicated are: -

Inside the company (Top to down)

- a. Quality Policy
- b. HSE Policy contents
- c. Environment Policy
- d. HSE Objectives
- e. Safety Cardinal Rules
- f. HSE Target – reached or missed
- g. Praises & Warnings to personnel for HSE Management
- h. Safety Walk Through Reports and safety defects / shortfalls (by management)
- i. HSE Audit results
- j. Revised Statutory Health & Safety provisions, if any
- k. H & S publicity
- l. Suggestions

Inside the Company (Bottom to up)

- a. Complaints
- b. Compliances on safety defects / shortfalls
- c. Suggestions
- d. Proposals for changes & improvements

- e. HSE Reports (including near-miss reports)

3.3.21 Confined Space Entry

The contractor shall generate a work permit (Format No. HSE -7) before entering a confined space. People, who are permitted to enter into confined space, must be medically examined & certified by registered doctor, confirming their 'medical fitness for working in confined space'. All necessary precautions mentioned therein shall be adhered to. An attendant shall be positioned outside a confined space for extending help during an emergency. Effective communication shall be maintained between personnel in confined space and outside by combination of visual/voice or portable radio. Compressed gas cylinders shall not be taken into confined space. Entry Register for confined space to be maintained with the name and time of entry/exit. All appropriate PPEs and air quality parameters shall be checked before entering a confined space. It shall be ensured that the piping of the equipment which has to be opened is pressure-free by checking that blinds are in place, vents are open and volume is drained. Inside confined space works, only electrical facilities / installations of 24V shall be permitted. Contractor shall ensure usage of safe & suitable arrangement of oxygen supply for individual workmen (during the course of work in confined space), if oxygen concentration is found to be less than 19.5% (v/v) there. All persons must be made aware of the risk associated with Nitrogen & all precautionary measures shall be taken when vessel/ sphere/ pipelines etc. are being purged with nitrogen.

3.3.22 Heavy Lifts

- a) The contractor shall submit detailed rigging study/ plan for IIMN/ Owner approval prior to lifting equipment requiring a crane of approx. 100 MT capacity or more due to constraints of its dimensions, location of foundation height, approach & weight.
- b) Contractor shall generate the format no. HSE-15 "Permit for heavy lift/critical erection"
- c) The Safe Working Load (SWL) and manufacturer's serial numbers shall be clearly marked on the slings and the lifting gears, either by tagging, stamping, engraving or embossing.
- d) Prior to actual lifting activities, contractor shall check the validity of the crane inspection certificate issued by statutory/ competent authority. This requirement shall also apply to all rigging equipments utilized for the job.
- e) The contractor shall, at all times, be responsible for all rigging activities.
- f) The Contractor shall ensure medical fitness of all workmen who are engaged / involved in erection of equipments, vessels etc. and such fitness checks shall be carried-out every six months interval with the help of a registered medical practitioner & record shall be maintained
- g) Adequate safety measures such as positive barricading, usage of appropriate PPEs, permit to work, etc. shall be taken during all heavy or critical lifts.
- h) Ground condition should be suitable to sustain the Ground Bearing Load of the Crane with full load condition.
- i) For lifting any material (irrespective of shape, size or volume), at any height, it is always advisable to prepare a Plan of Erection (PoE) taking into consideration hazards & risks associated therein – this can enable people to put their own experiences of various natures & side-by-side establish a practical method for risk-free erection / lifts. The contractor shall prepare PoE & shall document the same, when risks are identified as "medium" or "high" and the same shall be approved by its competent / qualified engineer.

3.3.23 Key Performance Indicators

The contractor shall measure an activity in both leading & trailing indicators for statistical and performance measurement. The activities pertaining to key performance indicators are covered in

Monthly HSE Report (Format No. HSE-5). The contractor shall try to achieve a statistically fair record and strive for its continual improvement.

Leading Indicators viz:-:

- Number of Safety Inductions carried-out at site (for workmen & staff members)
- Number of HSE inspections carried out
- Number of “Safety Walk Through” carried-out by site-head.
- Number of HSE shortfalls / lapses identified per contractor& closed-out in time.
- Number of Safety Meetings conducted (in-house / with contractors)
- Number of HSE Audits made (internal & external) vis-à-vis non conformances raised
- Number of HSE Awareness / Motivational program conducted by contractors
- Number of HSE Trainings conducted at site for supervisors & workmen
- Study of Near miss case reported
- Encouragements / Awards / Recognitions to workmen, job supervisors & field engineers.
- Suggestions for improvement

Trailing Indicators viz:-:

- Calculation of HSE statistics viz frequency rate, severity rate, LTA free manhours etc.
- Analysis of incidents / accidents (nature, severity, types etc.)
- Study of Incident / Accident with respect to :-
 - Variety
 - Period of the year / project span
 - Timings of the incident / accident
 - Age profile of victims
 - Body parts involved
 - Penalty levied for causing incident / accident

3.3.24 Unsuitable Land Conditions

Contractor shall take appropriate measures and necessary work permits/clearances if work is to be done in or around marshy areas, river crossings, mountains, monuments, etc. The Contractor shall make right assessment and take all necessary action for developing work areas to make them safe & suitable for crane operations or other vehicular movement before carrying out any project related activity / operation. Contractor shall take all necessary actions to make the surroundings of its site establishments (site office, stores, lay-down area etc.) work-worthy safe and secure.

3.3.25 Under Water Inspection

Contractor shall ensure that boats and other means used for transportation, surveying & investigation works shall be certified seaworthy by a recognized classification society. It shall be equipped with all life saving devices like life jackets, adequate fire protection arrangements and shall possess communication facilities like cellular phones, wireless, walkie-talkie. All divers used for seabed surveys, underwater inspections shall have required authorized license, suitable life-saving kit. Number of hours of work by divers shall be limited as per regulations. IIMN/ Owner shall have the right to inspect the boat and scrutinize documents in this regard.

3.3.26 Excavation

The Contractor shall obtain permission from competent authorities prior to excavation wherever required.



The Contractor shall locate the position of buried utilities (water line, cable route, etc.) by referring to project / plant drawing / in consultation with IIMN/Owner. The Contractor shall start digging manually to locate the exact position of buried utilities & thereafter use mechanical means.

In case of non-availability of sufficient data/ drawings, underground services i.e. underground cable/ pipe shall be checked by cable detector/ pipe locator by the contractor.

The Contractor shall keep soil heaps at least 1.5 M away from edge or a distance equal to depth of pit (whichever is more)

All excavated pits greater than 10 Sq.M plan area and depth more than 1.5M shall have at least two access routes for ingress and egress. Also, additional access routes shall be provided such that distance between any two access routes shall not be more than 20M.

The Contractor shall maintain sufficient “angle of repose” during excavation – shall also provide slope or suitable bench as decided by IIMN / Owner.

The Contractor shall arrange “battering” or “benching” wherever required for preventing collapse of edge of excavations.

The Contractor shall identify & arrange de-watering pump or well-point system to prevent earth collapse due to heavy rain / influx of underground water.

The Contractor shall arrange protective fencing/ hard barricading with warning signal around excavated pits, trenches, etc. along with minimum 2 (two) entries, exits / escape ladders.

The Contractor must avoid “underpinning” / under-cutting to prevent collapse of chunk of earth during excavation

The Contractor shall use “stoppers” to prevent over-run of vehicle wheels at the edge of excavated pits / trenches.

The Contractor shall arrange strengthening of “shoring” & “strutting” proactively to avoid collapse of earth / edges due to vehicular movement in close proximity of excavated areas / pits/ trenches, etc.

3.4 Tool Box Talks (TBT)

Contractor shall conduct daily TBT with workers prior to start of work and shall maintain proper record of the meeting. A suggested format is given below. The TBT is to be conducted by the immediate supervisor of the workers.

The Contractor shall conduct TBT before start of every morning or evening shift or night shift activities, for alerting the workers on specific hazards and their appropriate dos & don'ts. The Contractor shall provide sufficient rests to the site workmen and their foremen to avert fatigue & thereby endangering their lives during the course of site works.

TOOLBOX TALK RECORDING SHEET		
Date & Time		
Work Location		
Subject (Nature of work)		
Presenter		
Hazards involved		
Precautions to be taken		
Worker's Name	Signature	Section

Remarks, in any		

The topics during TBT shall include

- Hazards related to work assigned on that day and precautions to be taken.
- Any forthcoming HSE hazards/events/instruction/orders, etc.

The above record can be kept in local language, which workers can read. These records shall be made available to IIMN/ Owner whenever demanded.

3.5 Training & Induction Programme

- a) Initial induction of workers into Construction oriented activities and appraising them about the methodology of works and how to carry-out safely and the same should not be inter mixed with Tool Box Talks or HSE Training. In this regard careful action should be made & maintained for imparting HSE induction to every individual, irrespective of his task/designation/level of employment, whereas, HSE Training should be imparted to specific person/group of people who are to carry-out that specific task more than once – for example, Riggers must be trained for working at heights, welders must be trained for work in confined space, fitters/carpenters, mesons must be trained for work at heights, etc.
- b) Contractor shall conduct Safety induction programme on HSE for all his workers and maintain records. The Gate Pass shall be issued only to those workers who successfully qualify the Safety induction programme.
- c) The Contractor shall brief the visitors about the HSE precautions which are required to be taken before their proceeding to site and make necessary arrangements to issue appropriate PPEs like Aprons, hard hats, ear-plugs, goggles & safety shoes etc., to his visitors. The Contractor shall always maintain relevant acknowledgement from visitor on providing him brief information on HSE actions.
- d) Contractor shall ensure that all his personnel possess appropriate training to carry out the assigned job safely. The training should be imparted in a language understood by them and should specifically be trained about
 - Potential hazards to which they may be exposed at their workplace
 - Measures available for prevention and elimination of these hazards

The topics during training shall cover, at the minimum: -

- Why safety should be considered during work - explanation
- Education about hazards and precautions required
- Employees' duties & responsibilities
- Emergency and evacuation plan
- HSE requirements during project activities
- Firefighting and First-Aid
- Use of PPEs
- Occupational health issues – dos & don'ts
- Local laws on intoxicating drinks, drugs, smoking in force

- Common environmental subjects – lighting, ventilation, vibration, smoke/fumes etc.
- e) Records of the training shall be kept and submitted to IIMN/ Owner.
- f) The Contractor shall make regular program for conducting Safety Training on various topics related to various activities & their safe-guarding utilizing experienced persons / outside agency / faculty. A program for Safety Training (indicative list as per Appendix –F) shall be furnished by the Contractor in its HSE Plan.
- g) For offshore and jetty jobs, contractor shall ensure that all personnel deployed have undergone a structured sea survival training including use of lifeboats, basket landing, use of radio communication etc. from an agency acceptable to Owner/IIMN.

3.6 [DELETED]

3.7 [DELETED]

3.8 HSE Promotion

The contractor shall encourage his workforce to promote HSE efforts at workplace by way of organizing workshops/ seminars/ training programs, celebrating HSE awareness weeks & National Safety Day, conducting quizzes & essay competitions, distributing pamphlets, posters & material on HSE, providing incentives for maintaining good HSE practices and granting incentives/ bonus for completing the job without any lost time accident.

3.9 Lock Out and Tag Out (LOTO) for Isolation of Energy Source

- a) Contractor shall follow the LOTO/ Isolation procedure of owner for all energy source isolations installed/ under purview by /of owner i.e. “Brown field”
- b) For all the other energy source (not under purview of client/owner) i.e. “Green field” Contractor shall develop a system to ensure the isolation of equipments, pipelines, Vessel, electrical panels from the energy source covering following as minimum:-
 - Identification of all energy source viz electrical, mechanical, hydraulic, pneumatic, chemical, thermal, gravitational, radiation and other forms of stored or kinetic energy.
 - Establishing the energy isolation devices viz manually operated electrical circuit breakers, disconnection switches, blind flanges, etc.
 - Installation of Lock Out devices for preventing the inadvertent release of stored energy and Tag Out devices (“Danger”, “Do Not operate” or Do not Remove” tags) to indicate that testing, maintenance or servicing is underway and the device cannot be operated until the tag out device is removed.
 - Lock Out and Tag out log book
 - Permit for isolation and de-isolation of energy source as per format No.: HSE-16
 - Availability of competent persons like experienced operators at substations, pump house, units etc., supervisors etc.
- c) Contractor shall ensure that all the sources are locked out and tagged properly before giving clearance to start the job.
- d) After the completion of job, contractor shall ensure all tools and tackles are removed and nobody is present in the working area and signing on LOTO log book.
- e) Only on confirmation of above the contractor will remove their lock and tag from the isolation points and give instructions for energizing the same. Only the person carrying out the task shall himself carry the key for the lock in /Lock out.

4.0 DETAILS OF HSE MANAGEMENT SYSTEM BY CONTRACTOR

4.1 On Award of Contract

The Contractor shall submit a comprehensive Health, Safety and Environmental Plan or programme for approval by IIMN/Owner prior to start of work. The Contractor shall participate in the pre-start meeting with IIMN/Owner to finalize HSE Plans which shall including the following:

- HSE policy & Objectives
- Job procedure to be followed by the Contractor for construction activities including handling of equipments, scaffolding, electric installations, etc. describing the risks involved, actions to be taken and methodology for monitoring each activity. Indicative list of procedures is enclosed as Annexure-H
- IIMN/Owner review/audit requirement.
- Organization structure along with responsibility and authority, on HSE activities.
- Administrative & disciplinary steps involving implementation of HSE requirements
- Emergency evacuation plan/ procedures for site and labour camps
- Procedures for reporting & investigation of accidents and near misses.
- HSE Inspection
- HSE Training programme at project site
- HSE Awareness programme at project site
- Reference to Rules, Regulations and statutory requirements.
- HIRAC
- Environment Aspect Impact Register
- Legal Register
- HSE documentation viz reporting, analysis & record keeping.

4.2 During Job Execution

Contractor shall implement approved Health, Safety and Environment management plan or programme including but not limited to as brought out under para 3.0. Contractor shall also ensure:

- a) to arrange workmen compensation insurance, registration under ESI Act, third party liability insurance, registration under BOCW Act etc., as applicable.
- b) to arrange all HSE permits before start of activities (as applicable), like permits for hot work, working at heights (Refer Format No. HSE-6), confined space (Refer Format No. HSE-7), Radiation Work Permit (Refer Format No. HSE-8), Demolishing/ Dismantling Work Permit (Refer Format No. HSE-9), Permit for erection/modification & dismantling of scaffolding (Refer Format No:HSE-14),Permit for heavy lift/critical erection (Refer Format No:HSE-15) ,Permit for energy Isolation & De-isolation” (HSE-16) ,storage of chemical/ explosive materials & its use and implement all precautions mentioned therein. In this regard, requirements of *Oil industry Safety Directorate Standard No. Std -105 "Work Permit Systems"* shall be complied with while working in existing Oil or Gas processing plants. List of the persons involved shall be maintained as annexure to the work permit issued for a particular activity.
- c) to submit, timely, the completed checklist on HSE activities in Format No.HSE-1, Monthly HSE report in Format No.HSE-5 (use of web based package (www.IIMN.co.in/conthse) is compulsory wherever the facility is available else a hard copy is to be submitted), accident/incident reports, investigation reports etc. as per IIMN/Owner requirements. Compliance of instructions on HSE shall be done by Contractor and informed urgently to IIMN/Owner.

- d) that his top most executive at site attends all the Safety Committee/HSE meetings arranged by IIMN/Owner and carries out safety walk regularly. Only in case of his absence from site that a second senior most person shall be nominated by him, in advance, and communicated to IIMN/Owner for performing the above tasks.
- e) display at site office and at prominent locations HSE Policy, caution boards, list of hospitals, emergency services available, safety signs like Men at work, Speed Limits, Hazardous Area, various do's & don'ts, etc.
- f) provide posters, banners for safe working to promote safety consciousness.
- g) identify, assess, analyze & mitigate the construction hazards & incorporate relevant control measures before actually executing site works. (HIRAC = Hazard Identification, Risk Analysis and Control).
- h) identify, assess, analyze & mitigate the environmental impact & incorporate relevant control measures through Environmental Aspect Impact Register
- i) Identify and comply to all applicable HSE related legal requirements by preparing and maintaining a Legal register
- j) arrange testing, examination, inspection of own as well as borrowed construction equipment's/ machinery (stationary & mobile) before being used at site and also at periodical interval, through own resources and also by 3rd party competent agencies (as deemed fit in statutes). Records of such test, examination etc. shall be maintained & shall be submitted to IIMN/Owner as & when asked for.
- k) carryout audits/inspection (internal & external) at his works as well as sub-contractor works as per approved HSE plan/procedure/programme & submit the compliance reports of identified shortfalls for IIMN/Owner review.
- l) Arranging HSE training for site workmen (of his own & subcontractors) through internal or external faculty at periodical intervals.
- m) Assistance & cooperate during HSE audits by IIMN/Owner or any other 3rd party and submit compliance report.
- n) Generate & submit of HSE records/report as per this specification.
- o) Contractor shall arrange minimum 100 lux illumination level at construction site for night works & record shall be maintained.
- p) The contractor shall assign responsible person as in charge for night works and it shall be informed to owner/IIMN.
- q) Appraise IIMN/Owner on HSE activities at site regularly.
- r) Carry-out all dismantling activities safely, with prior approval of IIMN/Owner representative.
- s) The Contractor shall ensure that "Hot works" and painting works do not continue at the same place/ location at project site for which chance or probability of "fire" incident exists.

4.3 During Short Listing of the Sub-Contractors

The contractor shall review the HSE management system of the sub-contractors in line with the requirements given in this specification. The contractor shall be held responsible for the shortcomings observed in the HSE management system of the sub-contractor(s) during execution of the job.

5.0 RECORDS

At the minimum, the contractor shall maintain/ submit HSE records as per approved HSE Plan.



APPENDIX-A
(Sheet 1 of 2)

A.	IS CODES ON HSE
SP: 53	Safety code for the use, Care and protection of hand operated tools.
IS: 838	Code of practice for safety & health requirements in electric and gas welding and cutting operations
IS: 1179	Eye & Face precautions during welding, equipment etc.
IS: 1860	Safety requirements for use, care and protection of abrasive grinding wheels.
IS: 1989 (Pt -II)	Leather safety boots and shoes
IS: 2925	Industrial Safety Helmets
IS: 3016	Code of practice for fire safety precautions in welding & cutting operation.
IS: 3043	Code of practice for earthing
IS: 3764	Code of safety for excavation work
IS: 3786	Methods for computation of frequency and severity rates for industrial injuries and classification of industrial accidents
IS: 3696	Safety Code of scaffolds and ladders
IS: 4083	Recommendations on stacking and storage of construction materials and components at site
IS: 4770	Rubber gloves for electrical purposes
IS: 5121	Safety code for piling and other deep foundations
IS: 5216 (Pt-I)	Recommendations on Safety procedures and practices in electrical works
IS: 5557	Industrial and Safety rubber lined boots
IS: 5983	Eye protectors
IS: 6519	Selection, care and repair of Safety footwear
IS: 6994 (Pt-I)	Industrial Safety Gloves (Leather & Cotton Gloves)
IS: 7293	Safety Code for working with construction Machinery
IS: 8519	Guide for selection of industrial safety equipment for body protection
IS: 9167	Ear protectors
IS: 11006	Flash back arrestor (Flame arrestor)



IS: 11016	General and safety requirements for machine tools and their operation
IS: 11057	Specification for Industrial safety nets
IS: 11226	Leather safety footwear having direct moulded rubber sole
IS: 11972	Code of practice for safety precaution to be taken when entering a sewerage system
IS: 13367	Code of practice-safe use of cranes
IS: 13416	Recommendations for preventive measures against hazards at working place

APPENDIX-A
(Sheet 2 of 2)

B. INTERNATIONAL STANDARDS ON HSE

Safety Glasses	:	ANSI Z 87.1, ANSI ZZ 87.1, AS 1337, BS 2092, BS 1542, BS 679, DIN 4646/ 58311
Safety Shoes	:	ANSI Z 41.1, AS 2210, EN 345
Hand Gloves	:	BS 1651
Ear Muffs	:	BS 6344, ANSI S 31.9
Hard Hat	:	ANSI Z 89.1/89.2, AS 1808, BS 5240, DIN 4840
Goggles	:	ANSI Z 87.1
Face Shield	:	ANSI Z 89.1
Breathing Apparatus	:	BS 4667, NIOSH
Welding & Cutting	:	ANSI Z49.1
Safe handling of compressed: P-1		(Compressed Gas Association Gases in cylinders 1235 Jefferson Davis Highway, Arlington VA 22202 - USA)
Full body harness	:	EN-361
Lanyard	:	EN-354
Karabiner	:	EN-362 and EN-12275

APPENDIX-B

DETAILS OF FIRST AID BOX

SL. NO.	DESCRIPTION	QUANTITY
1.	Small size Roller Bandages, 1 Inch Wide (Finger Dressing small)	6 Pcs.
2.	Medium size Roller Bandages, 2 Inches Wide (Hand & Foot Dressing)	6 Pcs.
3.	Large size Roller Bandages, 4 Inches Wide (Body Dressing Large)	6 Pcs.
4.	Large size Burn Dressing (Burn Dressing Large)	4 Pkts.
5.	Cotton Wool (20 gms packing)	4 Pkts.
6.	Antiseptic Solution Dettol (100 ml.) or Savlon	1 Bottle
7.	Mercurochrome Solution (100 ml.) 2% in water	1 Bottle
8.	Ammonia Solution (20 ml.)	1 Bottle
9.	A Pair of Scissors	1 Piece
10.	Adhesive Plaster (1.25 cm X 5 m)	1 Spool
11.	Eye pads in Separate Sealed Pkt.	4 pcs.
12.	Tourniquet	1 No.
13.	Safety Pins	1 Dozen
14.	Tinc. Iodine/ Betadine (100 ml.)	1 Bottle
15.	Polythene Wash cup for washing eyes	1 No.
16.	Potassium Permanganate (20 gms.)	1 Pkt.
17.	Tinc. Benzoine (100 ml.)	1 Bottle
18.	Triangular Bandages	2 Nos.
19.	Band Aid Dressing	5 Pcs.
20.	Iodex/ Moov (25 gms.)	1 Bottle
21.	Tongue Depressor	1 No.
22.	Boric Acid Powder (20 gms.)	2 Pkt.
23.	Sodium Bicarbonate (20 gms.)	1 Pkt.
24.	Dressing Powder (Nebasulf) (10 gms.)	1 Bottle
25.	Medicinal Glass	1 No.
26.	Duster	1 No.
27.	Booklet (English& Local Language)	1 No. each
28.	Soap	1 No.
29.	Toothache Solution	1 No.
30.	Vicks (22 gms.)	1 Bottle
31.	Forceps	1 No.
32.	Snake –Bite Lancet	1No.
33.	Note Book	1 No.
34.	Splints	4 Nos.
35.	Lock	1 Piece
36.	Life Saving/Emergency/Over-the counter Drugs	As decided at site

Box size: Suitable size first aid box to be used for first aid items

Note : The medicines prescribed above are only indicative. Equivalent medicines can also be used.
A prescription, in this regard, shall be required from a qualified Physician.

APPENDIX-C

TYPE OF FIRES VIS-À-VIS FIRE EXTINGUISHERS

Fire Extinguisher Fire	Water	Foam	CO ₂	Dry Powder	Multi purpose (ABC)
Originated from paper, clothes, wood	✓	✓	can control minor surface fires	can control minor surface fires	✓
Inflammable liquids like alcohol, diesel, petrol, edible oils, bitumen	✗	✓	✓	✓	✓
Originated from gases like LPG, CNG, H ₂	✗	✗	✓	✓	✓
Electrical fires	✗	✗	✓	✓	✓

LEGEND : ✓ : CAN BE USED
 ✗ : NOT TO BE USED

Note: Fire extinguishing equipment must be checked atleast once a year and after every use by an authorized person. The equipment must have an inspection label on which the next inspection date is given. Type of extinguisher shall clearly be marked on it.

APPENDIX-D

List of Statutory Acts & Rules Relating to HSE

- The Indian Explosives Act and Rules
- The Motor Vehicle Act and Central Motor Vehicle Rules
- The Factories Act and concerned Factory Rules
- The Petroleum Act and Petroleum Rules
- The Workmen Compensation Act
- The Gas Cylinder Rules and the Static & Mobile Pressure Vessels Rules
- The Indian Electricity Act and Rules
- The Indian Boiler Act and Regulations
- The Water (Prevention & Control & Pollution) Act
- The Water (Prevention & Control of Pollution) Cess Act
- The Mines & Minerals (Regulation & Development) Act
- The Air (Prevention & Control of Pollution) Act
- The Atomic Energy Act
- The Radiation Protection Rules
- The Indian Fisheries Act
- The Indian Forest Act
- The Wild Life (Protection) Act
- The Environment (Protection) Act and Rules
- The Hazardous Wastes (Management & Handling) Rules
- The Manufacturing, Storage & import of Hazardous Chemicals Rules
- The Public Liability Act
- The Building and Other Construction Workers (Regulation of Employment and Condition of Service) Act
- Other statutory acts Like EPF, ESIS, Minimum Wages Act.

APPENDIX-E (Sheet 1 of 12)

CONSTRUCTION HAZARDS, THEIR EFFECTS & PREVENTIVE MEASURES

ACTIVITY	TYPE OF HAZARD	EFFECT OF HAZARD	PREVENTIVE MEASURES
(A) EXCAVATION Pit Excavation upto 3.0m	Falling into pit	Personal injury	Provide guard rails/ barricade with warning signal Provide at least two entries/ exits. Provide escape ladders.
	Earth Collapse	Suffocation/ Breathlessness Buried	Provide suitable size of shoring and strutting, if required. Keep soil heaps away from the edge equivalent to 1.5m or depth of pit whichever is more. Don't allow vehicles to operate too close to excavated areas. Maintain at least 2m distance from edge of cut. Maintain sufficient angle of repose. Provide slope not less than 1:1 and suitable bench of 0.5m width at every 1.5m depth of excavation in all soils except hard rock. Battering/benching the sides.
	Contact with buried electric cables Gas/ Oil Pipelines	Electrocution Explosion	Obtain permission from competent authorities, prior to excavation, if required. Locate the position of buried utilities by referring to plant drawings. Start digging manually to locate the exact position of buried utilities and thereafter use mechanical means.
Pit Excavation beyond 3.0m	Same as above plus Flooding due to excessive rain/ underground water	Can cause drowning situation	Prevent ingress of water Provide ring buoys Identify and provide suitable size dewatering pump or well point system
	Digging in the vicinity of existing Building/ Structure	Building/Structure may collapse Loss of health & wealth	Obtain prior approval of excavation method from local authorities. Use under-pining method Construct retaining wall side by side.
	Movement of vehicles/ Equipments close to the edge of cut.	May cause cave-in or slides. Persons may get buried.	Barricade the excavated area with proper lighting arrangements Maintain at least 2m distance from edge of cut and use stop blocks to prevent over-run Strengthen shoring and strutting

APPENDIX-E: (Sheet 2 of 12)

CONSTRUCTION HAZARDS, THEIR EFFECTS & PREVENTIVE MEASURES (...Contd.)

ACTIVITY	TYPE OF HAZARD	EFFECT OF HAZARD	PREVENTIVE MEASURES
Narrow deep excavations for pipelines, etc.	Same as above plus Frequent cave-in or slides	May cause severe injuries or prove fatal	Battering/benching of sides Provide escape ladders
	Flooding due to Hydro- static testing	May arise drowning situation	Same as above plus Bail out accumulated water Maintain adequate ventilation.
Rock by excavation blasting	Improper handling of explosives	May prove fatal	Ensure proper storage, handling & carrying of explosives by trained personnel. Comply with the applicable explosive acts & rules.
	Uncontrolled explosion	May cause severe injuries or prove fatal	Allow only authorized persons to perform blasting operations. Smoking and open flames are to be strictly prohibited
	Scattering of stone pieces in atmosphere	Can hurt people	Use PPE like goggles, face mask, helmets etc.
Rock excavation by blasting (Contd)	Entrapping of persons/ animals.	May cause severe injuries or prove fatal	Barricade the area with red flags and blow siren before blasting.
	Misfire	May explode suddenly	Do not return to site for at least 20 minutes or unless announced safe by designated person.
Piling Work	Failure of pile-driving equipment	Can hurt people	Inspect Piling rigs and pulley blocks before the beginning of each shift.
	Noise pollution	Can cause deafness and psychological imbalance.	Use personal protective equipments like ear plugs, muffs, etc.
	Extruding rods/casing	Can hurt people	Barricade the area and install sign boards Provide first-aid
	Working in the vicinity of 'Live-Electricity'	Can cause electrocution/ Asphyxiation	Keep sufficient distance from Live-Electricity as per IS code. Shut off the supply, if possible Provide artificial/rescue breathing to the injured
(B) CONCRETING	Air pollution by cement	May affect Respiratory System	Wear respirators or cover mouth and nose with wet cloth.
	Handling of ingredients	Hands may get injured	Use gloves & other PPE.
	Protruding reinforcement rods.	Feet may get injured	Provide platform above reinforcement for movement of workers or provide end caps for protection on reinforcement bars.

APPENDIX-E : (Sheet 3 of 12)

CONSTRUCTION HAZARDS, THEIR EFFECTS & PREVENTIVE MEASURES (...Contd.)

ACTIVITY	TYPE OF HAZARD	EFFECT OF HAZARD	PREVENTIVE MEASURES
	Earthing of electrical mixers, vibrators, etc. not done.	Can cause electrocution/ asphyxiation	Ensure earthing of equipments and proper functioning of electrical circuit before commencement of work.
	Falling of materials from height	Persons may get injured	Use hard hats Remove surplus material immediately from work place. Ensure lighting arrangements during night hours
	Continuous pouring by same gang	Cause tiredness of workers and may lead to accident.	Insist on shift pattern Provide adequate rest to workers between subsequent pours.
	Revolving of concrete mixer/ vibrators	Parts of body or clothes may get entrapped.	Allow only mixers with hopper Provide safety cages around moving motors Ensure proper mechanical locking of vibrator
Super-structure	Same as above plus Deflection in props or shuttering material	Shuttering/props may collapse and prove fatal	Avoid excessive stacking on shuttering material Check the design and strength of shuttering material before commencement of work Rectify immediately the deflection noted during concreting.
	Passage to work place	Improperly tied and designed props/planks may collapse	Ensure the stability and strength of passage before commencement of work. Do not overload and stand under the passage.
(C) REINFOR-CEMENT	Curtailement and binding of rods	Persons may get injured	Use PPE like gloves, shoes, helmets, etc. Avoid usage of shift tools
	Carrying of rods for short distances/at heights	Workers may get injured their hands and shoulders.	Provide suitable pads on shoulders and use safety gloves. Tie up rods in easily liftable bundles Ensure proper staging.
	Checking of clear distance/ cover with hands	Rods may cut or injure the fingers	Use measuring devices like tape, measuring rods, etc.
	Hitting projected rods and standing on cantilever rods.	Persons may get injured and fell down	Use safety shoes and avoid standing unnecessarily on cantilever rods Avoid wearing of loose clothes

APPENDIX-E: (Sheet 4 of 12)

CONSTRUCTION HAZARDS, THEIR EFFECTS & PREVENTIVE MEASURES (...Contd.)

ACTIVITY	TYPE OF HAZARD	EFFECT OF HAZARD	PREVENTIVE MEASURES
	Falling of material from height	May prove fatal	Use helmets Provide safety nets
	Transportation of rods by trucks/ trailers	Protruded rods may hit the persons	Use red flags/lights at the ends Do not protrude the rods in front of or by the side of driver's cabin. Do not extend the rods 1/3 rd of deck length or 1.5m whichever is less
(D)WELDING AND GAS CUTTING	Welding radiates invisible ultraviolet and infra-red rays	Radiation can damage eyes and skin.	Use specified shielding devices and other PPE of correct specifications. Avoid thoriated tungsten electrodes for GTAW
	Improper placement of oxygen and acetylene cylinders	Explosion may occur	Move out any leaking cylinder Keep cylinders in vertical position Use trolley for transportation of cylinders and chain them Use flashback arrestors
	Leakage/ cuts in hoses	May cause fire	Purge regulators immediately and then turn off Never use grease or oil on oxygen line connections and copper fittings on acetylene lines Inspect regularly gas carrying hoses Always use red hose for acetylene & other fuel gases and black for oxygen
	Opening-up of cylinder	Cylinder may burst	Always stand back from the regulator while opening the cylinder Turn valve slowly to avoid bursting Cover the lug terminals to prevent short circuiting
	Welding of tanks, container or pipes storing flammable liquids	Explosion may occur	Empty & purge them before welding Never attach the ground cable to tanks, container or pipe storing flammable liquids Never use LPG for gas cutting

APPENDIX-E: (Sheet 5 of 12)

CONSTRUCTION HAZARDS, THEIR EFFECTS & PREVENTIVE MEASURES ...(Contd.)

ACTIVITY	TYPE OF HAZARD	EFFECT OF HAZARD	PREVENTIVE MEASURES
(E) RADIOGRAPHY	Ionizing radiation	Radiations may react with the skin and can cause cancer, skin irritation, dermatitis, etc.	Ensure Safety regulations as per BARC/AERB before commencement of job. Cordon off the area and install Radiation warning symbols Restrict the entry of unauthorized persons Wear appropriate PPE and film badges issued by BARC/AERB
	Transportation and Storage of Radiography source	Same as above	Never touch or handle radiography source with hands Store radiography source inside a pit in an exclusive isolated storage room with lock and key arrangement. The pit should be approved by BARC/AERB. Radiography source should never be carried either in passenger bus or in a passenger compartment of trains. BARC/AERB has to be informed before source movement. Permission from Director General of Civil Aviation is required for booking radio isotopes with airlines.
	Loss of Radio isotope	Same as above	Try to locate with the help of Survey Meter. Inform BARC/AERB (*)
(F) ELECTRICAL INSTALLATION AND USAGE	Short circuiting	Can cause Electrocutation or Fire	Use rubberized hand gloves and other PPE Don't lay wires under carpets, mats or door ways. Allow only licensed electricians to perform on electrical facilities Use one socket for one appliance Ensure usage of only fully insulated wires or cables Don't place bare wire ends in a socket Ensure earthing of machineries and equipments Do not use damaged cords and avoid temporary connections Use spark-proof/flame proof type field distribution boxes.

(*) Atomic Energy Regulatory Board (AERB),
Bhabha Atomic Research Centre (BARC)
Anushakti Nagar, Mumbai – 400 094

APPENDIX-E: (Sheet 6 of 12)

CONSTRUCTION HAZARDS, THEIR EFFECTS & PREVENTIVE MEASURES (...Contd.)

ACTIVITY	TYPE OF HAZARD	EFFECT OF HAZARD	PREVENTIVE MEASURES
			<p>Do not allow open/bare connections Provide all connections through 30mAELCB Protect electrical cables/equipments from water and naked flames Check all connections before energizing</p>
	Overloading of Electrical System	Bursting of system can occur which leads to fire	<p>Display voltage and current ratings prominently with 'Danger' signs. Ensure approved cable size, voltage grade and type Switch off the electrical utilities when not in use Do not allow unauthorized connections. Ensure proper grid wise distribution of Power</p>
	Improper laying of overhead and underground transmission lines/cables	Can cause electrocution and prove fatal	<p>Do not lay unarmoured cable directly on ground, wall, roof of trees Maintain atleast 3m distance from HT cables All temporary cables should be laid atleast 750 mm below ground on 100 mm fine sand overlying by brick soling Provide proper sleeves at crossings/ intersections Provide cable route markers indicating the type and depth of cables at intervals not exceeding 30m and at the diversions/termination</p>
(G) FIRE PREVENTION AND PROTECTION	Small fires can become big ones and may spread to the surrounding areas	Cause burn injuries and may prove fatal	<p>In case a fire breaks out, press fire alarm system and shout "Fire, Fire". Keep buckets full of sand & water/ fire extinguishing equipment near hazardous locations. Confine smoking to 'Smoking Zones' only. Train people for using specific type of fire fighting equipments under different classes of fire. Keep fire doors/shutters, passages and exit doors unobstructed. Maintain good housekeeping and first-aid boxes (for details refer Appendix-B). Don't obstruct access to Fire extinguishers. Do not use elevators for evacuation during fire. Maintain lightning arrestors for elevated structures. Stop all electrical motors with internal combustion.</p>

APPENDIX-E : (Sheet 7 of 12)
CONSTRUCTION HAZARDS, THEIR EFFECTS & PREVENTIVE MEASURES (...Contd.)

ACTIVITY	TYPE OF HAZARD	EFFECT OF HAZARD	PREVENTIVE MEASURES
			Move the vehicles from dangerous locations. Remove the load hanging from the crane booms Remain out of the danger areas.
	Improper selection of Fire extinguisher	It may not extinguish the fire	Ensure usage of correct fire extinguisher meant for the specified fire (for details refer Appendix-C). Do not attempt to extinguish Oil and electric fires with water. Use foam cylinders/CO ₂ /sand or earth.
	Improper storage of highly inflammable substances	Same as above	Maintain safe distance of flammable substances from source of ignition. Restrict the distribution of flammable materials to only min. necessary amount. Construct specifically designed fuel storage facilities. Keep chemicals in cool and dry place away from heat. Ensure adequate ventilation. Before welding operation, remove or shield the flammable material properly. Store flammable materials in stable racks, correctly labeled preferably with catchment trays. Wipe off the spills immediately
	Short circuiting of electrical system	Same as above Can cause Electrocutation	Don't lay wires under carpets, mats or door ways Use one socket for one appliance. Use only fully insulated wires or cables. Do not allow open/bare connections. Provide all connections through 30mAELCB. Ensure earthing of machineries and equipments.
(H) VEHICULAR MOVEMENT	Crossing the Speed Limits (Rash driving)	Personal injury	Obey speed limits and traffic rules strictly. Always expect the unexpected and be a defensive driver. Use seat belts/helmets. Blow horn at intersections and during overtaking operations. Maintain the vehicle in good condition. Do not overtake on curves, bridges and slopes.
	Adverse weather condition	Same as Above	Read the road ahead and ride to the left. Keep the wind screen and lights clean. Do not turn at speed. Recognize the hazard, understand the defense and act correctly in time.

APPENDIX-E : (Sheet 8 of 12)

CONSTRUCTION HAZARDS, THEIR EFFECTS & PREVENTIVE MEASURES (...Contd.)

ACTIVITY	TYPE OF HAZARD	EFFECT OF HAZARD	PREVENTIVE MEASURES
	Consuming alcohol before and during the driving operation	Same as above	Alcohol and driving do not mix well. Either choose alcohol or driving. If you have a choice between hitting a fixed object or an on-coming vehicle, hit the fixed object Quit the steering at once and become a passenger. Otherwise take sufficient rest and then drive. Do not force the driver to drive fast and round the clock. Do not day dream while driving
	Falling objects/ Mechanical failure	May prove fatal	Ensure effective braking system, adequate visibility for the drives, reverse warning alarm. Proper maintenance of the vehicle as per manufacturer instructions
(I) PROOF TESTING (HYDROSTATIC/PNEUMATIC TESTING)	Bursting of piping Collapse of tanks Tanks flying off	May cause injury and prove fatal	Prepare test procedure & obtain IIMN/owner's approval. Provide separate gauge for pressurizing pump and piping/equipment. Check the calibration status of all pressure gauges, dead weight testers and temperature recorders. Take dial readings at suitable defined intervals and ensure most of them fall between 40-60% of the gauge scale range. Provide safety relief valve (set at pressure slightly higher than test pressure) while testing with air/ nitrogen. Ensure necessary precautions, stepwise increase in pressure, tightening of bolts/nuts, grouting, etc. before and during testing. Keep the vents open before opening any valve while draining out of water used for hydro-testing of tanks. Pneumatic testing involves the hazard of released energy stored in compressed gas. Specific care must therefore be taken to minimize the chance of brittle failure during a pneumatic leak test. Test temperature is important in this regard and must be considered when the designer chooses the material of construction.

APPENDIX-E : (Sheet 9 of 12)

CONSTRUCTION HAZARDS, THEIR EFFECTS & PREVENTIVE MEASURES (...Contd.)

ACTIVITY	TYPE OF HAZARD	EFFECT OF HAZARD	PREVENTIVE MEASURES
			A pressure relief device shall be provided, having a set pressure not higher than the test pressure plus the lesser of 345 KPa (50 psi) or 10% of the test pressure. The gas used as test fluid, if not air, shall be nonflammable and nontoxic.
(J) WORKING AT HEIGHTS	Person can fall down	May sustain severe injuries or prove fatal	Provide guard rails/barricade at the work place Use PPE like full body harness, life line, helmets, safety shoes, etc. Obtain a permit before starting the work at height above 3 meters Fall arrest and safety nets, etc. must be installed Provide adequate working space(min. 0.6 m) Tie/weld working platform with fixed support Use roof top walk ladder while working on a sloping roofs Avoid movement on beams
		May hit the scrap/material stacked at the ground or in between	Keep the work place neat and clean Remove the scrap immediately
	Material can fall down	May hit the workers working at lower levels and prove fatal	Same as above plus Do not throw or drop materials or equipment from height. i.e. do not <i>bomb</i> materials All tools to be carried in a tool-kit Bag or on working uniform Remove scrap from the planks Ensure wearing of helmet by the workers working at lower levels
(K) CONFINED SPACES	Suffocation/ drowning	Unconsciousness, death	Use respiratory devices, if reqd. Avoid overcrowding inside a confined space Provide Exhaust fans for ventilation Do not wear loose clothes, neck ties, etc. Fulfill conditions of the permit

APPENDIX-E: (Sheet 10 of 12)

CONSTRUCTION HAZARDS, THEIR EFFECTS & PREVENTIVE MEASURES (...Contd.)

ACTIVITY	TYPE OF HAZARD	EFFECT OF HAZARD	PREVENTIVE MEASURES
			<p>Check for presence of hydrocarbons, O₂ level</p> <p>Obtain work permit before entering a confined space</p> <p>Ensure that the connected piping of the equipment which is to be opened is pressure free, fluid has been drained, vents are open and piping is positively isolated by a blind flange</p>
	Presence of foul smell and toxic substances	Inhalation can pose threat to life	<p>Same as above plus</p> <p>Check for hydrocarbon and Aromatic compounds before entering a confined space</p> <p>Depute one person outside the confined space for continuous monitoring and for extending help in case of an emergency</p>
	Ignition/ flame can cause fire	Person may sustain burn injuries or explosion may occur	<p>Keep fire extinguishers at a hand distance</p> <p>Remove surplus material and scrap immediately</p> <p>Do not smoke inside a confined space</p> <p>Do not allow gas cylinders inside a confined space</p> <p>Use low voltage (24V) lamps for lighting</p> <p>Use tools with air motors or electric tools with max. voltage of 24V</p> <p>Remove all equipments at the end of the day</p>
(L) HANDLING AND LIFTING EQUIPMENTS	Failure of load lifting and moving equipments	Can cause accident and prove fatal	<p>Avoid standing under the lifted load and within the operating radius of cranes.</p> <p>Check periodically oil, brakes, gears, horns and tyre pressure of all moving machinery.</p> <p>Check quality, size and condition of all chain pulley blocks, slings, U-clamps, D-shackles, wire ropes, etc.</p> <p>Allow crane to move only on hard, firm and leveled ground.</p> <p>Allow lifting slings as short as possible and check gunny packings at the friction points.</p> <p>Do not allow crane to tilt its boom while moving</p> <p>Install Safe Load Indicator.</p> <p>Ensure certification by applicable authority.</p>

APPENDIX-E : (Sheet 11 of 12)

CONSTRUCTION HAZARDS, THEIR EFFECTS & PREVENTIVE MEASURES (...Contd.)

ACTIVITY	TYPE OF HAZARD	EFFECT OF HAZARD	PREVENTIVE MEASURES
	Overloading of lifting equipments	Same as above	Safe lifting capacity of derricks and winches written on them shall be got verified The max. safe working load shall be marked on all lifting equipments Check the weight of columns and other heavy items painted on them and accordingly decide about the crane capacity, boom and angle of erection Allow only trained operators and riggers during crane operation.
	Overhead electrical wires	Can cause electrocution and fire	Do not allow boom or other parts of crane to come within 3m reach of overhead HT cables Hook and load being lifted shall preferably remain in full visibility of crane operators.
(M) SCAFFOLDING, FORMWORK AND LADDERS	Person can fall down	Person May sustain severe injuries and prove fatal	Provide guard rails for working at height. Face ladder while climbing and use both hands. Ladders shall extend about 1m above landing for easy access and tying up purpose. Do not place ladders against movable objects and maintain base at 1/4 unit of the working length of the ladder. Suspended scaffolds shall not be less than 500 mm wide and tied properly with ropes. No loose planks shall be allowed. Use PPE, like helmets, safety shoes etc.
	Failure of scaffolding material	Same as above	Inspect visually all scaffolding materials for stability and anchoring with permanent structures. Design scaffolding for max. load carrying capacity. Scaffolding planks shall not be less than 50X250 mm full thickness lumber or equivalent. These shall be cleated or secured and must extend over the end supports by at least 150mm and not more than 300mm. Don't overload the scaffolds. Do not splice short ladders to make a longer one. Vertical ladders shall not exceed 6m.
	Material can fall down	Persons working at lower level gets injured	Remove excess material and scrap immediately. Carry the tools in a tool-kit bag only. Provide safety nets.

APPENDIX-E: (Sheet 12 of 12)

CONSTRUCTION HAZARDS, THEIR EFFECTS & PREVENTIVE MEASURES)

ACTIVITY	TYPE OF HAZARD	EFFECT OF HAZARD	PREVENTIVE MEASURES
(N) STRUC- TURAL WORKS	Personal negligence and danger of fall	Can cause injury or casualty	Do not take rest inside rooms built for welding machines or electrical distribution system. Avoid walking on beams at height. Wear helmet with chin strap and full body harness while working at height. Use hand gloves and goggles during grinding operations. Cover or mark the sharp and projected edges. Do not stand within the operating radius of cranes.
	Lifting/ slipping of material	Same as above	Do not stand under the lifted load. Stack properly all the materials. Avoid slippage during handling. Control longer pieces lifted up by cranes from both ends. Remove loose materials from height. Ensure tightening of all nuts & bolts.
(O)PIPELIN E WORKS	Erection/ lowering failure	Can cause injury	Do not stand under the lifted load. Do not allow any person to come within the radii of the side boom handling pipes. Check the load carrying capacity of the lifting tools & tackles. Use safe Load Indicators (SLI). Use appropriate PPEs.
	Other	Same as above	Wear gum boots in marshy areas. Allow only one person to perform signaling operations while lowering of pipes. Provide night caps on pipes. Provide end covers on pipes for stoppage of pigs while testing/ cleaning operations.
(P) GRIT BLASTING	Pollution in neighboring area, hit by grits and high pressure air	Can cause personal injury	Ensure the blasting is done in enclosed shed. Keep safe distance while blasting operations. Wear positive pressure blast hood or helmet with view-window, ear-muff/plug, gloves, overall or leather coat /apron, rubber shoes.

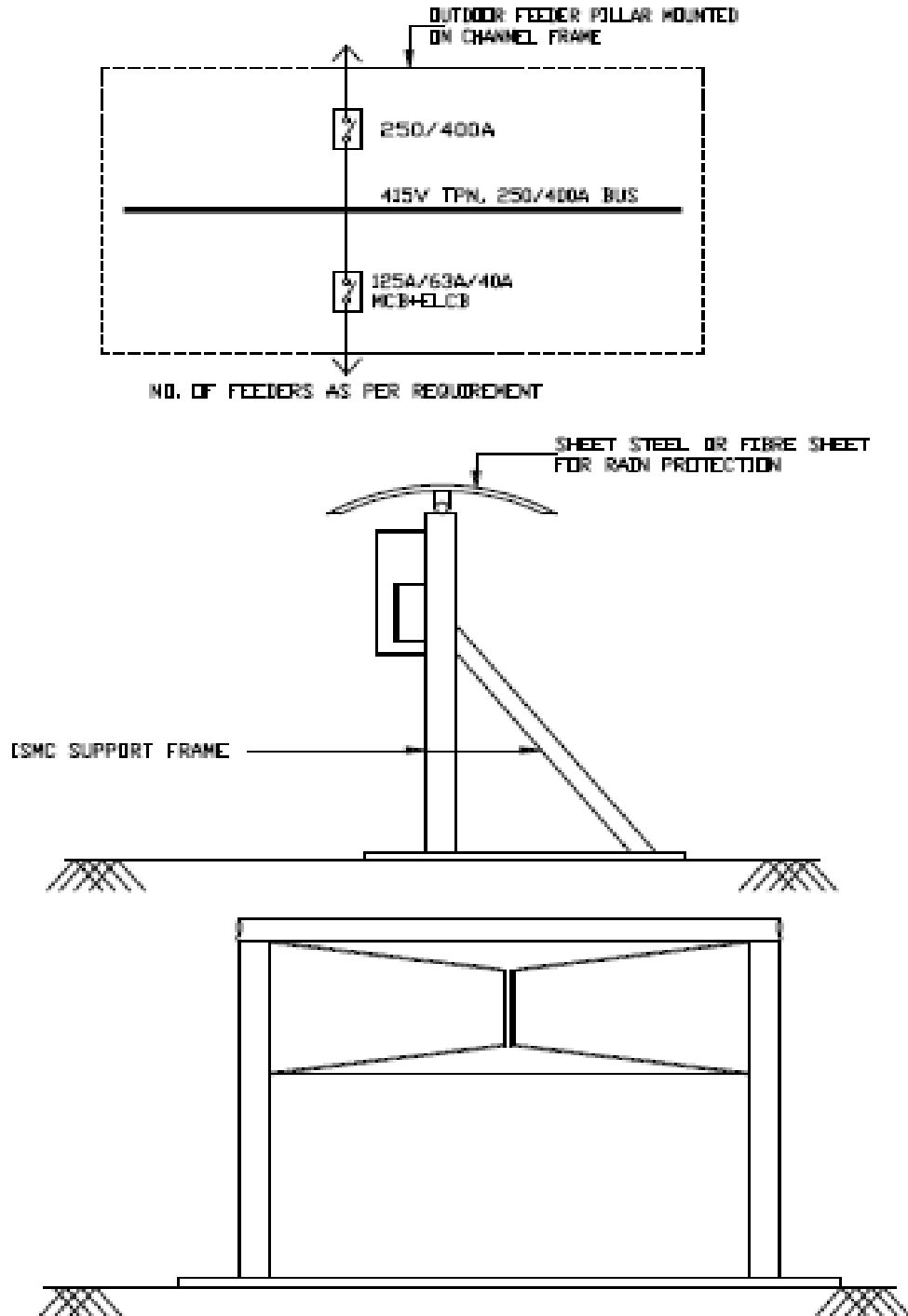
APPENDIX-F

TRAINING SUBJECTS / TOPICS
(For contractors' personnel)

1. The Law & Safety – Statutory Requirement / Applicable statutes / Duties of employer / employee.
2. Policy & Administration – Why HSE? / Duties & Responsibilities of Safety Personnel at project site / Effect of incentive on accident prevention.
3. HSE & Supervision – Duties of Supervisor / HSE integrated supervision / Who should be held responsible for site accidents?
4. Safety Budget / Cost of Accidents – Direct costs / Indirect costs.
5. Hazard Identification / Type of hazards / HIRAC.
6. Behavioral Safety & Motivation.
7. Housekeeping – Storage / Stacking / Handling of materials / Hydra handling.
8. Occupational Health in Construction sector.
9. Personal Protective Equipments – Respiratory & Non- respiratory.
10. Electricity & Safety – ELCB / Fuse / Powered tools / Project illumination.
11. Handling of Compressed Gas – Transportation / Storage / FBAs / Fire prevention.
12. Machine Safety – Machine guarding / Maintenance.
13. Transportation – Hazards & risks in transp. of materials / ODC consignments.
14. Cranes & Other Lifting machinery – Legal requirements vis-à-vis essential safety requirements.
15. Communication – HSE Induction / TBTs / Safety Committee / Safety meeting / Safety propaganda / Publicity.
16. Excavation – Risks & Dangers / Safety measures.
17. Working at Heights – Use of ladder / Work on roofs / Scaffolds / Double harness lanyards / Life-line / Fall arrester / Safety Nets / Floor openings.
18. Hazards in Welding & important safety precautions.
19. Gas Cutting – Hazards & safety measures.
20. Fire prevention & fire protection.

APPENDIX - G

CONSTRUCTION POWER BOARD (typ)



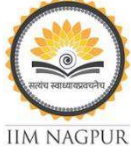
NOTES:-

1. CONTRACTOR TO INSTALL TEMPORARY CONST. POWER BOARD AS SHOWN IN THE DRG. ITS LOCATION SHALL BE EASILY ACCESSABLE.
2. POWER DISTRIBUTION BOARD SHALL BE EARTHED AT TWO POINTS BY MINIMUM 40X5MM GI STRIP FROM THE AVAILABLE GRID OR DIRECTLY CONNECTED TO TWO DIRECTLY DRIVEN EARTH ELECTRODES.
3. DISTRIBUTION BOARD SHALL BE FABRICATED BY USING 14MM CRCA SHEET STEEL WITH HINGED DOORS AND ALL COMPONENT MOUNTED IN IT.
4. ALL INCOMING AND OUTGOING CABLES SHALL HAVE BOTTOM ENTRY.

APPENDIX-H

LIST OF PROCEDURES (INDICATIVE) TO BE FORMING PART OF HSE PLAN:-

- A. HSE Management Procedures:
- HSE Risk Management (including HIRA)
 - HSE Legal Compliance and Other Requirements
 - HSE Objectives & Performance
 - HSE Training and Competence (including Induction)
 - HSE Motivation & Award Scheme
 - HSE Audits
 - HSE Sub Contractor Management
 - HSE Emergency Management
 - HSE Incidents Reporting and Management
 - HSE procedure for Behaviour based Safety
 - First Aid & Management
 - Roles, Responsibility, accountabilities and Authorities
- B. Job procedures/Safe Operating procedures
- Setting Up Site & Signages
 - Working at Height
 - Confined Space Entry
 - Permit to Work (including hot works)
 - Housekeeping
 - Transportation of materials including Manual Handling
 - Earthmoving Operations & excavation
 - Scaffolding
 - Fire Prevention/Protection
 - Hazardous Substance handling & Storage
 - Personal Protective Equipment



TERMS OF PAYMENT
[ANNEXURE - V TO SPECIAL CONDITIONS OF CONTRACT]

**TERMS OF PAYMENT**

Progressive payments shall be released to the Contractor against running account bills duly certified by Engineer-in-charge after affecting the necessary deductions / recovery, if any. The basis for payments for the subject work shall be as follows:-

S.NO	NATURE OF WORK	PAYMENT TERMS
1	Items Involving Both Supply and Installation (Part A of SOR)	<ul style="list-style-type: none">- 60% on receipt of material at site.- 20% on Installation and acceptance.- 10% on completion of all works in all respects and issuance of completion certificate.- 10% during Operation and Maintenance Period (of Five year); Progressively in Equal Quarterly installments or against submission of BG after completion of works of equivalent amount valid till 3 months beyond expiry of O&M Period.
2	Miscellaneous Works (Part A of SOR)	<ul style="list-style-type: none">- 80% on completion of work on pro-rata basis as certified in monthly R. A. bills.- 10% on completion of all works in all respects and issuance of completion certificate.- 10% during Operation and Maintenance Period (of Five year); Progressively on Quarterly installments or against submission of BG after completion of works of equivalent amount valid till 3 months beyond expiry of O&M Period.
3	Comprehensive Operation and Maintenance of the works (Part B of SOR)	<ul style="list-style-type: none">- Equated Quarterly installments

NOTES:-

1. Payments shall be made after necessary deductions on account of income tax and other deductions as per the provisions of the Contract and as required under the law.
2. Payment shall be made within 30 days of receipt of bill after due verification / certification.
3. Other terms of payment, if any, may be mutually discussed and agreed upon in consultation with Owner/ EIL after Award of Work.



4. All payments shall be made through EFT.

5. Running account Bill

The Contractor shall submit the R.A. Bill(s) in approved proforma to the Engineer in-charge of the work giving abstract and detailed measurement for the various items executed. Contractor can raise any no. of RA bills in a month for execution phase. Payments on Equated Quarterly installments basis for respective item of Comprehensive Operation and Maintenance of the works (Part B of SOR) may be released to the contractor on submission of RA Bill for O&M.

6. Final Bill

The final bill shall be submitted by the Contractor within the time frame specified in the General Conditions of the Contract. No further claims shall be made by the Contractor after submission of the final bill. The Contractor shall submit the final bill complete in all respect with no claim and no dues by Contractor, no objection certificate from labour officer and other completion documents.



MEASUREMENT OF WORKS

[ANNEXURE - VI TO SPECIAL CONDITIONS OF CONTRACT

MEASUREMENT OF WORKS

1.0 GENERAL

1.1 The mode of measurement shall be as mentioned in relevant standard specification incorporated in the Bidding Document. Any other mode of measurements not covered in above specifications shall be followed in accordance with relevant BIS codes /Schedule of Rates/ Specifications etc. and/or as decided by Engineer-in- Charge whose decision in this regard shall be final and binding upon the contractor.

1.2 Payment will be made on the basis of joint measurements taken by Contractor and certified by Engineer-in-Charge. Measurement shall be based on approved drawings to the extent that the work conforms to the drawings and details are adequate.

1.3 Wherever work is executed based on instructions of Engineer-in-Charge or details are not adequate in the drawings, physical measurements shall be taken by Contractor in the presence of Engineer-in-Charge.

1.4 Measurements of weights shall be in metric tons corrected to the nearest Kilogram. Linear measurements shall be in meters corrected to the nearest millimeters.

1.5 The weights mentioned in the drawing or shipping list shall be the basis for payment. If mountings for panels etc. are packed separately, their erection weights shall include all mountings.

1.6 No other payment either for temporary works connected with this Contract or for any other item such as weld, shims, packing plates etc. shall be made. Such items shall be deemed to have been included for in the rates quoted.

1.7 Measurements will be made for various items under schedule of rates on the following basis as indicated in the unit column unless otherwise specified specifically

- i) Weights MT or Kg
- ii) Length M (Meter)
- iii) Number No.
- iv) Volume Cu.M
- v) Area Sq.M

1.8 Wherever the unit of items has been indicated as lump sum, the payment shall be made on lump sum basis on completion & no mode of measurement shall be applicable.

2.0 ELECTRICAL/INSTRUMENTATION WORKS

2.1 The measurement for cable laying shall be made on the basis of length actually laid from lug to lug including length of loops provided.

2.2 The weights mentioned in drawing or shipping list shall be the basis of payment. If mountings for panels etc. are packed separately, their erection weights shall include all mountings.

NOTE:

All other mode of measurements not covered in above clauses shall be measured in accordance with relevant BIS codes/ Schedule of Rates/ Specifications etc. and/ or as decided by Engineer-in-Charge. The above measurement of works shall not be applicable for lumpsum items of SOR.



**KEY PERSONNEL, QUALIFICATION & EXPERIENCE
REQUIREMENT AND PENALTY FOR NON - MOBILIZATION**

[ANNEXURE - VII TO SPECIAL CONDITIONS OF CONTRACT]

1. INDICATIVE KEY SUPERVISORY PERSONNEL DURING EXECUTION PERIOD

S. N.	CATEGORY	QUALIFICATION & EXPERIENCE	NUMBERS
1.	SITE INCHARGE	GRADUATION WITH 5 YEARS' RELEVANT EXPERIENCE	1
2.	SR SUPERVISOR	ENGINEERING DIPLOMA WITH 3 YEARS' RELEVANT EXPERIENCE	2
3.	SUPERVISOR	MATRICULATION WITH 3 YEARS RELEVANT EXPERIENCE	5

2. MANPOWER TO BE DEPLOYED DURING OPERATION & MAINTENANCE PERIOD

S. No.	CATEGORY	QUALIFICATION AND EXPERIENCE	NUMBERS
1.	O&M ENGINEER	GRADUATION (ELECTRONICS & TELECOMMUNICATION/ IT) WITH 5 YEARS MINIMUM EXPERIENCE IN O&M OF AV WORKS	1
2.	SR SUPERVISOR	ENGINEERING DIPLOMA WITH 3 YEARS RELEVANT EXPERIENCE	2

Note:

1. The trained and qualified staff of OEM/Authorised Installers of OEM shall be engaged for Erection, Assembly, levelling, alignment of complete furniture and its related works. Certificate from OEM shall be required certifying that the team engaged is capable and trained for Furniture works.

2. The Site In charge shall be capable and competent to take care of the billing and QA/QC activities as well.

3. CVs of key persons proposed to be deployed shall be submitted to Engineer-In-charge prior to their mobilization at site. The mobilization of key personnel shall be done subject to prior approval of their CVs by Owner/Engineer-In-Charge.

2. PENALTY FOR NON - MOBILIZATION OF KEY CONSTRUCTION PERSONNEL

2.1. Penalty for non-mobilization per day per person after the contractual mobilization period/mobilization schedule agreed during kick off Meeting/Jointly agreed between Contractor & Owner/Engineer-In-Charge shall be as under.

- Rs. 5000/- for Resident Construction Manager/ Resident Engineer/ Site in- Charge.
- Rs. 3000/- for Lead QA/QC Engineer, Lead Planning Engineer, Lead Discipline Engineer, Quantity Surveyor, Sr. Supervisor and Supervisor.

2.2. Notes: (for Penalty clauses)

2.2.1. All intervening off days (Sundays etc.) and holidays will be counted for levy of penalty.

2.2.2. Mobilized personnel shall not be demobilized (till contractual completion) without consent of Engineer-in-Charge else penalties as above shall be applied.

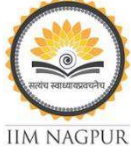
2.2.3. Total of above penalties shall **not exceed 1%** of the contract value.

2.2.4. The above penalties are over & above all other contractual provisions for late mobilization of resources.

3. PENALTY FOR NON - MOBILIZATION OF OPERATION & MAINTENANCE MANPOWER

Penalty for non-mobilization per day per person after the start of O&M Period shall be as under.

- Rs. 5000/- for O& M Engineer.
- Rs. 3000/- for Sr. Supervisor.



TIME SCHEDULE

[ANNEXURE - VIII TO SPECIAL CONDITIONS OF CONTRACT]

1. TIME SCHEDULE

S.No.	NAME OF WORK BIDDING DOCUMENT NO. IIMN/Project/ICT/2019-20/03	TIME OF COMPLETION
1	Supply, Installation, Testing & Commissioning of Audio Visual Equipments for IIM Nagpur New Campus (Phase-1) at MIHAN, Nagpur	06 (Six) Months
2	Comprehensive Operation and Maintenance of the works	05 (Five) Years from Completion of Works.

2. INTERMEDIATE MILESTONES

Works for following intermediate milestones shall be completed as per below mentioned details.

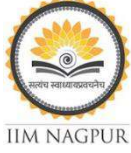
S.N.	MILESTONES	TIME OF COMPLETION FROM CONTRACT START DATE
1	Supply, Installation, Testing & Commissioning of Audio Visual Equipments as per scope of work, specifications, SoR etc for Priority-1 Buildings as below: (i.e Admin Block, Faculty block, Multi-Purpose Exam Hall, Academic Block – North, Academic Block- South, Student & Faculty Dining, Essentials & Health Centre, Hostel P1, Hostel P2, Estate Manager Office, Visitor Centre, Guard Room, Services Plant Room & Engg Centre and Service Plant Room Resd. Area.)	40 days

3. IMPORTANT NOTES:

- a) The time indicated above is for completing all the Works in all respects as per specifications, codes, drawings and instructions of Engineer-in-Charge.



- b) It should be noted that the time of completion given above includes period for preparation of drawings, procurement, mobilization & demobilization at site, fabrication, laying, erection/ construction/ installation, inspection, testing/ commissioning, rectifications, if any, retesting/rework etc. and handing over of works to Owner, complete in all respects to the entire satisfaction of Owner/ Engineer-in-Charge.
- c) The work shall be completed in consonance with completion of Civil Composite Works Contract.



**FORMAT FOR APPROVAL OF SUB-CONTRACTOR
[ANNEXURE – IX TO SPECIAL CONDITIONS OF CONTRACT]**

**APPROVAL OF CONSTRUCTION SUB-CONTRACTOR**

1.	NAME OF MAIN CONTRACTOR	:	
2.	NAME OF WORK, LOCATION	:	
3.	NAME OF PROPOSED SUB-CONTRACTOR	:	
4.	SCOPE OF WORK PROPOSED TO BE SUB-CONTRACTED (BRIEF)	:	
5.	ESTIMATED VALUE OF THE PROPOSED WORK TO BE SUB-CONTRACTED (INR):	:	
6.	QUALIFYING CRITERIA FOR SUB-CONTRACTOR:	:	
6.1	Similar Work experience :	:	
	i) 1 (One) Contract of 80% or 2 (two) contracts of 60 % each or 3(Three) contracts of 40% of estimated value of proposed work to be sub-contracted :	:	
	ii) Annual Turnover Not less than 100% of estimated value of proposed work to be sub-contracted :	:	
	iii) Positive Networth as per latest annual balance sheet/ Profit & loss account:	:	
7.	EXPERIENCE AND FINANCIAL DETAILS OF PROPOSED SUB-CONTRACTOR	:	
	i) Contract Value of similar work executed (as evidenced by work Order & Completion Certificate) During the last 7 years	:	
	ii) Maximum Annual Turnover during last 3(three) years (as evidenced by Balance Sheets)	:	
	iii) Networth as per latest annual balance sheet/ Profit & loss account	:	
8	CRITERIA FOR QUALIFICATION OF SUB-CONTRACTOR	:	
	i) Sl.No. 7(i) > 6 (i)	:	YES / NO
	ii) Sl.No. 7 (ii) > 6 (ii)	:	YES / NO
	iii) Sl.No. 7 (iii) > 0	:	YES / NO
9	Based on above information, we M/s _____ (Name of Main Contractor) propose M/s. _____ (Name of proposed sub-contractor) as our sub-contractor for the above mentioned works. We understand that notwithstanding above approval, we shall remain fully responsible for the performance of the said sub-contractor and any failure of the sub-contractor shall not absolve/relieve us of our responsibility to complete the works as per the terms and conditions of the Contract.		

NOTE: Contractor to fill all the details in the above proforma. Further Contractor shall also fill-in the details at Sl.No.5 above based on the estimated value of the proposed work to be subcontracted.

(STAMP & SIGNATURE OF CONTRACTOR)



**FORM OF CONTRACT PERFORMANCE BANK
GUARANTEE
[ANNEXURE – X TO SPECIAL CONDITIONS OF CONTRACT]**



FORM OF CONTRACT PERFORMANCE BANK GUARANTEE

[ON APPROPRIATE STAMP PAPER]

Beneficiary: Indian Institute of Management, Nagpur

Bank Guarantee No. [.....•]

THIS DEED OF GUARANTEE is executed on this [.....*insert day*] day of [.....*insert month and year*] at [.....*insert place*] by [.....**INSERT NAME OF BANK**] having its head/registered office at [.....*insert address*], (hereinafter referred to as the "**Guarantor**", which expression shall unless it is repugnant to the subject or context thereof include successors and assigns)

IN FAVOUR OF:

"INDIAN INSTITUTE MANAGEMENT NAGPUR, an autonomous institute established in 2015 by Government of India, having its principal office at VNIT Campus, South Ambazari Road, Nagpur, Maharashtra, India- 440010 (herein after referred to as "IIM Nagpur" or "IIMN" or "Owner", which expression shall unless it is repugnant to the subject or context thereof include successors and assigns).

WHEREAS

- A. IIMN has entered into a Engineering, Procurement and Construction Contract dated [.....■] (the "**Contract**") with [.....*insert name of Contractor*], a company incorporated under the Indian Companies Act, 1956 and having its registered office at [.....■] (the "**Contractor**", which expression shall, unless it be repugnant to the context or meaning thereof, include its successors-in-title and permitted assigns), for the Project.
- B. In terms of the Contract, the Contractor is required to furnish to IIMN, an unconditional, irrevocable, on demand bank guarantee for an amount equal to 10% of the Contract Price as security for due and punctual performance/discharge of the Contractor's obligations under the Contract for the Contract Validity Period.
- C. At the request of IIMN and for sufficient consideration, the Guarantor has agreed to provide an unconditional, irrevocable and on-demand bank guarantee, for the due and punctual performance/discharge by the Contractor of its obligations under the Contract during the Contract Validity Period.

NOW THEREFORE THIS DEED WITNESSETH AS FOLLOWS:

- 1 Capitalized terms used herein but not defined shall have the meaning ascribed to them in the Contract.

- 2 The Guarantor hereby irrevocably and unconditionally guarantees and secures (as primary obligor and not merely as guarantor) to IIMN the payment in full of all amounts at any time that may be due, owing or payable to IIMN from the Contractor for the failure of the Contractor to duly and punctually perform all of its obligations under the Contract (the "**Guarantee**"), without any demur, reservation, protest or recourse, immediately on receipt of a demand from IIMN.

The Guarantee is given in consideration for consideration received from the Contractor (the receipt and sufficiency of which is hereby acknowledged).

The Guarantor agrees that the value of the Guarantee shall at all times be maintained at the amount of Rs. [.....insert amount] (the "**Guaranteed Amount**").

The Guarantor further agrees that this Guarantee does not limit the number of claims that may be made by IIMN against the Guarantee.

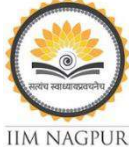
Any payment made hereunder shall be made free and clear of and without deduction for, or on account of, any present or future Taxes, deductions or withholdings of any nature whatsoever and by whomsoever imposed, and where any withholding on a payment is required by any Applicable Law, the Guarantor shall comply with such withholding obligations and shall pay such additional amount in respect of such payment such that IIMN receives the full amount due hereunder as if no such withholding had occurred.

- 3 The Guarantor shall, pay to IIMN sums not exceeding the Guaranteed Amount, within 5 (five) Business Days of receipt of a written demand from IIMN stating that the Contractor has failed to meet its performance obligations under the Contract. The Guarantor shall not be required to go into the veracity of any breach or failure on the part of the Contractor or validity of demand so made by IIMN and shall pay the amount specified in the demand notwithstanding any direction to the contrary given or any dispute whatsoever raised by the Contractor or any other Person. The Guarantor's obligations hereunder shall subsist until all such demands are duly met and discharged in accordance with the provisions hereof.

- 4 The obligations of the Guarantor herein are absolute and unconditional, irrespective of the value, genuineness, validity, regularity or enforceability of the Contract or the insolvency, bankruptcy, reorganization, dissolution or liquidation of the Contractor or any change in ownership of the Contractor or any purported assignment by the Contractor or any other circumstance whatsoever which might otherwise constitute a discharge or defence of a guarantor or a surety.

Further, this Guarantee is in no way conditional upon any requirement that IIMN first attempt to procure the Guaranteed Amount from the Contractor, or any other Person, or resort to any other means of obtaining payment of the Guaranteed Amount, prior to make any recourse to this Guarantee.

- 5 In order to give effect to this Guarantee, IIMN shall be entitled to treat the Guarantor as the principal debtor. The obligations of the Guarantor under this Guarantee shall



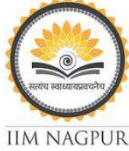
not be affected by any act, omission, matter or thing which, but for this provision, would reduce, release or prejudice the Guarantor from any of the Guaranteed Amount or prejudice or diminish the Guaranteed Amount in whole or in part, including (whether or not known to it, or IIMN):

- (a) any time or waiver granted to, or composition with, the Contractor or any other Person;
 - (b) any incapacity or lack of powers, IIMN or legal personality of or dissolutions, or insolvency, or bankruptcy, or change in the status of the Contractor or any other Person;
 - (c) any variation of the Contract so that references to the Contract in this Guarantee shall include each variation;
 - (d) any unenforceability, illegality or invalidity of any obligation of any Person under the Contract or any unenforceability, illegality or invalidity of the obligations of the Guarantor under this Guarantee or the unenforceability, illegality or invalidity of the obligations of any Person under any other document or guarantee, to the extent that each obligation under this Guarantee shall remain in full force as a separate, continuing and primary obligation, and its obligations be construed accordingly, as if there were no unenforceability, illegality or invalidity;
 - (e) the partial or entire release of any Guarantor or other Person primarily or secondarily liable or responsible for the performance, payment or observance of any of the Contractor's obligations during the Construction Period; or by any extension, waiver, or amendment whatsoever which may release a guarantor or Guarantor (other than performance or indefeasible payment of a Guaranteed Amount); or
 - (f) any part performance of the Contract by the Contractor or by any failure by IIMN to timely pay or perform any of its obligations under the Contract.
- 6 If, and to the extent that, for any reason the Contractor enters or threatens to enter into any proceedings in bankruptcy or reorganization or otherwise, or if, for any other reason whatsoever, the performance or payment by the Contractor of the Guaranteed Amount becomes or may reasonably be expected to become impossible, then the Guaranteed Amount shall be promptly paid by the Guarantor to IIMN on demand.
- 7 So long as any sum remains owing by the Contractor to IIMN, the Guarantor shall not exercise any right of subrogation or any other rights of a guarantor or enforce any guarantee or other right or claim against the Contractor (whether in respect of its liability under this Guarantee or otherwise) or claim in the insolvency or liquidation of the Contractor or any such other Person in competition with IIMN. If the Guarantor receives any payment or benefit in breach of this Clause 7, it shall hold the same upon trust for IIMN.
- 8 This Guarantee shall remain in full force and effect from the date hereof until the end of the Contract Validity Period i.e., up to midnight of {..... **insert date**} plus additional 2 Months to enable claims to be made i.e., up to midnight of {.....

insert date}, unless discharged/ released earlier by IIMN in accordance with the provisions of the Contract. No claim made after such date shall be valid against the Guarantor.

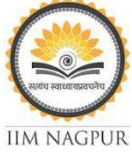
Notwithstanding the foregoing, this Guarantee shall continue in effect until the sums payable under this Guarantee have been indefeasibly paid in full and the Guarantor receives written notice thereof from IIMN (such notice to be issued promptly upon such occurrence).

- 9 The Guarantor represents and warrants to IIMN that:
- (a) it has the power to execute, deliver and perform the terms and provisions of this Guarantee and has taken all necessary action to authorize the execution, delivery and performance by it of this Guarantee;
 - (b) the Guarantor has duly executed and delivered this Guarantee, and this Guarantee constitutes its legal, valid and binding obligation enforceable in accordance with its terms except as the enforceability thereof may be limited by applicable bankruptcy, insolvency, moratorium or other similar laws affecting the enforcement of creditors' rights generally and by general equitable principles;
 - (c) neither the execution, delivery or performance by the Guarantor of this Guarantee, nor compliance by it with the terms and provisions hereof will: (i) contravene any material provision of any law, statute, rule or regulations or any order, writ, injunction or decree of any court or governmental instrumentality; (ii) conflict or be inconsistent with or result in any breach of any of the material terms, covenants, conditions or provisions of, or constitute a default under any agreement, contract or instrument to which the Guarantor is a party of by which it or any of its property or assets is bound; or (iii) violate any provision of the Guarantor's constituent documents; and
 - (d) no order, consent, approval, license, authorization or validation of, or filing, recording or registration with (except as have been obtained or made prior to the date hereof), or exemption by, any governmental or public body or IIMN, or any subdivision thereof, is required to authorize, or is required in connection with: (i) the execution, delivery and performance of this Guarantee; or (ii) the legality, validity, binding effect or enforceability of this Guarantee.
- 10 This Guarantee is a continuing one and all liabilities to which it applies or may apply under the terms hereof shall be conclusively presumed to have been created in reliance hereon. No failure or delay on the part of IIMN in exercising any right, power or privilege hereunder and no course of dealing between IIMN and the Guarantor, or the Contractor, shall operate as a waiver thereof, nor shall any single or partial exercise of any right, power or privilege hereunder preclude any other or further exercise thereof or the exercise of any other right, power or privilege.
- 11 The rights, powers and remedies expressly provided in this Guarantee are cumulative and not exclusive of any rights, powers or remedies which IIMN would otherwise have. No notice to or demand on the Guarantor in any case shall entitle the Guarantor to any other further notice or demand in similar or other circumstances or constitute a waiver



- of the rights of IIMN to any other or further action in any circumstances without notice or demand.
- 12 If any one or more of the provisions contained in this Guarantee are or become invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby, and the Guarantor shall enter into good faith negotiations with IIMN to replace the invalid, illegal or unenforceable provision.
- 13 The Guarantor hereby agrees to execute and deliver all such instruments and take all such actions as may be necessary to make effective fully the purposes of this Guarantee.
- 14 This Guarantee may be executed in one or more duplicate counterparts, and when executed and delivered by the Guarantor and IIMN shall constitute a single binding agreement.
- 15 Any notice, request or other communication to be given or made under this Guarantee shall be in writing addressed to the Guarantor at the location set opposite its signature hereto and in the manner as set out in respect of notices under the Contract.
- 16 This Guarantee shall be governed by, and construed in accordance with, the laws of India. The Guarantor irrevocably agrees that any legal action, suit or proceeding arising out of or relating to this Guarantee may be brought in the courts in Nagpur, Maharashtra.
- 17 OWNER may assign or transfer all or any part of its interest herein to any other person with prior notification to the Guarantor. The Guarantor may not assign or transfer any of its rights or obligations under this Guarantee.
- 18 “Notwithstanding anything contained herein:
- (i) The Bank’s liability under this guarantee/undertaking shall not exceed (Amount in figures & words);
 - (ii) This guarantee/undertaking shall remain in force upto_____ and any extension(s) thereof; and
 - (iii) The Bank shall be released and discharged from all liability under this guarantee/undertaking unless a written claim or demand is issued to the Bank on or before_____ or the date of expiry of any extension(s) thereof if this guarantee/undertaking has been extended”.

IN WITNESS WHEREOF the Guarantor has set its hands hereunto on the day, month and year first hereinabove written.



**Annexure to
Special Conditions of Contract
Sheet 7 of 7**

Signed and delivered by [.....*insert name of Bank*] Bank by
hand
Name:
Designation:

PREAMBLE TO SCHEDULE OF RATES

NAME OF WORK: Supply, Installation, Testing & Commissioning of Audio Visual Equipments for IIM Nagpur New Campus (Phase-1) at MIHAN, Nagpur

BIDDING DOCUMENT No. : IIMN/Project/ICT/2019-20/03

NAME OF BIDDER: M/s.

1. The Schedule of Prices shall be read with all other sections of this Bidding Document.
2. The Contractor is deemed to have studied the drawings, specifications and details of works to be done including scope of work, scope of supply and technical specification within the Time Schedule and should have acquainted himself of the conditions prevailing at site.
3. Bidders must submit the firm RATES for all the items of Schedule of Rates. The Bids of all such bidders not complying this requirement, shall not be accepted.
4. Bidder shall quote as per S.O.R. item only. No comment, explanation or clarification in S.O.R. is acceptable. Rebate, if any, to be indicated in "Schedule of Rates" only. No unsolicited rebate/price other than what is indicated in "Schedule of Rates" shall be acceptable. No condition in price part shall be acceptable.
5. The quantities given in SOR format are tentative and shall be used to evaluate the bidder's position. OWNER shall not make any commitment for quantities to be ordered on daily or monthly basis and payment shall be released for actual quantities ordered and supplied.
6. No claim shall be entertained during currency of this Contract towards any items due to the above including where the Contractor has quoted low/ high rates.
7. All items of work mentioned in the Schedule of Rates shall be carried out as per the specifications, drawings and instructions of Owner and the rates are deemed to be inclusive of material, consumable, labour, supervision, tools & tackles and detailing of construction/fabrication drawings, isometric wherever required as called for in the detail specification and conditions of the Contract.
8. Owner reserves the right to cancel/ delete/ curtail any item or group of work if necessary. Such a step shall not be construed as reason for changing the rates.

STAMP & SIGNATURE OF BIDDER

NAME OF PROJECT: CONSTRUCTION OF IIM NAGPUR NEW CAMPUS AT MIHAN, NAGPUR (PHASE-1)

NAME OF WORK : SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF AUDIO VISUAL EQUIPMENTS FOR IIM NAGPUR NEW CAMPUS (PHASE-1) AT MIHAN, NAGPUR

BIDDING DOCUMENT NO. : IIMN/Project/ICT/2019-20/03

SCHEDULE OF RATES					
ITEM NO.	ITEM DESCRIPTION	Unit	QUANTITY	RATE (Rs.)	AMOUNT (Rs.)
Part-A					
1	Supply, Installation, Testing & Commissioning of 55" Professional display with 350cd/m2 brightness 1200:1 or better native contrast ratio, 178x178 Viewing Angle (H x V), 8ms or better Response Time, 16 hr. operation Hours, 2-HDMI,1- DVI-D, 1 -USB, 1 -D-sub 15 pin inputs, RS232, RJ45, 20w Speaker, , Sleek Panel with less than 55mm depth , BIS, safety & EMC (Ce,fcc,UL) , Energy star 7.0 Certification, operation hr- 50000 hrs MTBF, Complete as per directions of engineer incharge with mounts and accessories.	nos	23		
2	Supply, Installation, Testing & Commissioning of 75" LFD Display with 4K native resolution 500cd/m2 brightness 1200:1 or better contrast ratio, 178x178Viewing Angle(H x V), 8ms or better Response Time, 16x7 hr. operation Hours, less reflective Screen- must visible in day light (haze- 20% or more Anti-Glare Treatment) USB 2.0 PC Connection, 2HDMI, 1 DVI-D, 1 USB, Screen mirroring, Inbuilt memory , Rs 232, LAN Port input/output, 20w built-in speaker, BIS Certification safety & EMC(Ce,fcc,UL) Certification ,managed and control from central server, operation hr- 50000 hrs MTBF. Complete as per directions of engineer incharge with mounts and accessories.	nos	3		
3	Supply, Installation, Testing & Commissioning of 65" LFD Display with 4K native resolution 500cd/m2 brightness 1200:1 or better contrast ratio, 178x178Viewing Angle(H x V), 8ms or better Response Time, 16x7 hr. operation Hours, less reflective Screen- must visible in day light (haze- 20% or moreAnti-Glare Treatment) USB 2.0 PC Connection, 2HDMI, 1 DVI-D, 1 USB, Screen mirroring, Inbuilt memory , RS 232, LAN Port input/output, 20w built-in speaker, BIS Certification safety & EMC(Ce,fcc,UL) Certification ,managed and control from central server, operation hr- 50000 hrs MTBF. Complete as per directions of engineer incharge with mounts and accessories.	nos	6		
4	Supply, Installation, Testing & Commissioning of 55" LFD Display with 4K native resolution 500cd/m2 brightness 1200:1 or better contrast ratio, 178x178Viewing Angle(H x V),8ms or better Response Time, 16x7 hr. operation Hours, less reflective Screen- must visible in day light (haze- 20% or Anti-Glare Treatment) USB 2.0 PC Connection, 2HDMI, 1 DVI-D, 1 USB, Screen mirroring, Inbuilt memory , Rs 232, LAN Port input/output, 20w built-in speaker, BIS Certification safety & EMC(Ce,fcc,UL) Certification ,managed and control from central server, operation hr- 50000 hrs MTBF. Complete as per directions of engineer incharge with mounts and accessories.	nos	44		
5	Supply, Installation, Testing and Commissioning of Teaching Platform - Cabinet Type - Customised Wheel mounted wooden podium with dimension of 590mm x 600mm x 1200mm. Power socket with On/Off switch etc. Suitable space for 21.5" Interactive monitor, control panel, Should have proper space to keep Laptop and Document camera placement space, Should have sliding Trays for Keyboard and Mouse, Should have sufficient Shelf to keep Classroom PC and other required equipments. Should have automated/motorised system to adjust the height of the podium and the angle position of Interactive Panel on the top, Should also be having the RFID based lockable slider to close the top of the podium when not in use, Should have proper louver for heat dissipation. Complete with all accessories as per specifications and directions of engineer in charge.	nos	11		
6	Supply, Installation, Testing and Commissioning of Teaching Platform - Cabinet Type - Customised Wheel mounted Metalic podium with dimension of 590mm x 600mm x 1200mm. Suitable space to 21.5" Interactive monitor, control panel, Should have proper space to keep Laptop and Document camera placement space, Should have sliding Trays for Keyboard and Mouse, Should have sufficient Shelf to keep Classroom PC and other required equipments. Should have automated/motorised system to adjust the height of the podium and the angle position of Interactive Panel on the top, Should also be having the RFID based lockable slider to close the top of the podium when not in use, Should have proper louver for heat dissipation. Complete with all accessories as per specifications and directions of engineer in charge.	nos	10		
7	Supply, Installation, Testing & Commissioning of interactive monitor of Screen size : 21.5" IPS with Full HD (1920 x 1080) resolution and wide viewing angles, INterface : USB 2.0 version, Aspect ratio : 16:9 or better, Response Rate: 14 ms or better, Brightness: 210 cd/m ² , Contrast ratio : 900:1 (typical) or better, Reading technology: Electro Magnetic Resonance technology , Pen Pressure Levels: 1024 , HDCP Compliant, Built-in DVI-I pass-thru connector handles either digital or analog inputs and mirror to another display from this pen display, Adjustable stand allows for 15 to 72 degrees of incline for greater comfort., Coordinate Resolution: 2540 Ipi, Pen report rate: 133 points/sec or better, Viewing angle :89°/89°, 89°/89° or better , Video input : Analog (RGB) / digital (DVI-I) or better , Video output : Analog (RGB) / digital (DVI-I) or better , Battery free wireless Pen, Technology : Electromagnetic resonance technology (EMR) or better	nos	11		
8	Supply, Installation, Testing & Commissioning of 21.5" Monitor to be fitted on Teaching Platform with motorised tilt Screen size 21.5" IPS with Full HD (1920 x 1080) resolution Aspect ratio 16:9 or better Brightness200 cd/m ² (Typ.) Contrast ratio 1000:1 (Typ.) or better PortsHDMI IN, D-Sub	nos	10		
9	Supply, Installation, Testing & Commissioning of WorkStation with i7 processor (latest generation), 16 GB RAM, 1TB HDD, along with preloaded windows Professional 10 with wireless mouse and keyboard. Mini cabinet, Complete as required. As per directions of engineer in charge	nos	21		
10	Supply, Installation, Testing & Commissioning of LCD laser Projector having output of 5000 lumens MINIMUM with a native resoultion 1920X1200 WUXGA ,contrast ratio 2000000:1,input HDMI,HDbaseT,USB Input RCA ,complete with lens (as per site requirement) and other accessories, . Complete as per directions of engineer incharge with mounts and accessories.	nos	8		
11	Supply, Installation, Testing & Commissioning of 6500 Lumens, DLP Laser projector Resolution WUXGA (1920 x 1200),Contrast Ratio : 200000: 1, Illumination performance 20,000 hrs , HDMI x 2, 1 HDBT Control & networking, RS232 In, Control Ethernet (10/100) RJ45.	nos	37		

ITEM NO.	ITEM DESCRIPTION	Unit	QUANTITY	RATE (Rs.)	AMOUNT (Rs.)
12	Supply, Installation, Testing and Commissioning of Projector DLP Laser phosphor, 1920X1200 native resolution, min. 12000 lumens, Contrast Ratio : 200000: 1, Lamp life 20000 hours, Motorized horizontal and vertical lens offset , Active 3D ready, Inputs: 3G-SDI x 1 (BNC), HDMI x 2, DVI-D x 1, Display Port x 1 , HD15 x 1, HD base T , Controls: RS232 in/out, RS422 in, Ethernet (10/100), USB, device, should be complete with lens. Complete as per directions of engineer incharge with mounts and accessories.	nos	1		
13	Supply, Installation, Testing & Commissioning of Tab tensioned motorised screen with LVC controller, Size 137" .Complete with all accessories as per specifications and directions of engineer in charge.	nos	8		
14	Screen 150", Tab-Tensioned motorised screen with low voltage interface, Sliding brackets on top of the case allow for adjustments for mounting.Sliding brackets inside case accommodate different size screens. Complete with all accessories as per specifications and directions of engineer in charge.	nos	37		
15	Supply, Installation, Testing & Commissioning of Tab tensioned motorised screen with LVC controller, Size 330" .Complete with all accessories as per specifications and directions of engineer in charge.	nos	1		
16	Supply Installation Testing & Commissioning of Visual Presenter/Document Camera to be kept inside teaching platform of drawer- CMOS Sensor, XGA (1024 x 768), SXGA (1280 x 1024), WXGA (1280 x 800), 1080 P and 4K, Camera Lens 13 Megapixel, LCD Preview Screen, 30x optical zoom & 8x Digital Zoom, 30 fps, Lens rotation 0 to 90 deg to orient object/paper, Writable platform, HDMI Out, HDMI In, 10000 Images & external memory support through USB, Standalone Audio Video Recording through USB, In-built Light, In-built Backlight, etc Complete with all accessories as per specifications and directions of engineer in charge.	nos	12		
17	Supply, Installation, testing & commissioning of GPS based Digital Wall Clock having SS 304 enclosure with Antenna Complete with all accessories, control unit etc of minimum enclosure size 500mm x 290mm and minimum 100 mm LED size as per specifications and directions of engineer in charge.	nos	111		
	VIDEO SWITCHING				
18	Supply, Installation, Testing & Commissioning of Podium/Table mounted Cable Cubby with VGA, HDMI input, and USB-C input, Audio input, Ethernet port with 2-3 meter patch cords. Complete with all accessories as per specifications and directions of engineer in charge.	nos	85		
19	Supply, Installation, Testing & Commissioning of HDMI over HDBT receiver - HDMI over HDBT receiver for 100 meters, POE/external power supply receiver with Ethernet/Control pass through, Receiver should support resolution up to 4k HDR, Front panel LED indication for Power and HDBT link, 4K/UHD capability @ 60 Hz with 4:2:0 chroma subsampling, Supports 4K HDR10 @ 24 Hz, Receiver should be able to pass multi-channel Audio format on HDMI. Complete with all accessories as per specifications and directions of engineer in charge.	nos	43		
20	Supply, Installation, Testing & Commissioning of 6 x 6 Matrix Switcher - • Six input six output digital fixed or card based matrix switcher - Switcher should have Six HDBaseT outputs with dual-distance transmission of A/V, control and power signals over a single category cable, Two HDBaseT output up to cable run 100 meters and four HDBaseT output up to cable run 70 meters, Switcher should have one analog audio output from matrix, Video resolution support up to 4096x2160 @ 60/50/30/25/24 with Chroma subsampling 4:2:2/4:2:0 , 4K/UHD capability with HDCP 1.4 copy protection, Audio de-embedding, EDID management and HDCP management, Audio format support up to 7.1 uncompressed audio channels, Control RS232 / IP. Complete with all accessories as per specifications and directions of engineer in charge.	nos	20		
21	Supply, Installation, Testing & Commissioning of 8x8 Matrix Switcher - Eight input Eight output digital fixed or card based matrix switcher, Switcher should have Eight HDBaseT outputs with dual-distance transmission of A/V, control and power signals over a single category cable, Four HDBaseT output, up to cable run 100 meters and four HDBaseT output up to cable run 70 meters, Video resolution support up to 4096x2160 @ 60/50/30/25/24 with Chroma subsampling 4:2:2/ 4:2:0, 4K/UHD capability with HDCP 1.4 copy protection, Switcher should have six analog audio output from matrix, Audio de-embedding with volume, mute, EDID management and HDCP management, Audio format support up to 7.1 uncompressed audio channels, Independent volume control, mute for each de-embedded audio output, Control RS232 / IP, Complete with all accessories as per specifications and directions of engineer in charge.	nos	1		
22	Supply, Installation, Testing & Commissioning of Three Input Switcher Auto Input Switcher for HDMI and VGA Sources with Ethernet-Enabled HDBaseT Output, 3x1 HDBaseT switcher (two HDMI and one VGA and separate Audio input), Automatic display control using Consumer Electronics Control (CEC)/IP/RS-232, 4K @60Hz with 4:2:0 Chroma subsampling, Automatic input selection using video detection technology, TCP/IP/RS-232 control of switcher, powered via power over ethernet/external power supply, Front panel control, Transmits IP and AV signals up to 100 meter. Complete with all accessories as per specifications and directions of engineer in charge.	nos	34		
23	Supply, Installation, Testing & Commissioning of Switcher with four input and two output with wireless connectivity (BYOD), Switcher should have two HDMI one USB C and Display port for wired connection on presenter table, Wireless presenter should support Miracast/Chromecast/Air play, Presenter should not setup any exe file in laptop or mobile device for presenting wireless on screen, HDMI and HDBT output. • HDCP 2.2 and EDID management , 4K/UHD capability @60Hz with 4:2:2 / 4:2:0 Chroma subsampling ,Local HDMI/USBC and Display port should support 4K/60 and HDR, Automatic input selection using hot plug detect and display control, USB-C port should support device charging for laptop/Smart phone and tablet, Provision of Analog audio embedding and De-embedding with occupancy sensor triggering. Complete with all accessories as per specifications and directions of engineer in charge.	nos	6		

ITEM NO.	ITEM DESCRIPTION	Unit	QUANTITY	RATE (Rs.)	AMOUNT (Rs.)
24	Supply, Installation, Testing & Commissioning of button control panel with 8 backlit buttons, should have provision to Custom labeled, should consist of two bidirectional COM port and two IR port allow for controlling a video display, document camera, and other devices. Two programmable relay ports are provided for controlling a projection screen, lift and ethernet PoE. Complete with all accessories as per specifications and directions of engineer in charge	nos	22		
25	Supply, Installation, Testing & Commissioning of Touch Panel with 9.7-inch (diagonal) LED-backlit Multi Touch display with IPS technology , 2048x1536 resolution at 264 pixels per inch (ppi) , Fingerprint - resistant oleophobic coating , Wi Fi (802.11a/b/g/n); dual channel (2.4GHz and 5GHz) and MIMO , Bluetooth 4.2 technology , Operating temperature: 0° to 35° C (32° to 95° F), Non-operating temperature: -20° to 45° C (-4° to 113° F), Relative humidity: 5% to 95% non-condensing , 16M colors, Scratch-resistant glass, oleophobic coating, 32GB memory with 2GB RAM, To be provided with suitable docking station . Complete with all accessories as per specifications and directions of engineer in charge.	nos	21		
26	Supply, Installation, testing & Commissioning of Wireless router - Advanced Dual-Band N Router, Switch Port Speed : 10/100 Mbps (Fast Ethernet) or better, Radio Frequency : 2.4 and 5 Ghz or better, Security features : WEP, WPA, WPA2 or better, Security key bits : Up to 128-bit encryption or better, Storage File System Support : FAT, and NTFS, and HFS+ (V3 only) or better, Certifications : FCC, IC, CE, Wi-Fi (IEEE 802.11a/b/g/n) or better, Operating Temp : 0 to 40°C (32 to 104°F) or better	nos	21		
27	Supply Installation Testing & Commissioning of Network Based Control Processor ,Real-time, Multitasking Control processor, Should have minimum of 512MB RAM Built in, Should have minimum of 4GB Flash Built In, It should have Industry-standard Ethernet communications, It should have built in Web server, It should have minimum One RS-232/422/485 COM port, It should have minimum Two RS-232 COM ports, It should have minimum 8 IR/serial, It should have minimum 8 Low Voltage relay ports, It should have minimum 8 Versiport I/O ports, It should be controllable thru iPhone®, iPad® and Android without the need of any other hardware modules, It should include a power supply, if it is not there, it should be seperately quoted, rack mountable. Complete with all accessories as per specifications and directions of engineer in charge.	nos	21		
28	Supply, Installation, Testing & Commissioning of Wireless presentation device for transmission of Data / Video signal from laptop Operating system Windows 7/8/8.1/10 32 & 64 bit macOS 10.13/10.14, Android v7 & v8 & 8.1 (through app) , iOS 11, 12 (through app) , Video outputs 1x HDMI 1.4b & 1 Mini DP/VGA output. , Video inputs 1x HDMI 1.4b , Output resolution 1080p@60HZ , four sources simultaneous on screen , 252 nos. simultaneous connections, 4 nos. of USB3.0 port for connecting peripheral devices like keyboard & mouse, Should be able to share uninterrupted HD video of 1080p @ 60 FPS, feature to stop someone else from presenting to enable uninterrupted presentation, audio de-embedding feature, whiteboard, live annotation from your device, view the content on your device, including inbuilt/external 1Gbps wi-fi router Complete with all accessories as per specifications and directions of engineer in charge	nos	2		
LECTURE CAPTURE SETUP					
29	Supply, Installation, Testing & Commissioning of Full HD Broadcast Box Camera with 1080p at 60fps resolution, minimum 30X Optical Zoom, min 68° Horizontal Viewing Angle, should support simultaneous outputs through Ethernet Out, HDMI Out and 3G-SDI Out, Line in, should support triple video streams of H.265 / H.264, Support RTSP / RTMP / MPEG-TS, should support PoE+.	nos	12		
30	Classroom AV Recording Device (5th Generation Intel Core i3 , min. 8Gb Dual Channel DDR3L 1600MHz Ram, min. 1TB HDD)	nos	6		
31	8 Port PoE Giga switch	nos	6		
32	Screen Capture hardware	nos	6		
33	PoE Injector	nos	12		
34	Media Server : 5th Generation Intel Core i5-5250U Processor , 8GB RAM, 6 GBPS SATA (Intel Rapid Storage) , 12 TB Storage (4TB @ 7200 RPM) , Customized File system for distributed file access ,Can store over 40,000 hours of captured video, Gigabit Ethernet ,All required cables and connectors		3		
35	Software Requirements: Automated solution for Audio and Video recording of Classroom lectures, Live Broadcasting (HLS) and Video Conferencing, Lectures to be broadcast and communicate in real time from different campuses, through secure web link, Real time two-way communication from anywhere across the world, Secured delivery and playback capability of the live and recorded content, with suitable encryption to prevent piracy and unauthorized access, Laptop/Desktop screen to be captured and integrated with recorded lecture, Provision to capture broad view, close view of podium recording with integrated audio, Laptop/Desktop screen to be recorded separately and synchronized with lecture, Solution must have the capability for echo-cancellation to cancel unwanted noise, Browser-based platform/application for Mobile/Tablet/ Laptop/Desktop, Create an automatic calendar entry to schedule classroom recording in advance, Recorded Lectures will be stored on the server and will be available for anytime viewing on Software platform by registered users, Teacher can take feedback or ask questionnaires within published lectures, Videos are made searchable and discoverable through user-tags and algorithms, Software access within campus and in the cloud	nos	6		
	Collaborative & Interactive features : College can create and post time table and calendar of events for easy viewing by students. Details can be attached in the events calendar, It should allows students to interact in real time with their teachers and other students in their own group , Teachers and students can create and share their notes and study material and participate in discussions				
	Analytics : Advanced Search for all the recorded videos , Student/Professor Usage Reports to measure ROI , Reporting & Tracking technical support issues , Video rating /popular videos				
	Content Management Module : Allows to manage digital content library of educational content , Detects the DLSC user's bandwidth in real time and adjusts the video quality accordingly , Permission based publishing and access , Create an automatic calendar entry to schedule classroom recordings in advance , Teacher can remove the unwanted part of the videos before distribution to the students. , Enable Institute to build and manage a library of various kind of educational content. The Teacher can also upload any kind of study material, handouts (text, PDF, audio, video etc.)				

ITEM NO.	ITEM DESCRIPTION	Unit	QUANTITY	RATE (Rs.)	AMOUNT (Rs.)
	General backend activities : Recorded videos to be stored in compressed format , Recorded videos to be process automatically for AV quality improvement , Recorded contents to be stored securely in encrypted format , Email notification on user/server administration , Ability to identify and notify system faults and loss of recording				
	Flipped Classroom : Institute can very easily enable "Flipped Classroom" where teacher becomes facilitator and students participate more inside the classroom. It provides a very easy user interface for creation and distribution of short video lectures. Both screen as well as video recording capabilities with two way interaction.				
	Service : Providing online access/Apps to all the users to access digital content, Vendor to provide Training to teachers/IT team, User Manual for teachers, admin and students, On call/email support for admin and any other support, Hardware/Software maintenance and quality monitoring, Should be able to support automated email to vendor support center to proactive maintenance, Regular software updates, including new and enhanced features and bug fixes				
	VC System				
36	Supply, Installation, Testing & Commissioning of Video Conferencing System	NOS	4		
	Video : Latest video standards H.264, H.265, Should support 60 fps with 1080p resolution, Ability to send and receive two live simultaneous video sources in a single call, so that the image from the main camera and PC or document camera can be seen simultaneously, Should support H.239 and BFCP protocols, "The system must have the ability to pair mobile devices such as Tablet and Smartphones based on iOS or Android platforms so that these devices can be used for: 1) Add and disconnect call. 3) Take snapshot of the presentation being shown", The system must have the ability to pair with laptop for sending content without any wires to the VC system, In case the above feature is not available natively, then additional components can be provided to achieve this, Should have at least 1 x HDMI inputs to connect Full HD cameras, Must have 2 HDMI inputs to connect two laptops/PC for presentations, All inputs should support 1080p60, Should support the ability to view and share presentations at a resolution of 1080p30, The system must have the ability to pair with laptop for sending content without any wires to the VC system, Should have at least 2 no.'s of HDMI output to connect Full High Definition display devices such as plasma and projectors for both Video and Content.(Dual Monitor Support), When not in a VC call, it should be possible to view presentation from two laptops on each of the screen so that users can collaborate.				
	Audio : G.711, G.722, G.722.1, 64 kbps MPEG-4 AAC-LD standard must be supported, Noise Reduction, Automatic Gain control, Acoustic Echo Canceller, Active Lip synchronization, Should support 3 Microphone inputs to connect 3 microphones, The pick up of the microphones should be at least 10 feet from the microphone, Echo Cancellation for every input must be available, Should support audio output.				
	Network Interfaces : 1 LAN /Ethernet--10/100/1000 Mbps full duplex, H323/SIP upto 6 Mbps point-to-point, Packet Loss Based Down speeding, QoS—Diff Serve, IP adaptive bandwidth management (including flow control), Auto Gatekeeper discovery, Auto Network Address Translation(NAT) support, Standards based- Packet Loss Recovery feature, System should support IPv4 and IPv6 from day one, Should support URL Dialling, Support for H.245 DTMF tones in H.323.				
	Encryption of video call : ITU-T standards based Encryption of the video call, Call should be encrypted end-to-end on IP, Should support Standards-based: H.235 v3 and AES Encryption via Automatic key generation and exchange. The same should be available in a call with Video with presentation (dual video), Ability to manually turn encryption ON/ OFF should be there, Automatic key generation and exchange.				
	Management : System Management using HTTPS and SSH				
	Camera : Should have at least two or more HD cameras to automatically detect active speakers in the conference room. The camera should also have face detection mechanism to enable automatic framing of participants, The camera should automatically detect who in the room is speaking and select the best camera framing for that person. And when no one is speaking it should automatically select the best group framing, The system should be capable of providing metrics such as participant count that could be used for resource utilization, return on investment reports, Should have the ability to turn OFF speaker tracking if need be, The camera must have a resolution of at least 4k and a zoom of 5X, 1920 x 1080 pixels progressive @ 60fps, The Camera and codec should be from the same manufacturer, Should have at least 80 degrees horizontal field of view				
	Directory Services : Should support Local and Global directories, Should support LDAP and H.350 protocols for directory transfer				
	Multipoint Capability : Should support built-in Multiconference capability to connect at least 1+3 sites at 720p30fps in a continuous presence mode, All sites must be visible in a continuous presence mode with rate matching and transcoding such that different sites may connect at different speeds and protocols and still maintain a resolution of at least 720p				
	User Interface : User Interface : In order to provide a good user experience, the unit must be equipped with an intuitive Touch Screen/Panel for controlling the VC unit, Must have ability to browse the directory, serach a contact, Enable / disable speaker tracking, change layouts, mute/ unmute, increase decrease volume, The user should have the ability to select between two presentation sources such as a fixed PC and a laptop from the user interface. Users should also have the ability to share presentation wirelessly, Must have the capability to integrate with external control systems to control Blinds, Lights, air conditioning using the API's . The User interface must have the necessary icons for controlling the external devices.				
37	Supply, Installation, Testing & Commissioning of Video Conferencing System	nos	1		

ITEM NO.	ITEM DESCRIPTION	Unit	QUANTITY	RATE (Rs.)	AMOUNT (Rs.)
	<p>VIDEO Video Standards Latest video standards H.264, H.265 Video Frame Rate Should support 60 fps with 1080p resolution. Video Features Ability to send and receive two live simultaneous video sources in a single call, so that the image from the main camera and PC or document camera can be seen simultaneously. Should support H.239 and BFCP protocols The system must have the ability to pair mobile devices such as Tablet and Smartphones based on iOS or Android platforms so that these devices can be used for: 1) View the Presentation that is being shown in the VC call. 2) Add and disconnect call. 3) Take snapshot of the presentation being shown The system must have the ability to pair with laptop for sending content without any wires to the VC system. In case the above feature is not available natively, then additional components can be provided to achieve this. Should have a digital input (HDMI/DVI) to connect PC/ Laptop directly to the Video conferencing system and display resolutions from WXGA (1280 x 768) to 1080p (1920 x 1080). All inputs should support 1080p60. Should support the ability to view and share presentations at a resolution of 3840 x 2160 (4K). Video Output Should have at least 2 no.'s of HDMI output to connect Full High Definition display devices such as plasma and projectors for both Video and Content.(Dual Monitor Support). When not in a VC call, it should be possible to view presentation from two laptops on each of the screen so that users can collaborate.</p> <p>AUDIO G.711, G.722, G.722.1, 64 kbps MPEG-4 AAC-LD standard must be supported, Noise Reduction, Automatic Gain control, Acoustic Echo Canceller, Active Lip synchronization,-Built in microphone,- Should support 2 Microphone inputs, The pick up of the microphones should be at least 10 feet from the microphone, Echo Cancellation for every input must be available, . The VC unit must have at least 22W of amplifier output.</p>				
	<p>Multisite Features 1+ 3 SIP/H.323 MultiSite. Resolution up to at least 720p30, Individual layouts in MultiSite CP, H.323/SIP/VoIP in the same conference, Must have Individual transcoding and rate matching for each site so that all the sites can be connected at different bandwidths and different audio and video protocols without affecting the resolution to the other sites, Support for Presentation (H.239/BFCP) from any participant at resolutions up to 3840 x 2160p5, H.264, Encryption, Dual Stream from any site.</p> <p>Network Interfaces : 1 LAN /Ethernet--10/100/1000 Mbps full duplex Bandwidth : H323/SIP upto 6 Mbps point-to-point. Network Capabilities : Packet loss handling mechanism</p> <p>H.323/ IP Features : Differentiated Services(QOS), IP adaptive bandwidth management (including flow control), Auto Network Address Translation(NAT) support, Standards based- Packet Loss Recovery feature , Should support URI Dialling, Should support IPv4 and IPv6 from day one, System Management using HTTPS and SSH, In order to provide a good user experience, the unit must be equipped with an intuitive Touch Screen/Panel for controlling the VC unit, Must have ability to browse the directory, search a contact, change layouts, mute/ unmute, increase-decrease volume, Must have the capability to integrate with external control systems to control Blinds, Lights, air conditioning using the API's . The User interface must have the necessary icons for controlling the external devices.</p> <p>SECURITY Menu Control: Password protected system menu, Encryption of video call: ITU-T standards based Encryption of the video call, Call should be encrypted end-to-end on IP, Should support Standards-based: H.235 v3 and AES Encryption via Automatic key generation and exchange. The same should be available in a call with Video with presentation (dualvideo), Ability to manually turn encryption ON/OFF should be there. Automatic key generation and exchange, Management System: Management using HTTPS and SSH</p>				
	<p>CAMERA 1920 x 1080 at 60 fps resolution, Zoom: 10x optical zoom, 2x digital zoom, 20x total zoom, Pan and tilt, Pan range: +/- 100 degrees, Tilt range: +/- 20 degrees, Field of view (FoV), Horizontal FoV: 80 degrees, Vertical FoV: 48.8 degrees, 1.0 m to infinity (wide) focus distance, F-value: 1.5, Camera control: Ethernet, Focus, white balance, and brightness: Automatic or manual, Video interfaces: HDMI 1.4, 3G-SDI, Power, 12V/3A, 100-120/200-240VAC, 50/60 Hz, Network interfaces: One LAN/Ethernet (RJ-45) 10/100 Mbit. The Camera and codec should be from the same manufacturer</p>				
38	Supply, Installation, Testing & Commissioning of Cloud based Video Conferencing Solution:	nos	5		
	<p>Video: Video Quality: Main video at up to 720p at 30 frames per second (fps), Content sharing up to 1920x1200 at 3 fps, Video Aspect Ratios: 16:9 widescreen, 4:3 standard, Video Codec Support: H.261, H.263, H.263+, H.264 AVC, H.263 (CIF) or H.264 UC (720p/30) for Skype for Business and Lync clients</p>				
	<p>Audio : Audio Codec Support for Video Systems: G.711 (m-law and a-law), MPEG-4 AAC-LD, Opus, G.722, G.728, G.722.1, G.729 (with and without Annex B) MPEG-4 AAC-LC (TIP calls only), Audio Codec Support for Applications: Opus, Internet Low Bitrate Codec (iLBC), G.722, Audio Integration Options for Applications: Cloud integrated audio (telephone and VoIP), Cloud Connected Audio, Audio Access Methods for Applications: Call-in (dial into the meeting) Call-back (meeting calls you) and video call-back, VoIP (use your computer microphone and speakers or your smartphone data connection)</p>				
	SIP Video Systems: Advanced Encryption Standard (AES) 128-bit encryption, Signaling protocol support: SIP, SIP Transport Layer Security (TLSv1.2), Binary Floor Control Protocol (BFCP), Media protocol support: Real-Time Transfer Protocol (RTP), Secure RTP (sRTP), and Real-Time Control Protocol (RTCP), Content share (dual video) protocol support: BFCP				

ITEM NO.	ITEM DESCRIPTION	Unit	QUANTITY	RATE (Rs.)	AMOUNT (Rs.)
	H.323 Video Systems: ITU-T H.323 standards-based video systems, AES 128-bit encryption, Signaling protocol support: H.323, H.323 with H.235, H.225.0, and H.245, Media protocol support: RTP, sRTP, and RTCP, Content (dual video) share protocol support: H.239, Annex-O dialing: Ability for standalone H.323 video systems not registered to a gatekeeper to dial and join meetings				
	Security: AES 128-bit encryption, PIN-protected access into personal rooms from video systems, Meeting lock and unlock for added privacy, Authenticated access into meetings on desktop and mobile apps, SIP TLSv1.2 and H.235 for signaling security, sRTP for media security, Data at rest encryption for recordings in Cloud data centers				
	AUDIO SYSTEM				
39	Supply, Installation, Testing & Commissioning of Discussion device: Chairman Unit Microphone type:super cardioids/ array microphone or better with length minimum 390 MM features and benefits: Twin/ Two way loudspeaker for better sound reinforcement, Priority Button to provide access and mute delegate microphone, Digital acoustic feedback suppression Supply voltage:48 Vdc Port: R-J45 connectivity, 3.5 mm stereo jack socket Indication: LED light Ring & Bi-color bar indicator Power consumption: Max 3.5W Frequency response: 50 Hz – 20 kHz THD at nominal level: 0.5% or more at 50 mW/16 Ω Dynamic range: > 70 dB Signal-to-noise ratio: > 70 dB Operating temperature range: +10 °C to +40 °C	nos	4		
40	Supply, Installation, Testing & Commissioning of Delegate unit features and benefits: Twin/ Two way loudspeaker for better sound reinforcement, Digital acoustic feedback suppression Microphone Type: super cardioids/ array microphone or better (good neck length minimum 390 MM) Ports: R-J45 daisy chain, 3.5 mm stereo jack socket, Power Consumption: Max 3.5W Frequency response: 50 Hz – 20 kHz THD at nominal leve: 0,03 % at 50 mW/16 Ω Dynamic range:> 70 dB Signal-to-noise ratio: > 70 dB Operating temperature: +10 °C to +40 °C	nos	50		
41	Supply, Installation, Testing & Commissioning of Digital audio conference control unit for Features: supplies power for minimum for 40 Units and control up to minimum 400 discussion units with power supply shall be responsible for routing, controlling and processing the audio and supplies power to the devices. It includes an intelligent Digital acoustic feedback suppression, Built in USB for Recording, Built in Open Media Control Protocol for Camera, Direct access, Request, Push to talk modes of operation, pre-installed control software for management synoptic and audio recording etc, plug and play device. Frequency response: 100 – 14.000 Hz Total harmonic distortion: < 0,01% A-weighted at +6 dBV IN, OUT Signal-to-noise ratio: > 80 dB A-weighted at +18 dBV Buttons(Switch): Mains switch in the front to power on the audio powering switch, Ground lift switch	nos	4		
42	Supply, Installation, Testing & Commissioning of 6.5" Ceiling Loudspeaker Frequency Range (-10 dB) : 74 Hz – 20 kHz Power Capacity: 50W continuous power Nominal Sensitivity 90 dB Nominal Coverage Angle 110° conical coverage Maximum SPL 113 dB Transformer Taps: 30 W, 15 W, 7.5 W @ 70V or 100V (plus 3.8 W @ 70V only) 6.5 inch Low Frequency driver with polypropelene-coated 0.75 inch High frequency driver Complete with Steel Backcan UL-1480, UL-2043 EN54-24 certified	nos	254		
43	Supply, Installation, Testing & Commissioning of Compact 2-way Loudspeaker System with 1 - 8" LF Frequency Range (-10 dB): 65Hz - 20 kHz Coverage Pattern horizontal 100° x vertical 60° (Rotatable) System Sensitivity : 92 dB/1W/1m or better Maximum SPL (1m): 116 dB Continuous nominal impedance : 8 ohm Power Rating: 200W Continuous or better 8 inch low frequency driver 1 inch High frequency driver, Multiple rigging points for hanging and for wall mounting	nos	32		
44	Supply, Installation, Testing & Commissioning of Dual channel power Amplifier Dual Channel Power Amplifier 2 x 240W @8ohm/4 ohms Insertion Loss (70V & 100V outputs) Frequency Response(8Ω, 20Hz - 20kHz +/- 1.0 dB Total Harmonic Distortion (THD) <0.5% Signal-to-Noise Ratio >97dB Maximum Input Level +22dBu Crosstalk >85 dB	nos	43		

ITEM NO.	ITEM DESCRIPTION	Unit	QUANTITY	RATE (Rs.)	AMOUNT (Rs.)
45	Supply, Installation, Testing & Commissioning of TRUE DIVERSITY WIRELESS HANDHELD MICROPHONE SYSTEM Element – Dynamic Cardioid Carrier frequency: UHF System Frequency response: 40 Hz–15 KHz Dynamic range: 115 dB (A Weighted) 60 MHz or better UHF tuning bandwidth THD <0.1% at 1 kHz Simultaneous operation: upto 40 Microphones per band RF Output - 30mW / 10mW switchable Working range: 270 ft. (90 m)	nos	40		
46	Supply, Installation, Testing & Commissioning of TRUE DIVERSITY WIRELESS COLLAR MICROPHONE SYSTEM Element – Condenser Cardioid with low frequency roll off at 80Hz Carrier frequency: UHF 60 MHz or better UHF tuning bandwidth, System Frequency response: 40 Hz–15 KHz Dynamic range: 115 dB (A Weighted) THD <0.1% at 1 kHz, ±17.5 kHz deviation Simultaneous operation: upto 40 Microphones per band RF Output - 30mW / 10mW switchable Working range: 270 ft. (90 m)	nos	27		
47	Supply, Installation, Testing & Commissioning of Garland Microphone Carrier frequency: 2.4 GHz Frequency response: 100 Hz–10 KHz RF Frequency range: 2.4 - 2.483 GHz Pendant and Clip on style Quick Charge, Adjustable Lanyard, Microphone Sensitivity :- -39db ref. 1 K@1V Microphone S/N >59db Micro USB connector for Battery charging	nos	21		
48	Supply, Installation, Testing & Commissioning of Two way Line Array Column Loudspeaker with Frequency range 90Hz – 20kHz; Total no. of drivers should be minimum 30 including LF/Full Range/HF; Power rating 350W continuous / 1400W Peak at 8 to 12 ohms; Sensitivity 94dB; Max. SPL 126 peak etc complete with Original OEM Pan/tilt Bracket	nos	16		
49	Supply, Installation, Testing & Commissioning of Two channel Class D power Amplifier Dual Channel Power Amplifier 2 x 1200W @ 4 ohms, 2 x 800 watts @ 8 ohms Frequency Response - 20Hz - 20kHz Total Harmonic Distortion (THD) <0.35% Signal-to-Noise Ratio (A-weighted) >90dB Maximum Input Level +22dBu Crosstalk >75 dB Built in DSP and front Display	nos	8		
50	Supply, Installation, Testing & Commissioning of Digital Signal Processor 10 Analog Inputs with 48v Phantom Power per Channel, 6 Analog Outputs, Configurable Signal Processing, 8 Channels of AEC Processing with Auto Gain Control and Noise Cancellation, Built in 2x2 USB Audio interface. Low Latency, Clear Front Panel LED Indication, Third Party Control System Integration (Documentation), Control options - 1X RS-232, 1X Ethernet port. Complete with all accessories as per specifications and directions of engineer in charge.	nos	27		
51	Supply, Installation, testing & Commissioning of Presentation control for Highlight with advanced pointer system, precisely highlight areas of focus or magnify them in pixel-perfect detail, on-screen cursor to play and pause videos, open links, and content interaction, connects instantly via USB receiver or Bluetooth Smart, plug-and-play on most platforms and compatible with all popular presentation apps, fully rechargeable and can operate from 100-foot range.	nos	7		
52	Supply, Installation, testing & Commissioning of Presentation control remote - Should come with a red laser pointer that enables you to attract attention to the specific area, device should have a signal range of up to 15 meters, dedicated buttons to go forward and backward, on and off key, Battery Indicator	nos	67		
	Cable & supporting accessories				
53	Port Standards & Functions: IEEE 802.3 10BASE-T Ethernet, IEEE 802.3u 100BASE-TX Fast Ethernet, IEEE 802.3ab 1000BASE-T Gigabit Ethernet, IEEE 802.3x Flow Control for Full-Duplex Mode, IEEE 802.3af compliance, IEEE 802.3at compliance, Auto-negotiation, Ports: 8 x 10/100/1000BASE-T PoE ports, 2 x SFP ports, Network Cables: UTP Cat. 5, Cat. 5e (100 m max.); EIA/TIA-568 100-ohm STP (100 m max.), Full/half duplex for 10/100 Mbps speeds; Full duplex for Gigabit speed, Auto or configurable MDI/MDIX, Switching Capacity: 20 Gbps, MAC Address Table: 8K entries per device, MAC Address Update: Up to 256 static MAC entries, Enable/disable auto-learning of MAC addresses, Maximum 64 bytes Packet Forwarding Rate: 14.9Mpps, Packet Buffer Memory: 4.1 Mbits, PoE Standard: IEEE 802.3af and IEEE 802.3at, PoE Capable Ports Ports 1 to 8: Up to 30 W, PoE Power Budget Max. 65 W, Maximum Power Consumption - PoE Enable: 80.6 W, PoE Disable: 7.5 W or better, Dimensions 280 x 126 x 44 mm, 19" standard rack mounting width, 1U height, Weight 0.95 kg, Diagnostic LEDs - Power (per device), Link/Activity/Speed/PoE, L2 Features - MAC Address Table: 8K, Flow Control, Jumbo Frame up to 10,000 Bytes, IGMP Snooping, MLD Snooping, Spanning Tree Protocol, VLAN -802.1Q Tagged VLAN, VLAN Group, Management VLAN, Quality of Service (QoS) - 802.1p Quality of Service, Queue Handling, 8 queues per port, Bandwidth Control, Must have Access Control List (ACL), Security - Broadcast/Multicast/Unicast Storm Control, Static MAC, D-Link Safeguard Engine, DHCP Server Screening, Trusted Host, ARP Spoofing Prevention, OAM: Cable Diagnostics.The work to be done complete with all accessories as required & as per directions of engineer in charge & design drawings.	nos	22		

ITEM NO.	ITEM DESCRIPTION	Unit	QUANTITY	RATE (Rs.)	AMOUNT (Rs.)
54	Port Standards & Functions: Port Standards & Functions: IEEE 802.3 10BASE-T Ethernet, IEEE 802.3u 100BASE-TX Fast Ethernet, IEEE 802.3ab 1000BASE-T Gigabit Ethernet, IEEE 802.3x Flow Control for Full-Duplex Mode, IEEE 802.3af compliance, IEEE 802.3at compliance, Auto-negotiation, Ports: 24 x 10/100/1000BASE-T PoE ports, 4 x Combo 10/100/1000BASE-T/SFP ports, Network Cables: UTP Cat. 5, Cat. 5e (100 m max.); EIA/TIA-568 100-ohm STP (100 m max.) Full/half duplex for 10/100 Mbps speeds; Full duplex for Gigabit speed, Media Interface Exchange: Auto or configurable MDI/MDIX, Switching Capacity: 56 Gbps, MAC Address Table: 8K entries per device, MAC Address Update: Up to 256 static MAC entries, Enable/disable auto-learning of MAC addresses, PoE Standard: IEEE 802.3af and IEEE 802.3at, PoE Capable Ports: Ports 1 to 24: Up to 30 W, PoE Power Budget: Max. 193 W, Maximum Power Consumption: PoE Enable: 247.4W, PoE Disable: 28.1W or better, Dimensions: 440 x 250 x 44 mm, 19" standard rack mounting width, 1U height, Weight: 3.75 kg, Diagnostic LEDs - Power (per device), Fan (per device), Link/Activity/Speed/PoE, L2 Features - Loopback Detection, 802.3ad Link Aggregation, Port Mirroring, Multicast Filtering, LLDP, LLDP-MED, VLAN - Asymmetric VLAN, Auto Voice VLAN, Auto Surveillance VLAN, Quality of Service (QoS) - 802.1p Priority Queues, DSCP, ToS, TCP/UDP port number, IPv6 traffic class1, Must have Access Control List (ACL), Security - SSL, Traffic Segmentation, Smart Binding, OAM - Factory Reset.The work to be done complete with all accessories as required & as per directions of engineer in charge & design drawings.	nos	20		
55	Supply , Installation, Testing & Commissioning of Speaker cable Stranded 2 X 2.5 sq mm, PVC insulated and soft PVC sheathed copper low loss, low conductance . Complete with all accessories as per specifications and directions of engineer in charge.	meter	3500		
56	Supply , Installation, Testing & Commissioning of Microphone Cable with high-quality shielded pair for routing balanced mono or unbalanced stereo mic stranded 20AWG tinned copper. Complete with all accessories as per specifications and directions of engineer in charge.	meter	1000		
57	Supply , Installation Testing & Commissioning of Stereo Audio/Control Bulk Cable 4x20AWG	meter	1000		
58	Supply, Installation, Testing & Commissioning of Cat6 Cable 4 Pairs Shielded Twisted Pair screened with tinned copper braiding (S/FTP) Cable	meter	7000		
59	Supply, Installation, Testing & Commissioning of 6 feet long Flexible High Speed HDMI Cables with gold plated connectors and supporting upto 4K/UHD resolution. Complete with all accessories as per specifications and directions of engineer in charge.	nos	263		
60	Supply, Installation, testing & commissioning of VGA with Audio Cable with 6 feet , Resolution capability upto 1920 x 1080 .Complete with all accessories as per specifications and directions of engineer in charge.	nos	55		
61	Supply, Installation, testing & commissioning of Equipment Rack with top discharge fans , 6 nos 5/15amp power sockets , glass lockable door. Powder coated .42U.Complete with all accessories as per specifications and directions of engineer in charge.	nos	1		
62	Supply, Installation, Testing & commissioning of 9U rack as 603 x 600 x 650 MM(HxWxD)with required Power and fan to be kept under the Classroom table. Complete with all accessories as per specifications and directions of engineer in charge.	nos	21		
63	Supply, Installation, testing & commissioning of 25mm PVC conduit with accessories.	meter	2000		
64	Bulk connector and adaptors as required (This should also include minimum 21 number of VGA to HDMI converter and 6 number of HDMI to DP converter)	lump sum	1		
Part-B					
65	Comprehensive Operation & Maintenance of complete Audio Visual system executed by the contractor under this contract including projectors, screens, display panels, video conferencing equipment, audio reinforcement equipment, switching & control, Audio Conferencing System, Lecture capture solution and all the other Systems/equipments installed/executed including all other associated equipment for a period mentioned below. Comprehensive Operation & Maintenance shall include routine operation, preventive & break down maintenance including repair/ replacement of defective or worn out items/ parts. The item also includes providing and replacing the spares, consumables like battery etc., and manufacturer's warantee/ guarantee of such items & consumables replacement/ repair during the period of operation & maintenance. This item also includes deployment of manpower as specified in the bidding document, tools & tackles and testing equipments as per provisions of the tender, all complete as per the requirement of the bidding document and direction of Engineer-in-Charge.				
65.1	During Defect Liability Period (DLP)	LS	Year		
65.2	First Year after expiry of DLP	LS	Year		
65.3	Second Year after expiry of DLP	LS	Year		
65.4	Third Year after expiry of DLP	LS	Year		
65.5	Fourth Year after expiry of DLP	LS	Year		
TOTAL					

INDEX - TECHNICAL

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4.	List of Approved Makes
5	List of Inventory
6	Tender Drawings

1.0 BRIEF SCOPE OF WORK

The brief scope of work shall generally comprise of but not be limited to the following:

- 1.1** The work shall include design, Supply, Installation testing, commissioning and programming of Audio visual equipment including projectors, screens, display panels, video conferencing equipment, audio reinforcement equipment's, switching & control, Lecture capture system and all other equipment, systems and components required for IIM Nagpur campus at MIHAN Nagpur.
- 1.2** Comprehensive Operation & Maintenance (O&M) of all the works, equipment, systems executed by the contractor under this contract for 5 years from the date of Completion of works as mentioned in the Completion Certificate.
- 1.3** The Contractor shall warrant that during the O&M Period, the Works shall be free of all Defects.
- 1.4** Comprehensive Operation & Maintenance of all the supplied Items/ Equipment, Systems and executed works shall be performed by the contractor On-site.
- 1.5** Contractor shall deploy desired nos. of staff with all necessary spares, tools and tackles for undertaking Operation & Maintenance during the O&M period as indicated in Annexure-VII manpower requirement in SCC.
- 1.6** During the O&M Period the Contractor shall replace the Items/ Equipment, in case the defects are non-repairable.
- 1.7** Spare items of each type should be available with the Contractor to provide smooth functioning of the setup.
- 1.8** Contractor shall get the Connectivity diagram of classroom/Conference room approved from Engineer In-charge before implementing the setup.

2.0 DETAILED SCOPE OF WORK

The detailed scope of work shall generally comprise of but not be limited to the following:

- 2.1** The Contractor shall understand the specific Area/room wise requirement of IIMN with respect to Audio-visual facilities/ features to be provisioned and provided in the Class Rooms, Meeting Rooms, Conference Rooms, Board Rooms & Lounges etc.
- 2.2** Based on the requirement, and within the items available in the Schedule of rates of the bidding document, the contractor shall prepare and submit for approval a design brief along with block schematics indicating model nos. of the equipment selected for room wise AV solutions.
- 2.3** The contractor shall ensure to carry out and complete the supply, installation, testing and commissioning of the AV equipment's in all the area/rooms as per IIMN requirement as per approved design and technical specifications.

- 2.4 Selection of certain equipment and software (like for Lecture Capture System) shall be done by a committee comprising of representatives of IIMN, PMC and Contractor. The contractor shall arrange demonstration of Sample, presentation etc. for above purpose.
- 2.5 The contractor shall conduct an on-site demonstration and training session for IIM, Nagpur/ end users.
- 2.6 A preliminary inventory list is given in **Annexure 1** to give an indicative overview of area wise item/equipment requirement. However, the final inventory list is to be prepared by the contractor in line with the approved design, which shall be submitted for approval of IIMN.
- 2.7 Programming of the system to ensure smooth, seamless and efficient working of the day to day lectures recording and switching requirements for flipping , broadcasting, streaming of the lecture's from one class room to more as per the IIMN requirements.
- 2.8 GUI interface for the Scheduling and auto execution of the recording of the lecture as per the IIMN requirements.
- 2.9 Programming of the Lecture capture system for the Archiving of the day to day class lectures complete as required.
- 2.10 GUI interface for the faculty member to view, edit and publish the lecture as per requirement.
- 2.11 GUI interface for the students to view the published lecture of the course to which the student is registered. Student should able to raise the lecture related questions on the same interface.
- 2.12 Providing online access/Apps to all the users to access digital content, Hardware/Software maintenance and quality monitoring, Regular software updates, including new and enhanced features and bug fixes.
- 2.13 Vendor to provide Training and User Manual for teachers, admin and students, Should be able to support automated email to vendor support center to proactive maintenance, On call/email Live support for Administrators, Faculty and Staff during regular business hours
- 2.14 Programming of the Video conferencing for the Board Rooms & Conference Rooms complete as required.
- 2.15 Submission of Shop drawings, Block schematics & as built drawings are part of the scope of the contractor. The contractor to submit 5 sets of such drawings in A2/A1 sheets. Further 2 nos CD's with as built drawings & documents to be submitted to IIMN.
- 2.16 To coordinate with the Civil, Furniture & Interior contractors for installation of the AV equipment and provided them with templates / exact sizes for cut outs and installation requirements.

2.17 Wiring cabling in the existing / new conduits as per the directions of engineer incharge. Further all the wiring to be ferruled as per the international standards.

2.18 Operation and Maintenance for 5 years.

2.19 Room-wise Requirements/ Methodology

To enable lecture halls and meeting rooms with automation, AV routing and easy to use presentations following needs to be followed.

Note: Programming is not limited to the scope below, rather it is to be kept adaptable and scalable.

i. Class rooms (84 / 66 /50 / 30 seater)

- a. These classrooms shall be used for lectures, the sessions shall be recorded using lecture capture functionality in few rooms as per the no given in the BoQ.
- b. Each of these classrooms shall have wired connectivity through cable cubbies
- c. Each session that is being recorded should be able to be streamed on a URL in LAN / WAN so that it can be viewed live.
- d. Each recorded session should also be available for viewing on demand

ii. Class rooms /discussion rooms/Meeting Room/Technical Room (12/10/8/6 seater)

- a. These rooms shall be used for lectures, discussions.
- b. Each of these rooms shall have Interactive displays/ projection system and wired connectivity to the external Desktop/Laptop for the presentation.

iii. Chairperson Room/ Directors Room / Waiting Lounge / Meeting room

- a. The Chairperson Room/ Director Room shall have smart TV with wired connectivity on the Table to see the presentations or connect laptop.
- b. Small meeting rooms with Local presentation on display through wired connectivity & Video Conferencing System.

iv. Meeting Room (46 Pax)

- a. Video conference and Audio conference enabled meeting room, total capacity of 46 seats
- b. To be equipped with 2x75" Display systems & 2 x 55" side screens for displaying the local and far end contents.
- c. Users should be able to switch any laptop presentation
- d. The Display must display Schedule (Meeting subject, Time, organizer name and customized logos / branding)

v. Meeting Room (20 PAX)

- a. Video conference and Audio conference enabled meeting room, total capacity of 20 seats
- b. To be equipped with 2x65" Displays, and having a functionality of annotation and feedback to the shared laptop device
- c. Users should be able to switch the laptop presentation and Video Conference display The laptop will be connected through wired connectivity.



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- d. The Display must display Schedule (Meeting subject, Time, organizer name and customized logos / branding)
- vi. Meeting Room (18 PAX)**
- Video conference and Audio conference enabled meeting room, total capacity of 18 seats
 - To be equipped with 2x65" Displays, and having a functionality of annotation and feedback to the shared laptop device
 - Users should be able to switch the laptop presentation and Video Conference display The laptop will be connected through wired connectivity .
 - The Display must display Schedule (Meeting subject, Time, organizer name and customized logos / branding)
- vii. Meeting Room (16 PAX)**
- Video conference and Audio conference enabled meeting room, total capacity of 18 seats
 - To be equipped with 2x65" Displays, and having a functionality of annotation and feedback to the shared laptop device
 - Users should be able to switch the laptop presentation and Video Conference display The laptop will be connected through wired connectivity.
 - The Display must display Schedule (Meeting subject, Time, organizer name and customized logos / branding)
- viii. Technical Room**
- Equipped with Projection and screen
- ix. Meeting Room**
- Equipped with Projection and screen

3.0 GENERAL REQUIREMENTS

3.1 Shop Drawings/ details:-

- The contractor to supply all the shop drawings, Block Schematics , wiring & cabling drawing as per site conditions for mounting of said systems within one week of receipt of the order & further get them approved from Engineer In Charge before taking up the work.
- The block schematic for approval of the scheme shall carry the model nos. of the equipment selected by the contractor as per the technical specifications given in the tender document. Further 3 set of hardcopies of all the catalogues for equipment being offered shall be submitted.

3.2 Descriptive Literature :-

- The contractor shall supply a complete room wise inventory of all equipment's being supplied together with detailed descriptive literature containing following details :-
 - Photographs & technical catalogue's.
 - Performance characteristics pertaining to the equipment's offered.



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- Manuals and instructions for operation and maintenance of all equipment and systems shall be supplied along with the equipment.
- Manufacturer Test Certificates
- Guaranty/Warranty Cards duly filled / stamped.

3.3 Training :-

- The contractor shall train the operational staff so as to enable them to Operate/maintain the Sound – Display - Automation equipment and all other executed equipment/systems in an Efficient /satisfactory manner.

3.4 Repairs/ Replacements of work during Guarantee :-

- Any defects or other faults which may appear within defect liability / guarantee period/O&M period, arising in the system due to material or workmanship should be corrected and replaced with parts of original specifications and makes by the contractor at his own cost.

3.5 Acceptance tests:-

- After installation of equipment/systems, the testing & commissioning of the equipment and performance measurement tests shall be conducted to confirm that all the equipment meet the relevant technical specifications. The following minimum tests shall be done as a part of scope of work :-
 - Acceptance test
 - Functional tests.
 - Performance measurements of various parameters.
 - 3-4 hrs daily for 7 days as an Endurance tests.

4.0 Guidelines to be followed by Contractor's O&M Staff/ Engineer during Operation & Maintenance period

- 4.1** The O&M Staff shall perform the Services with the highest degree of commitment and to total satisfaction of Engineer Incharge/ IIMN. The O&M Staff further maintain such performance guarantees, including service levels, response time, etc. as may be prescribed by IIMN, from time to time.
- 4.2** The O&M Staff shall abide by the procedure and processes as may be prescribed by IIMN, from time to time, in relation to the Services or any part thereof and shall ensure that its employees deployed for rendering the Services shall comply with such procedure/processes.
- 4.3** The following Maintenance services shall broadly be covered under the scope of services of O&M Staff but not limited to the following:-
 - O&M staff shall provide assistance in Operation of all the executed equipment/systems.
 - O&M Staff shall prepare, provide and maintain a detailed plan for Maintenance services.

- To maintain the Office Equipment as per the manuals and specifications of the manufacturers and/ or the original installations.
- To ensure Office Equipment including all accessories & panels are in working condition. Periodic checks to be carried out to ensure the appropriate operating parameters as designed and handed over. A log of all such tests & visits shall be maintained.
- Preventive Maintenance shall be scheduled by O&M Staff & communicated to respective Officer Incharge (IIM, NAGPUR) thru the mail with minimum one week prior notice.
- A Comprehensive checklist shall be prepared by O&M Staff for carrying out a Preventive Maintenance operations at the site. All Service Reports (Preventive or Breakdown) shall get approved/signed by Officer Incharge (IIM, NAGPUR) or their authorized representatives by O&M staff.
- A Performance analysis report shall be generated by O&M Staff every quarter for each facility.
- Preventive Maintenance Schedule to be followed with 100% compliance and predictive maintenance techniques to be followed.
- All the breakdowns/faults of Equipment/systems shall be attended by contractor promptly.
- If the problem is not resolved within 48 hrs time, a stand-by Office Equipment of same technical specifications shall be provided by Contractor as a stop gap arrangement.
- There shall be no extra charges for repairing/ replacement of defective spares. All spares provided shall be of the same Make & Model. No inferior quality product shall be supplied to IIM, NAGPUR as spares replacement.
- Replacement of spares shall be carried out in presence of IIM, NAGPUR representative only. Shuffling of parts shall not be allowed unless Officer Incharge (IIM, NAGPUR) Authorizes for the same.
- There shall be no extra charges for re-installation of software (If any) for any of the Equipment/System.

4.4 Preventive Maintenance Services Schedule :-

- Monthly Preventive Maintenance.
- Quarterly - Performance analysis report shall be generated by O&M Staff

4.5 Breakdown Maintenance:

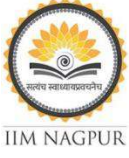
This is to be carried out in the event of any malfunction which prevents the operation of the equipment and to be done through Monday- Saturday excluding Public holidays. Week Hours call basis throughout the year. Breakdown Maintenance includes fault finding, repair or replacement of identified defective parts & functional checking. If the problem is not resolved within 24 hrs time, a stand-by Office Equipment of same technical specifications shall be provided by O&M Staff as a stop gap arrangement.

4.6 The O&M Staff / personnel shall adhere to the following;

- Check the system and its functionality daily in the morning.
- Take care of operation as per Engineer Incharge/ IIMN guideline and he shall be synced with IIMN team and report vertically to IIMN.
- Support during meetings as per Officer incharge (IIMN) guideline.
- Report at prescribed working hours as directed by Engineer Incharge
- Maintain confidentiality and shall not divulge any information to unauthorized person



- Comply with applicable statutes.
 - Always carry with them proper identity cards issued.
 - Adhere to proper work discipline, in conformity with the office decorum and etiquette, as may be laid down by IIMN from time to time.
- 4.7** Not be found indulging in fraudulent act/theft.
- 4.8** In case of O&M Staff is on Leave then suitable replacement of same capability to handle the operation and Maintenance shall be provided.
- 4.9** O&M Staff shall arrange training program to IIMN team as and when required.
- 4.10** Pro-actively maintenance viz. keep an eye of life equipment' and technology and take proactive action for repair/replacement.
- 4.11** Engineer support shall be available for meetings on Holidays and beyond office hours at Conference Room (IIMN) based on requirement as per directions of IIMN.
- 4.12** Qualified / Certified Engineer shall only be deputed and they shall be experienced in handling High end AV equipments/Systems.
- 4.13** In case there is a break down Engineer shall report in 15 minutes.
- 4.14** Availability of all the tools with engineer shall be ensured by the Contractor.
- 4.15** Spare parts shall be kept in buffer.



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**TECHNICAL SPECIFICATION
FOR
AUDIO VISUAL EQUIPMENT**



TECHNICAL SPECIFICATIONS FOR AV EQUIPMENT

1.0 SOFTWARE & PROGRAMMING:

Any software or programming required for successful testing, commissioning and functioning of all the equipment's and systems installed by the contractor shall be in the scope of the contractor. All such software required shall be fully-loaded, genuine, latest versions, shall be as per OEM's specifications/ recommendations, shall not be trial versions or limited- feature or limited-period versions and shall not involve any recurring cost.

The rate quoted by the contractor shall be inclusive of all such required software and programming and the contractor shall be responsible for making the entire system operational as per tender specification and no extra shall be paid to the contractor on this account.

2.0 COMPATIBILITY OF SYSTEM:

It shall be contractor's obligation to ensure that all the software, hardware, equipment, and AV systems, including input-output connectors/ port/ terminals, are seamlessly compatible with one another. Any specific provisions, if required to be made on this account, shall be done by the contractor without compromising the performance of the AV system and without any extra cost. The rate quoted by the contractor shall be inclusive of all such required software and programming and no extra shall be paid to the contractor on this account.

Similarly, the contractor shall ensure that the speaker's wattage and corresponding amplifiers are selected and proposed in a manner that they are compatible with one another.

The contractor shall ensure that the equipment being proposed in the design are the prevalent models/ series of the OEM.

3.0 SIZES OF LED DISPLAY PANEL

The contractor shall supply the LED display panel as per the specifications given in the Bidding document. However a variation in screen diagonal size of the LED panel upto +5" (Plus Five inches) shall be acceptable as decided by Engineer in charge, whose decision shall be final in this regard. The bidder shall quote the price accordingly and no extra amount shall be paid on account of this.

4.0 CONNECTORS/ ADAPTORS/ CONVERTORS:

The connectors/ adaptors/ convertors/ports required in making connections between various equipment's, cables or terminating cables into equipments shall be provided and installed by the contractor as per industry standards, design and site requirements. The rates quoted by the contractor for equipments and cables shall be inclusive of connectors/ adaptors/ convertors/ports etc. and no extra shall be paid to the contractor on account of this. The specifications of some of such connectors are given below:

SI No.	Connector/Convertor Type	Specifications
1	VGA	15-pin HD Metal Body male/ female solder type Connectors
2	HDMI	HDMI 4K, Metal Body male/ female type Connectors
3	HDMI to thunderbolt for MAC	Support 4K Resolution
4	VGA to thunderbolt for MAC	Support Resolution upto 1920x1200@60Hz
5	HDMI, VGA, LAN and USB to Type C	Support 4K Resolution, 1920x1200@60Hz, USB 2.0,3.0
6	Stereo Audio	3.5 mm male/female stereo audio metallic connector having Gold-plated contacts and solder cup
7	Any other type of connector	Shall have specifications as per relevant Industry standards and OEM's specifications

5.0 POWER AND LAN SUPPLY TO THE AV EQUIPMENTS:

The contractor shall take power and LAN connections for the (Audio-Visual equipments) from the prescribed electrical and LAN points already installed in each of the area/rooms. It shall be contractor's obligation to ensure necessary coordination in this regard with IIMN/PMC and other agencies working at site. The rates quoted by the contractor shall be inclusive of this and no extra shall be paid to the contractor on account of this. Decision of Engineer in charge regarding the same shall be final and binding upon the contractor.

6.0 HARDWARE, ACCESSORIES, MOUNTING KITS ETC.:

The contractor shall provide all necessary hardware, accessories, mounting kits etc required for appropriately and safely mounting the equipments and same shall be as per the requirements of the equipments, provision of the connection in all the classrooms for document camera. OEM's recommendations (if any), site conditions, technical specifications and as approved by Engineer in charge. The rates quoted by the contractor shall be inclusive of this and no extra shall be paid to the contractor on account of this.

7.0 OPERATING CONDITIONS:

All Audio Visual Equipment's enlisted in this tender shall be suitable for operating under following environmental conditions:

SI No	Environmental parameter	Range
1	Operating Temperature	: 5°C - 40°C



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2	Operating Humidity	:	15% - 80% RH
3	AC Voltage supply (for equipment's that operates on AC voltage supply)*	:	110V - 240V AC @ 50-60 Hz

*There may be equipment's which operate on DC supply or Power-over-Ethernet (PoE) as per manufacturer's specifications. The contractor shall supply and install the equipment along with the necessary adaptor, power cords, Ethernet cables/ cords (in cases where Ethernet cable is meant only for supply of power and not for communication or LAN), or any other provision required as per manufacturer's specifications. The rates quoted by the bidder shall be inclusive of this and no extra amount shall be paid to the contractor on account of this.

8.0 "APPROVED EQUIVALENT":


The term "approved equivalent" shall mean equivalent make/model of that material/ item:

- Meeting the specifications as mentioned in the tender for that material/ item, and
- Whose sample is submitted by the contractor and approved by Engineer in charge.

TECHNICAL SPECIFICATIONS OF THE EQUIPMENT

S.N.	Description	Technical Specification
1)	55" LED Panel	
	Display Size	55"
	Bright ness	350cd/m2
	contrast ratio	1200:1 or better
	Viewing Angle(HxV)	178x178
	Response Time	8ms or better
	operation Hours	16 hr
	HDMI input	2
	DVI-D input	1
	USB input	1
	D-sub 15 pin input	1
	Control port	RS232
	Lan port	RJ45
	Speaker	20 w
	Sleek Panel	less than 55mm depth
	Certification	Energy star 7.0
	BIS, safety & EMC	Ce,fcc,UL
	operation Hour	50000 hrs MTBF
2)	75" LFD Panel	
	Display Size	75"
	Native resolution	4K
	Brightness	500cd/m2
	contrast ratio	1200:1 or better
	Viewing Angle(H x V)	178x178
	Response Time	8ms or better
	operation Hours	16x7 hr
	less reflective Screen	must visible in day light (haze- 20% or Anti-Glare Treatment)
	PC Connection	USB 2.0
	HDMI	2
	DVI-D	1
	USB	1
	Screen	mirroring
	memory	Inbuilt
	Ports(input/output)	RS 232, LAN
	Built-in speaker	20w
	BIS Certification safety & EMC	Ce,fcc,UL
	managed and control	from central server
	operation hr	50000 hrs MTBF

S.N.	Description	Technical Specification
3) 65" LFD Panel		
	Display Size	65"
	Native resolution	4K
	Brightness	500cd/m2
	contrast ratio	1200:1 or better
	Viewing Angle(H x V)	178x178
	Response Time	8ms or better
	operation Hours	16x7 hr
	less reflective Screen	must visible in day light (haze- 20% or Anti-Glare Treatment
	PC Connection	USB 2.0
	HDMI	2
	DVI-D	1
	USB	1
	Screen	mirroring
	memory	Inbuilt
	Ports(input/output)	RS 232, LAN
	Built-in speaker	20w
	BIS Certification safety & EMC	Ce,fcc,UL
	managed and control	From central server
	operation hr	50000 hrs MTBF
4) 55" Smart Panel		
	Display Size	55"
	Native resolution	4K
	Brightness	500cd/m2
	contrast ratio	1200:1 or better
	Viewing Angle(H x V)	178x178
	Response Time	8ms or better
	operation Hours	16x7 hr
	less reflective Screen	must visible in day light (haze- 20% or Anti-Glare Treatment)
	PC Connection	USB 2.0
	HDMI	2
	DVI-D	1
	USB	1
	Screen	mirroring
	memory	Inbuilt
	Port(input/output)	Rs 232, LAN
	Built-in speaker	20w
	BIS Certification safety & EMC	Ce,fcc,UL
	managed and control	from central server
	operation hr	50000 hrs MTBF


S.N.	Description	Technical Specification
5)	Teaching Platform	Indicative picture 
	Cabinet Type	Customised Wooden (solid teakwood or rubber wood) /Metal podium wheel mounted
	Dimensions (minimum)	(LxWxH) 590mm x 600mm x 1200mm (approx.)
	External connectivity options	2xUSB, 2xXLR, HDMI In/Out, VGA In/Out, Audio In/Out, Gigabit LAN, Power socket with On/Off switch
	Drawers	For document camera, keyboard/mouse and accessories.
	Tilt mechanism	Motorized system for angle adjustment for 21.5" monitor /interactive panel
	Space	space to keep 21.5" Interactive panel / monitor, External Laptop, CPU/PC, another equipment
	Security	All drawers, sliding trays, and doors should be lockable.
	Provision to fix Logo	At the front side with the flexibility to change the logo.
	Monitor Cover	Lockable slider (RFID based) for covering monitor for security
	Future upgrades	Provision to cater for future upgrades in technology
	Height Adjustment	automated/motorised system to adjust the height of the Podium
	Servicing doors	Access doors for servicing both/back sides of the podium
	Wire managers	On left, right and at bottom for managing wires
	louver	proper louver for heat dissipation
	Power Supply ports	Min. 8 port 5 amp modular metallic spike buster, with MCB Controlled
	Customization as required by IIMN may be done by the contractor	
6)	LCD PROJECTOR	
	Brightness	5000 Lumens MIN
	Contrast	200000:1
	Type	3-LCD
	Native Resolution	1920 X1200
	Illumination	20000 hours illumination
	Inputs	HDMI, HDbaseT, RCA
	Controls	RS 232, RJ45
	Operating environment	Temperature: 32-104°F (0-40°C)

S.N.	Description	Technical Specification
7) DLP PROJECTOR		
	Brightness	6500 lumens
	Contrast	200000:1
	Type	DLP
	Native Resolution	1920 X 1200 WUXGA
	Lamp Type	LASER
	Lamp Life	20000 hrs
	Inputs	HDBaseT, HDMI x 2
	Controls	RS232 In, Control Ethernet (10/100) RJ45
8) DLP PROJECTOR		
	Brightness	12000 lumens
	Contrast ratio	200000: 1
	Type	1-Chip DLP
	Native Resolution	1920 X 1200
	Lamp Type	LASER Phosphor
	Lamp Life	20000 hrs
	Lens Offset	Motorized horizontal and vertical lens offset
	Scan Rates	Horizontal: 15-100kHz , Vertical: 24-85Hz
	Inputs	3GSDI x 1 (BNC) , DVI-D x 1 , HDMI x 2, Display Port x 1 , HD15 x 1 , ,HDBaseT
	Pixel Clock	162 MHz
	Controls	RS232 In ,Control via HDBaseT, Ethernet (10/100) RJ45, USB
	3D Feature	3D Ready
	Operating voltage	110-240 VAC 50/60Hz
	Operating environment	32-104° F (0-40° C),0-85% non-condensing
9) Projection Screens		
	Size	As per BOQ
	Screen type	Tab tensioned motorised screen
	controller	LVC
	Power	240 V AC
	Motor	AC
	Colour	White
	Outer Color	Black
10) 21.5" Interactive Monitor (to be fitted on Teaching Platform with motorised tilt)		
	Panel	Interactive
	Display	21.5" IPS with Full HD (1920 x 1080) resolution and wide viewing angles
	Technology	Electromagnetic resonance technology (EMR) or better
	Interface	USB 2.0
	Aspect Ratio	16:9 or better
	Response Rate	14 ms or better
	Reading technology	Electro Magnetic Resonance technology

S.N.	Description	Technical Specification
	Compliant	HDCP Compliant
	Brightness	210 cd/m ²
	Contrast Ratio	900:1 (typical) or better)
	Pass-thru connector handles	either digital or analog inputs and mirror to another display from this pen display
	Adjustable stand	for 15 to 72 degrees of incline for greater comfort
	Viewing Angle	89°/89°, 89°/89° or better
	Report Rate	133 Points per second or better Pen report rate
	Video Input & output	Analog (RGB) / digital (DVI-I) or better
	EM Pen/Stylus	Battery free wireless Pen
	Express Keys	To be customised
	Tablet resolution	2540 LPI
	Pen Pressure	1024 non interpolated pen pressure
11) 21.5" Monitor (to be fitted on Teaching Platform with motorised tilt)		
	Screen size	21.5" IPS with Full HD (1920 x 1080) resolution
	Aspect ratio	16:9 or better
	Brightness	200 cd/m ² (Typ.)
	Contrast ratio	1000:1 (Typ.) or better
	Ports	HDMI IN, D-Sub
12) GPS based Digital Wall Clock		
	Features	GPS based Digital Wall Clock having SS 304 enclosure with Antenna Complete with all accessories, control unit etc of minimum enclosure size 500mm x 290mm and minimum 100 mm LED size as per specifications and directions of engineer in charge.
13) Visual Presenter (to be kept/fitted in teaching platform drawer)		
	Sensor	CMOS Sensor
	Resolutions	XGA (1024 x 768), SXGA (1280 x 1024), WXGA (1280 x 800), 1080 P and 4K
	Camera Lens	13 Megapixel
	Preview Screen	LCD Preview Screen
	Zoom	30x optical zoom & 8x Digital Zoom
	Frame Rate	30 fps
	Lens Rotation	Lens rotation 0 to 90 deg to orient object/paper
	Platform	Writable platform
	Ports	HDMI Out, HDMI In
	Memory	10000 Images & external memory support through USB
	other features	Standalone Audio Video Recording through USB, In-built Light, In-built Backlight, etc
14) WorkStation		
	processor	Intel Core Latest Generation i7-Processor
	RAM	16 Gb
	Cabinet	Mini
	Mouse & Keyboard	Wireless

S.N.	Description	Technical Specification
	Form Factor	Tower
	Processor Type	i7
	Processor Count	4
	HDD	1 TB
	Operating System	Win 10 Professional
15) Wireless Presentation		
	OS	Windows 7/8/8.1/10 32 & 64 bit macOS 10.13/10.14 (Mojave) , Android v7 & v8 & 8.1 (through app) , iOS 11, 12 (through app)
	Video outputs	1x HDMI 1.4b & & 1 Mini DP/VGA
	Video inputs	1x HDMI 1.4b
	resolution	1080p@60HZ
	other features	Four sources simultaneous on screen , 252 nos. simultaneous connections, 4 nos. of USB3.0 port for connecting peripheral devices like keyboard & mouse, Should be able to share uninterrupted HD video of 1080p @ 60 FPS, feature to stop someone else from presenting to enable uninterrupted presentation, audio de-embedding feature, have inbuilt Wi-Fi,
		with RAM, F, with Should have Status LED to check for Control/Connection status.
	Ram	512MB
	Flash memory	4 GB
	Ports & other features	Minimum 4 bidirectional RS232, 4 IR, 4 Relays and 4 GP/IO and 1 Ethernet port, have inbuilt or external IR sensor/learner to learn IR commands, compatible with any (IOS/Android) wireless or wired Touch screen of any size, including minimum 5 license each included for both iOS & Android application, Should have embedded webpage for control port settings, It should support PoE
	Indicators	Led
16) Ceiling Speakers		
	Ceiling Loudspeaker	6.5"
	Frequency Range	74 Hz – 20 kHz
	Power Capacity	50W continuous power
	Nominal Sensitivity	90 dB
	Nominal Coverage Angle	110° conical coverage
	Maximum SPL	113dB
	Transformer Taps	30 W, 15 W, 7.5 W @ 70V or 100V (plus 3.8 W @ 70V only)
	Low Frequency driver with polypropelene-coated	6.5 inch
	High frequency driver with titanium-coated polyester	0.75 inch
	Steel Backcan	Complete with Steel Backcan UL-1480, UL-2043
	Certification	EN54-24 certified
17) FOH Loudspeaker		
	In bulit Transformer	70V/100V transformer
	Frequency Range	65 Hz – 20 kHz

S.N.	Description	Technical Specification
	Coverage	Vertical Broad Mode: 60°, Horizontal 100
	Sensitivity (2.83V@ 1m)	92 dB/1W/1m or better
	Max SPL (1m)	116 dB
	nominal impedance	8 ohm
	Power Capacity	200W cont. or better
	Crossover	1.6 kHz
	Frequency driver	8 inch low frequency driver, 1 inch High frequency driver
	Enclosure	Fiberglass reinforced ABS cabinet
-		
18) Two way column Array Speakers		
	components	min 30 drivers
	coverage	Vertical pattern coverage switchable 25° to 45° Horizontal Coverage =150°
	Frequency Range	90 Hz – 20 kHz
	Power Capacity	350W continuous / 1400W Peak 100 Hrs. at 8-12 ohms
	Sensitivity	94 dB or more
	Max SPL	126 dB Peak or more
19) Two channel Class D Power Amplifier		
	Amplifier configuration	Two channel Class D power Amplifier
	Total Harmonic Distortionat full rated power, from 20Hz - 20kHz	<0.35%
	Frequency Response	20Hz - 20kHz
	Analog Input Signal to Noise Ratio	> 90dB
	Maximum Input Level	+22dBu
	Crosstalk (below rated power, 20Hz to 1kHz)	>75dB
	Channel power	2x1200 W at 4 Ohm , 2x800 W @ 8 Ohm
20) Dual channel power Amplifier		
	Power Amplifier	Dual Channel Power Amplifier 2 x 240W @8ohm/4 ohms
	Insertion Loss	70V & 100V outputs
	Frequency Response	8Ω, 20Hz - 20kHz +/- 1.0 dB
	Total Harmonic Distortion (THD)	<0.5%
	Signal-to-Noise Ratio	>97dB
	Maximum Input Level	+22dBu
	Crosstalk	>85 dB
21) DIGITAL WIRELESS Garland Microphone		

S.N.	Description	Technical Specification
 <p>Tentative Picture:</p>		
	Carrier frequency	2.4 GHz
	Frequency response	100 Hz–10 KHz
	RF Frequency range	2.4 - 2.483 GHz
	Feature	Pendant and Clip on style, Quick Charge, Adjustable Lanyard
	Microphone Sensitivity	-39db ref. 1 K@1V
	Microphone S/N	>59db
	Charging	Micro USB connector for Battery charging
22) DIGITAL WIRELESS COLLAR MICROPHONE SYSTEM		
	Carrier frequency	UHF 60 MHz or better UHF tuning bandwidth
	Frequency response	40 Hz–15 KHz
	Dynamic range	115 dB (A Weighted)
	THD(Total Harmonic Distortion)	<0.1% at 1 kHz, ±17.5 kHz deviation
	Simultaneous operation	upto 40 Microphones per band
	Latency	2.9 ms
	RF Output	30mW / 10MW switchable
	Working range	270 ft. (90 m)
23) DIGITAL WIRELESS HANDHELD MICROPHONE SYSTEM		
	MICROPHONE Type	WIRELESS Handheld
	Carrier frequency	UHF 60 MHz or better UHF tuning bandwidth
	Frequency response	40 Hz–15 KHz
	Dynamic range	115 dB (A Weighted)
	THD (Total Harmonic Distortion)	<0.1% at 1 kHz, ±17.5 kHz deviation
	Simultaneous operation	upto 40 Microphones per band
	Latency	2.9 ms
	RF Output	30mW / 10MW switchable
	Working range	270 ft. (90 m)
24) Digital Signal Processor		
	Analog Inputs	10
	Phantom Power per Channel	48v
	Analog Outputs	6
	Telephone Input/Output Port	RJ-11
	AEC Processing	8 Channels
	Control	Auto Gain, Noise Cancellation, Low Latency
	Audio Interfaces	2x2 USB
	Indication	Clear Front Pane LED lights

S.N.	Description	Technical Specification
	Control System Integration	Third Party
	Control options	1X RS-232, 1X Ethernet port
	Nominal gain	0dB
25) Digital audio conference control unit		
	Features	supplies power for minimum for 40 Units and control up to minimum 400 discussion units with power supply shall be responsible for routing, controlling and processing the audio and supplies power to the devices. It includes an intelligent Digital acoustic feedback suppression, Built in USB for Recording, Built in Open Media Control Protocol for Camera, Direct access, Request, Push to talk modes of operation, pre-installed control software for management synoptic and audio recording etc, plug and play device.
	Frequency response	100 – 14.000 Hz
	Total harmonic distortion	< 0,01% A-weighted at +6 dBV IN, OUT
	Signal-to-noise ratio	> 80 dB A-weighted at +18 dBV
	Buttons(Switch)	Mains switch in the front to power on the audio powering switch, Ground lift switch
26) Audio Conference System		
	Discussion device	Chairman Unit
	Microphone type	super cardioids/ array microphone or better with length minimum 390 MM
	features and benefits	Twin/ Two way loudspeaker for better sound reinforcement, Priority Button to provide access and mute delegate microphone, Digital acoustic feedback suppression
	Supply voltage	48 Vdc
	Port	RJ-45 connectivity, 3.5 mm stereo jack socket
	Indication	LED light Ring & Bi-color bar indicator
	Power consumption	Max 3.5W
	Frequency response	50 Hz – 20 kHz
	THD at nominal level	0.5% or more at 50 mW/16 Ω
	Dynamic range	> 70 dB
	Signal-to-noise ratio	> 70 dB
	Operating temperature range	+10 °C to +40 °C
27) Delegate unit		
	features and benefits	Twin/ Two way loudspeaker for better sound reinforcement, Digital acoustic feedback suppression
	Microphone Type	super cardioids/ array microphone or better (good neck length minimum 390 MM)
	Ports	RJ-45 daisy chain, 3.5 mm stereo jack socket,
	Power Consumption	Max 3.5W
	Frequency response	50 Hz – 20 kHz
	THD at nominal level	0,03 % at 50 mW/16 Ω
	Dynamic range	> 70 dB
	Signal-to-noise ratio	> 70 dB
	Operating temperature	+10 °C to +40 °C

S.N.	Description	Technical Specification
28) Spotlight Presentation Remote		
	features and benefits	Presentation control for Highlight with advanced pointer system, precisely highlight areas of focus or magnify them in pixel-perfect detail, on-screen cursor to play and pause videos, open links, and content interaction, connects instantly via USB receiver or Bluetooth Smart, plug-and-play on most platforms and compatible with all popular presentation apps, fully rechargeable and can operate from 100-foot range.
29) LASER PRESENTATION REMOTE		
	features and benefits	Presentation control remote - Should come with a red laser pointer that enables you to attract attention to the specific area, device should have a signal range of up to 15 meters, dedicated buttons to go forward and backward, on and off key, Battery Indicator
30) Audio Powering Switch 8 port		
	features and benefits	Port Standards & Functions: IEEE 802.3 10BASE-T Ethernet, IEEE 802.3u 100BASE-TX Fast Ethernet, IEEE 802.3ab 1000BASE-T Gigabit Ethernet, IEEE 802.3x Flow Control for Full-Duplex Mode, IEEE 802.3af compliance, IEEE 802.3at compliance, Auto-negotiation, Ports: 8 x 10/100/1000BASE-T PoE ports, 2 x SFP ports, Network Cables: UTP Cat. 5, Cat. 5e (100 m max.); EIA/TIA-568 100-ohm STP (100 m max.), Full/half duplex for 10/100 Mbps speeds; Full duplex for Gigabit speed, Auto or configurable MDI/MDIX, Switching Capacity: 20 Gbps, MAC Address Table: 8K entries per device, MAC Address Update: Up to 256 static MAC entries, Enable/disable auto-learning of MAC addresses, Maximum 64 bytes Packet Forwarding Rate: 14.9Mpps, Packet Buffer Memory: 4.1 Mbits, PoE Standard: IEEE 802.3af and IEEE 802.3at, PoE Capable Ports 1 to 8: Up to 30 W, PoE Power Budget Max. 65 W, Maximum Power Consumption - PoE Enable: 80.6 W, PoE Disable: 7.5 W or better, Dimensions 280 x 126 x 44 mm, 19" standard rack mounting width, 1U height, Weight 0.95 kg, Diagnostic LEDs - Power (per device), Link/Activity/Speed/PoE, L2 Features - MAC Address Table: 8K, Flow Control, Jumbo Frame up to 10,000 Bytes, IGMP Snooping, MLD Snooping, Spanning Tree Protocol, VLAN -802.1Q Tagged VLAN, VLAN Group, Management VLAN, Quality of Service (QoS) - 802.1p Quality of Service, Queue Handling, 8 queues per port, Bandwidth Control, Must have Access Control List (ACL), Security - Broadcast/Multicast/Unicast Storm Control, Static MAC, D-Link Safeguard Engine, DHCP Server Screening, Trusted Host, ARP Spoofing Prevention, OAM: Cable Diagnostics.The work to be done complete with all accessories as required & as per directions of engineer in charge & design drawings.
31) Audio Powering Switch 24 port		
	features and benefits	Port Standards & Functions: Port Standards & Functions: IEEE 802.3 10BASE-T Ethernet, IEEE 802.3u 100BASE-TX Fast Ethernet, IEEE 802.3ab 1000BASE-T Gigabit Ethernet, IEEE 802.3x Flow Control for Full-Duplex Mode, IEEE 802.3af compliance, IEEE 802.3at compliance, Auto-negotiation, Ports: 24 x 10/100/1000BASE-T PoE ports, 4 x Combo 10/100/1000BASE-T/SFP ports, Network Cables: UTP Cat. 5, Cat. 5e (100 m max.); EIA/TIA-568 100-ohm STP (100 m max.) Full/half duplex for 10/100 Mbps speeds; Full duplex for Gigabit speed, Media Interface Exchange: Auto or configurable MDI/MDIX, Switching Capacity: 56 Gbps, MAC Address Table: 8K entries per device, MAC Address Update: Up to 256 static MAC entries, Enable/disable auto-learning of MAC addresses, PoE Standard: IEEE 802.3af and IEEE 802.3at, PoE Capable Ports: Ports 1 to 24: Up to 30 W, PoE Power Budget: Max. 193 W, Maximum Power Consumption: PoE Enable: 247.4W, PoE Disable: 28.1W or better, Dimensions: 440 x 250 x 44 mm, 19" standard rack mounting width, 1U height, Weight: 3.75 kg, Diagnostic LEDs - Power (per device), Fan (per device), Link/Activity/Speed/PoE, L2 Features - Loopback Detection, 802.3ad Link Aggregation, Port Mirroring, Multicast Filtering, LLDP, LLDP-MED, VLAN - Asymmetric VLAN, Auto Voice VLAN, Auto Surveillance

S.N.	Description	Technical Specification
		VLAN, Quality of Service (QoS) - 802.1p Priority Queues, DSCP, ToS, TCP/UDP port number, IPv6 traffic class1, Must have Access Control List (ACL), Security - SSL, Traffic Segmentation, Smart Binding, OAM - Factory Reset.The work to be done complete with all accessories as required & as per directions of engineer in charge & design drawings.
32) Video Conferencing System		
	Video :	Latest video standards H.264, H.265, Should support 60 fps with 1080p resolution, Ability to send and receive two live simultaneous video sources in a single call, so that the image from the main camera and PC or document camera can be seen simultaneously, Should support H.239 and BFCP protocols, "The system must have the ability to pair mobile devices such as Tablet and Smartphones based on iOS or Android platforms so that these devices can be used for: 1) Add and disconnect call. 3) Take snapshot of the presentation being shown", The system must have the ability to pair with laptop for sending content without any wires to the VC system, In case the above feature is not available natively, then additional components can be provided to achieve this, Should have at least 1 x HDMI inputs to connect Full HD cameras, Must have 2 HDMI inputs to connect two laptops/PC for presentations, All inputs should support 1080p60, Should support the ability to view and share presentations at a resolution of 1080p30, The system must have the ability to pair with laptop for sending content without any wires to the VC system, Should have at least 2 no.'s of HDMI output to connect Full High Definition display devices such as plasma and projectors for both Video and Content.(Dual Monitor Support), When not in a VC call, it should be possible to view presentation from two laptops on each of the screen so that users can collaborate.
	Audio :	G.711, G.722, G.722.1, 64 kbps MPEG-4 AAC-LD standard must be supported, Noise Reduction, Automatic Gain control, Acoustic Echo Canceller, Active Lip synchronization, Should support 3 Microphone inputs to connect 3 microphones, The pick up of the microphones should be at least 10 feet from the microphone, Echo Cancellation for every input must be available, Should support audio output.
	Network Interfaces :	1 LAN /Ethernet--10/100/1000 Mbps full duplex, H323/SIP upto 6 Mbps point-to-point, Packet Loss Based Down speeding, QoS—Diff Serve, IP adaptive bandwidth management (including flow control), Auto Gatekeeper discovery, Auto Network Address Translation(NAT) support, Standards based- Packet Loss Recovery feature, System should support IPv4 and IPv6 from day one, Should support URL Dialling, Support for H.245 DTMF tones in H.323.
	Encryption of video call :	ITU-T standards based Encryption of the video call, Call should be encrypted end-to-end on IP, Should support Standards-based: H.235 v3 and AES Encryption via Automatic key generation and exchange. The same should be available in a call with Video with presentation (dual video), Ability to manually turn encryption ON/ OFF should be there, Automatic key generation and exchange.
	Management :	System Management using HTTPS and SSH
	Camera :	Should have at least two or more HD cameras to automatically detect active speakers in the conference room. The camera should also have face detection mechanism to enable automatic framing of participants, The camera should automatically detect who in the room is speaking and select the best camera framing for that person. And when no one is speaking it should automatically select the best group framing, The system should be capable of providing metrics such as participant count that could be used for resource utilization, return on investment reports, Should have the ability to turn OFF speaker tracking if need be, The camera must have a resolution of at least 4k and a zoom of 5X, 1920 x 1080 pixels progressive @ 60fps, The Camera and codec should be from the same manufacturer, Should have at least 80 degrees horizontal field of view
	Directory Services :	Should support Local and Global directories, Should support LDAP and H.350 protocols for directory transfer

S.N.	Description	Technical Specification
	Multipoint Capability :	Should support built-in Multiconference capability to connect at least 1+3 sites at 720p30fps in a continuous presence mode, All sites must be visible in a continuous presence mode with rate matching and transcoding such that different sites may connect at different speeds and protocols and still maintain a resolution of at least 720p
	User Interface :	User Interface: In order to provide a good user experience, the unit must be equipped with an intuitive Touch Screen/Panel for controlling the VC unit, Must have ability to browse the directory, search a contact, Enable / disable speaker tracking, change layouts, mute/ unmute, increase-decrease volume, The user should have the ability to select between two presentation sources such as a fixed PC and a laptop from the user interface. Users should also have the ability to share presentation wirelessly, Must have the capability to integrate with external control systems to control Blinds, Lights, air conditioning using the API's . The User interface must have the necessary icons for controlling the external devices.
33) Video Conference System		
	Video Standards	H.261 , H.263, H263+, H.263++ , H.264 High Profile, H.264 Baseline Profile
	Video Frame Rate	
	Video Standards	Latest video standards H.264, H.265
	Video Features	Should support 60 fps with 1080p resolution, All inputs should support 1080p60.
		Ability to send and receive two live simultaneous video sources in a single call, so that the image from the main camera and PC or document camera can be seen simultaneously.
	Resolution	Should support H.239 and BFCP protocols with 1080p resolution
	Multi-Point Feature	Should have 4 way SIP/H.323 in 1080p/60fps Multipoint video conference feature enabled from day one.
	Support features for devices	must have the ability to pair mobile devices such as Tablet and Smartphones based on iOS or Android platforms so that these devices can be used for: 1) View the Presentation that is being shown in the VC call. 2) Add and disconnect call. 3) Take snapshot of the presentation being shown must have the ability to pair with laptop for sending content without any wires to the VC system. In case the above feature is not available natively, then additional components can be provided to achieve this
		Should support the ability to view and share presentations at a resolution of 3840 x 2160 (4K)
	Video	Should support 2 monitors for Self View, Remote View and Content all in separate Monitors.
	Video out	Should have at least 2 nos. of HDMI / or equivalent (High Definition Multimedia Interface) output to connect Full High Definition display devices such as LFD / Smart TV and projectors for both Video and Content.(Dual Monitor Support)
	Video Input	Should have at least one HD video Input to connect full HD cameras.
		Should have VGA/DVI/HDMI port to connect PC/ Laptop directly to the Video conferencing system and display resolutions from WXGA (1280 x 768) upto 1080p (1920 x 1080)
	Protocols	G.711, G.722, G.722.1, 64 kbps MPEG-4 AAC-LD or equivalent standard must be supported.
	Audio : Audio standards supported	Noise Reduction, Automatic Gain control, Acoustic Echo Canceller, Active Lip synchronization, Must have a built in audio amplifier,

S.N.	Description	Technical Specification
		must have at least 22W of amplifier output
	Other Desirable features	Should support 2 Microphone inputs
	Audio Inputs	The microphones must be standard based microphones.
		The pick up of the microphones should be at least 10 feet from the microphone
		Echo Cancellation for every input must be available
	Multisite Features	1+ 3 SIP/H.323 MultiSite. Resolution up to at least 720p30, Individual layouts in MultiSite CP, H.323/SIP/VoIP in the same conference, Must have Individual transcoding and rate matching for each site so that all the sites can be connected at different bandwidths and different audio and video protocols without affecting the resolution to the other sites, Support for Presentation (H.239/BFCP) from any participant at resolutions up to 3840 x 2160p5, H.264, Encryption, Dual Stream from any site.
	LAN	1 LAN /Ethernet-10/100/1000 Mbps full duplex.
	Network	Should have support for IPV4 networks, Packet loss handling mechanism
	Network Interfaces	Password protected system menu
	Bandwidth	H323/SIP upto 6 Mbps point-to-point.
	Camera	Should support Standards 10x optical zoom cameras with 1920x1080p 60 frames per second. Pan range: +/-100 degrees, Tilt range: +/-20 degrees , 2x digital zoom, 20x total zoom, Pan and tilt, Horizontal FoV: 80 degrees, Vertical FoV: 48.8 degrees, 1.0 m to infinity (wide) focus distance, F-value: 1.5, Camera control: Ethernet, Focus, white balance, and brightness: Automatic or manual, Video interfaces: HDMI 1.4, 3G-SDI, Power, 12V/3A, 100-120/200-240VAC, 50/60 Hz, Network interfaces: One LAN/Ethernet (RJ-45) 10/100 Mbit. The Camera and codec should be from the same manufacturer
	Security : Menu Control	Password protected system menu, Encryption of video call: ITU-T standards based Encryption of the video call, Call should be encrypted end-to-end on IP, Should support Standards-based: H.235 v3 and AES Encryption via Automatic key generation and exchange. The same should be available in a call with Video with presentation (dualvideo), Ability to manually turn encryption ON/ OFF should be there. Automatic key generation and exchange, Management System: Management using HTTPS and SSH
	Encryption of video call	Call should be encrypted end-to-end on IP
34) Cloud based Video Conferencing Solution		
	Video:	Video Quality: Main video at up to 720p at 30 frames per second (fps), Content sharing up to 1920x1200 at 3 fps, Video Aspect Ratios: 16:9 widescreen, 4:3 standard, Video Codec Support: H.261, H.263, H.263+, H.264 AVC, H.263 (CIF) or H.264 UC (720p/30) for Skype for Business and Lync clients
	Audio	Audio Codec Support for Video Systems: G.711 (m-law and a-law), MPEG-4 AAC-LD, Opus, G.722, G.728, G.722.1, G.729 (with and without Annex B) MPEG-4 AAC-LC (TIP calls only), Audio Codec Support for Applications: Opus, Internet Low Bitrate Codec (iLBC), G.722, Audio Integration Options for Applications: Cloud integrated audio (telephone and VoIP), Cloud Connected Audio, Audio Access Methods for Applications: Call-in (dial into the meeting) Call-back (meeting calls you) and video call-back, VoIP (use your computer microphone and speakers or your smartphone data connection)
	SIP Video Systems	Advanced Encryption Standard (AES) 128-bit encryption, Signaling protocol

S.N.	Description	Technical Specification
		support: SIP, SIP Transport Layer Security (TLSv1.2), Binary Floor Control Protocol (BFCP), Media protocol support: Real-Time Transfer Protocol (RTP), Secure RTP (sRTP), and Real-Time Control Protocol (RTCP), Content share (dual video) protocol support: BFCP
	H.323 Video Systems	ITU-T H.323 standards-based video systems, AES 128-bit encryption, Signaling protocol support: H.323, H.323 with H.235, H.225.0, and H.245, Media protocol support: RTP, sRTP, and RTCP, Content (dual video) share protocol support: H.239, Annex-O dialing: Ability for standalone H.323 video systems not registered to a gatekeeper to dial and join meetings
	Security:	AES 128-bit encryption, PIN-protected access into personal rooms from video systems, Meeting lock and unlock for added privacy, Authenticated access into meetings on desktop and mobile apps, SIP TLSv1.2 and H.235 for signaling security, sRTP for media security, Data at rest encryption for recordings in Cloud data centers
35)	LAN Cable	
	Quality Construction	4 shielded twisted pairs (U/FTP) of 23AWG solid copper conductors
	Certified.	CAT6a
	Connector	RJ-45
	Total Wires	8
	Overall Shield Material	100% aluminium foil, 25% overlap
36)	HDMI Cable 10 meter	
	Max Resolution	4K @60Hz (4:4:4)
	Max Data Rate	1080p
	Quality Performance	HDMI cables provide an uncompressed digital link between consumer electronics equipment such as DVD players, set-top boxes and audio/video monitors such as LCD or OLED display screens for high-definition TVs.
	High-Quality Connectors	24K gold-plated connectors resist corrosion, and offer the best possible connectivity.
	K-Lock Pull-Resistant Connectors	Provides 15lbs of restraining force for a non-slip connection.
37)	VGA cable 2 meter	
	Quality Construction	High-resolution 26AWG mini coax for video.
	Shield	(A) 90% spiral 38AWG tinned copper (B) aluminum-foil/Mylar 25% overlap rate
	Inner Jacket	PVC
	Dielectric	Foam polyethylene with red, green, blue color coding
	REGULATORY	UL: CL2 CSA: C(UL) CL2
38)	Equipment Rack	
	Size	U's as per BOQ/ specifications.
	Door	Front (Glass) / Rear
	Dual Blower	Built-in
	AC Outlets	2x 6 nos. 15 Amp
	Doors Fans	Front Glass, Rear Metal with locks
	Castors	Lockable
39)	9U Rack	

S.N.	Description	Technical Specification
	Features	603 x 600 x 650 MM(HxWxD) with required Power and fan to be kept under the Classroom table. Complete with all accessories as per specifications and directions of engineer in charge.
40) Cable Cubby		
	Features	, Supply, Installation, Testing & Commissioning of Podium/Table mounted Cable Cubby with VGA, HDMI and USB-C input, Audio input, Ethernet port with 2-3 meter patch cords and AC power outlet. Complete with all accessories as per specifications and directions of engineer in charge.
41) HDMI over HDBT receiver		
	Features	HDMI over HDBT receiver for 100 meters, POE receiver with Ethernet and Control pass through, Receiver should support resolution up to 4k HDR, Front panel LED indication for Power and HDBT link, 4K/UHD capability @ 60 Hz with 4:2:0 chroma subsampling, Supports 4K HDR10 @ 24 Hz, Receiver should be able to pass multi-channel Audio format on HDMI
42) 6 x 6 Matrix Switcher		
	Features	6 x 6 Matrix Switcher - • Six input six output digital fixed or card based matrix switcher - Switcher should have Six HDBaseT outputs with dual-distance transmission of A/V, control and power signals over a single category cable, Two HDBaseT output up to cable run 100 meters and four HDBaseT output up to cable run 70 meters, Switcher should have one analog audio output from matrix, Video resolution support up to 4096x2160 @ 60/50/30/25/24 with Chroma subsampling 4:2:2/4:2:0 , 4K/UHD capability with HDCP 1.4 copy protection, Audio de-embedding, EDID management and HDCP management, Audio format support up to 7.1 uncompressed audio channels, Control RS232 / IP.
43) 8x8 Matrix Switcher		
	Features	8x8 Matrix Switcher - Eight input Eight output digital fixed or card based matrix switcher, Switcher should have Eight HDBaseT outputs with dual-distance transmission of A/V, control and power signals over a single category cable, Four HDBaseT output, up to cable run 100 meters and four HDBaseT output up to cable run 70 meters, , Video resolution support up to 4096x2160 @ 60/50/30/25/24 with Chroma subsampling 4:2:2/ 4:2:0, 4K/UHD capability with HDCP 1.4 copy protection, Switcher should have six analog audio output from matrix, Audio de-embedding with volume, mute, EDID management and HDCP management, Audio format support up to 7.1 uncompressed audio channels, Independent volume control, mute for each de-embedded audio output, Control RS232 / IP,
44) Three Input Switcher		
	Features	Three Input Switcher Auto Input Switcher for HDMI and VGA Sources with Ethernet-Enabled HDBaseT Output, 3x1 HDBaseT switcher (two HDMI and one VGA and separate Audio input), Automatic display control using Consumer Electronics Control (CEC)/IP/RS-232, 4K @60Hz with 4:2:0 Chroma subsampling, Automatic input selection using video detection technology, TCP/IP/RS-232 control of switcher, powered via power over ethernet/external power supply, Front panel control, Transmits IP and AV signals up to 100 meter.
45) Switcher with four input and two output		
	Features	Switcher with four input and two output , Switcher should have minimum two HDMI, one USB-C and one Display port/HDMI for wired connection on presenter table, HDMI/HDBT output. HDCP 1.4 and EDID management , 4K/UHD capability @60Hz with 4:2:0 Chroma subsampling , Local HDMI/USB-C/Display port should support 4K/60 4:2:2/4:2:0, Automatic input selection using hot plug detect, Provision of Analog audio embedding/De-embedding. should support Miracast/Chromecast/Air play,

S.N.	Description	Technical Specification
		Presenter should not setup any exe file in laptop or mobile device for presenting wireless on screen (Note this wireless feature can be quoted as an additional if inbuilt not available in switcher but in that case additional HDMI input port in switcher to be considered)
46) Button control panel		
	Features	button control panel with 8 backlit buttons, should have provision to Custom labelled, should consist of two bidirectional COM port and two IR port allow for controlling a video display, document camera, and other devices. Two programmable relay ports are provided for controlling a projection screen, lift and ethernet PoE.
47) Touch Panel with 9.7-inch (diagonal)		
	Features	LED-backlit Multi Touch display with IPS technology , 2048x1536 resolution at 264 pixels per inch (ppi) , Fingerprint-resistant oleophobic coating , Wi Fi (802.11a/b/g/n); dual channel (2.4GHz and 5GHz) and MIMO , Bluetooth 4.2 technology , Operating temperature: 0° to 35° C (32° to 95° F), Non-operating temperature: -20° to 45° C (-4° to 113° F), Relative humidity: 5% to 95% non-condensing , 16M colors, Scratch-resistant glass, oleophobic coating, 32GB memory with 2GB RAM, To be provided with suitable docking station
48) Wireless router		
	Features	Advanced Dual-Band N Router, Switch Port Speed : 10/100 Mbps (Fast Ethernet) or better, Radio Frequency : 2.4 and 5 Ghz or better, Security features : WEP, WPA, WPA2 or better, Security key bits : Up to 128-bit encryption or better, Storage File System Support : FAT, and NTFS, and HFS+ (V3 only) or better, Certifications : FCC, IC, CE, Wi-Fi (IEEE 802.11a/b/g/n) or better, Operating Temp : 0 to 40°C (32 to 104°F) or better
49) Network Based Control Processor		
	Features	Network Based Control Processor ,Real-time, Multitasking Control processor, Should have minimum of 512MB RAM Built in, Should have minimum of 4GB Flash Built In, It should have Industry-standard Ethernet communications, It should have built in Web server, It should have minimum One RS-232/422/485 COM port, It should have minimum Two RS-232 COM ports, It should have minimum 8 IR/serial, It should have minimum 8 Low Voltage relay ports, It should have minimum 8 Versiport I/O ports, It should be controllable thru iPhone®, iPad® and Android without the need of any other hardware modules, It should include a power supply, if it is not there, it should be seperately quoted, rack mountable.
LECTURE CAPTURE		
50) Camera		
	Features	Full HD Broadcast Box Camera with 1080p at 60fps resolution, minimum 30X Optical Zoom, min 68° Horizontal Viewing Angle, should support simultaneous outputs through Ethernet Out, HDMI Out and 3G-SDI Out, Line in, should support triple video streams of H.265 / H.264, Support RTSP / RTMP / MPEG-TS, should support PoE+.
51) Classroom AV Recording Device		
	Features	5th Generation Intel Core i3 , min. 8Gb Dual Channel DDR3L 1600MHz Ram, min. 1TB HDD
52) 8 Port PoE Giga switch		

S.N.	Description	Technical Specification
	Device Interfaces	8 ports 10/100/1000BASE-T
	Standards	IEEE 802.3 10BASE-T, 802.3u 100BASE-TX, 802.3ab 1000BASE-T, 802.3x Flow Control, 802.1p QoS, 802.3az Energy-Efficient Ethernet (EEE)
	Media Interface Exchange	Auto MDI/MDIX adjustment for all ports
	Performance	Transmission Method : Store-and-forward, Data Transfer Rates: Ethernet, 10 /100Mbps (half-duplex), 20/200/2000 Mbps (full-duplex), Fast Ethernet, Gigabit Ethernet
	Packet Filtering/ Forwarding Rates	Ethernet 14,880 pps per port, Fast Ethernet: 148,800 pps per port, Gigabit Ethernet 1,488,000 pps per port
	Other features	MAC Address Table: 2K , 4K entries, MAC Address Learning : Automatic update, RAM 128 KB/192 KB
53) Screen Capture hardware		
	Features	Input: 1 * HDMI, Supports input HDMI Resolution: Max support 1920x1080P@60Hz, Output Stream Resolution: Max support 1920x1080P@30Hz / 720P@60Hz, Data Rate: 0.8Mbps~12Mbps, Rate Control: CBR / VBR, GOP Structure: IBBP, Advanced Pretreatment: De-interlacing, Noise Reduction, Sharpening
	Audio	Encoding: AAC, Sampling rate: Auto, Sampling precision: 24 bit, Bit-rate: 48K/64K/96K/128K/160K/192K, Data Rate: 64Kb/s~384Kb/s
	System	Ethernet: 100Base-T Ethernet interface, Protocol: RTMP, HTTP, RTSP, UDP/RTP, ONVIF, User Interface: WEB, default IP - 192.168.0.31
54) PoE Injector		
	Interface	2 10/100/1000Mbps RJ45 Port , AUTO Negotiation/AUTO MDI/MDIX, 1 48VDC POWER INPUT PORT
	Network Media	10BASE-T: UTP category 3, 4, 5 cable (Max 100m) , EIA/TIA-568 100Ω STP (Max 100m), 100BASE-TX: UTP category 5, 5e cable (Max 100m), EIA/TIA-568 100Ω STP (Max 100m), 1000BASE-T: UTP category 5, 5e, 6 cable (Max 100m)
	Power Supply	15.4W (Max. 48VDC)
	SOFTWARE FEATURES	Compatible with IEEE 802.3af Compliant PDs, Delivers Power Up to 100 Meters, Auto-Determine The Necessary Power Requirements
55) Media Server		
	Features	5th Generation Intel Core i5-5250U Processor , 8GB RAM, 6 GBPS SATA (Intel Rapid Storage) , 12 TB Storage (4TB @ 7200 RPM) , Customized File system for distributed file access ,Can store over 40,000 hours of captured video, Gigabit Ethernet ,All required cables and connectors
56) Auto recording, scheduling and live broadcasting software		
	Features	User interface for Scheduling, auto-recording and analytics for admin.
		Web interface for student and faculty
		Should be compatible with camera , audio setup and recording hardwares

S.N.	Description	Technical Specification
	Automated solution	Audio and Video recording of Classroom lectures, Live Broadcasting (HLS) and Video Conferencing, Lectures to be broadcast and communicate in real time from different campuses, through secure web link, Real time two-way communication from anywhere across the world, Secured delivery and playback capability of the live and recorded content, with suitable encryption to prevent piracy and unauthorized access, Laptop/Desktop screen to be captured and integrated with recorded lecture, Provision to capture broad view, close view of podium recording with integrated audio, Laptop/Desktop screen to be recorded separately and synchronized with lecture, Solution must have the capability for echo-cancellation to cancel unwanted noise, Browser-based platform/application for Mobile/Tablet/Laptop/Desktop, Create an automatic calendar entry to schedule classroom recording in advance, Recorded Lectures will be stored on the server and will be available for anytime viewing on Software platform by registered users, Teacher can take feedback or ask questionnaires within published lectures, Videos are made searchable and discoverable through user-tags and algorithms, Software access within campus and in the cloud
	Collaborative & Interactive features	College can create and post time table and calendar of events for easy viewing by students. Details can be attached in the events calendar, It should allows students to interact in real time with their teachers and other students in their own group , Teachers and students can create and share their notes and study material and participate in discussions
	Analytics	Advanced Search for all the recorded videos , Student/Professor Usage Reports to measure ROI , Reporting & Tracking technical support issues , Video rating /popular videos
	Content Management Module	Allows to manage digital content library of educational content , Detects the DLSC user's bandwidth in real time and adjusts the video quality accordingly , Permission based publishing and access , Create an automatic calendar entry to schedule classroom recordings in advance , Teacher can remove the unwanted part of the videos before distribution to the students. , Enable Institute to build and manage a library of various kind of educational content. The Teacher can also upload any kind of study material, handouts (text, PDF, audio, video etc.)
	General backend activities	Recorded videos to be stored in compressed format , Recorded videos to be process automatically for AV quality improvement , Recorded contents to be stored securely in encrypted format , Email notification on user/server administration , Ability to identify and notify system faults and loss of recording
	Flipped Classroom	Institute can very easily enable "Flipped Classroom" where teacher becomes facilitator and students participate more inside the classroom. It provides a very easy user interface for creation and distribution of short video lectures. Both screen as well as video recording capabilities with two way interaction.
	Service	Providing online access/Apps to all the users to access digital content, Vendor to provide Training to teachers/IT team, User Manual for teachers, admin and students, On call/email support for admin and any other support, Hardware/Software maintenance and quality monitoring, Should be able to support automated email to vendor support center to proactive maintenance, Regular software updates, including new and enhanced features and bug fixes

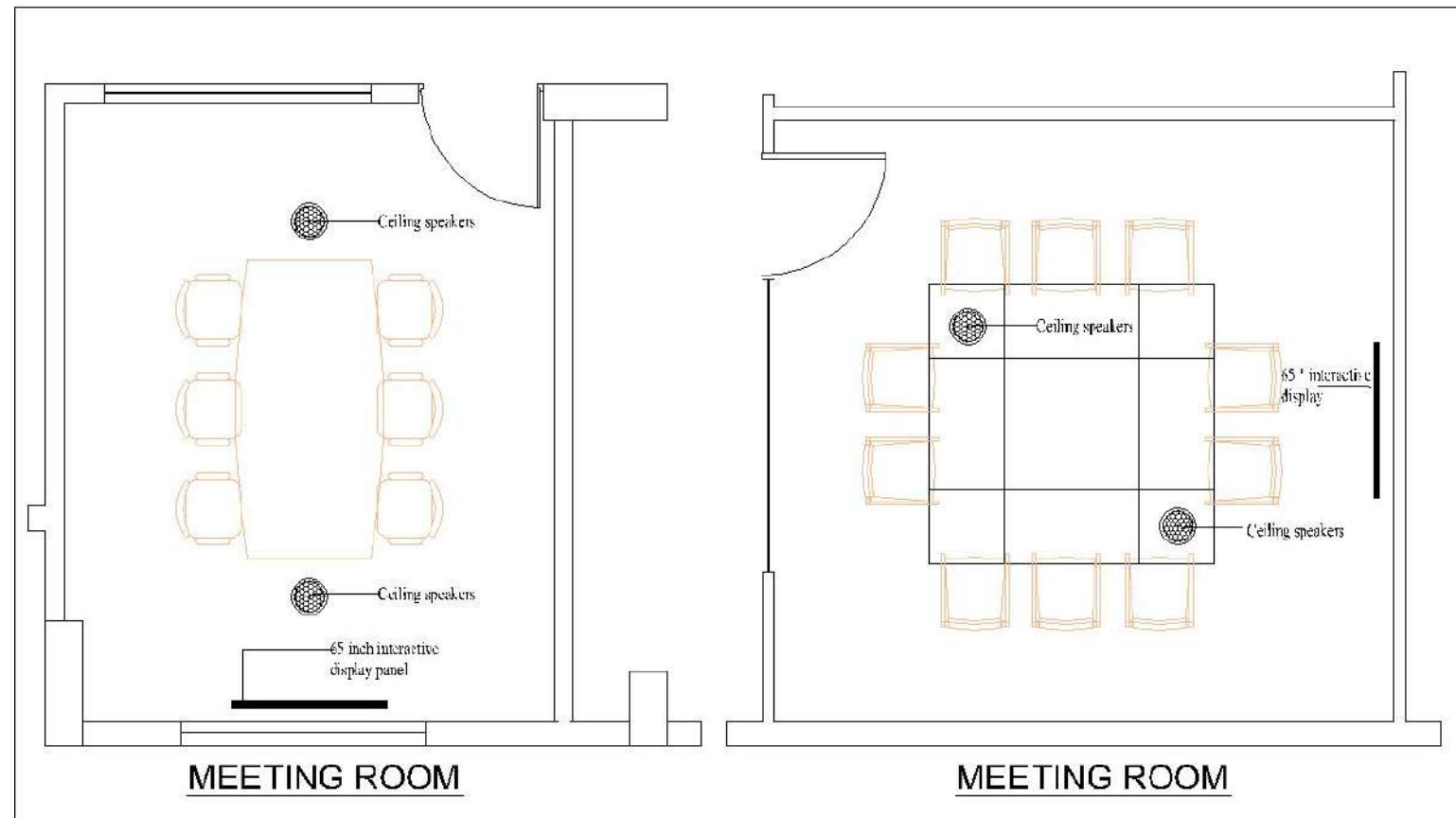
LIST OF APPROVED MANUFACTURERS/ MAKES

List of approved Makes of materials is listed below. However, approved equivalent materials of any other specialized Makes may be used, in case it is established that the brands specified below are not available in the market subject to prior approval of by the Engineer in charge.

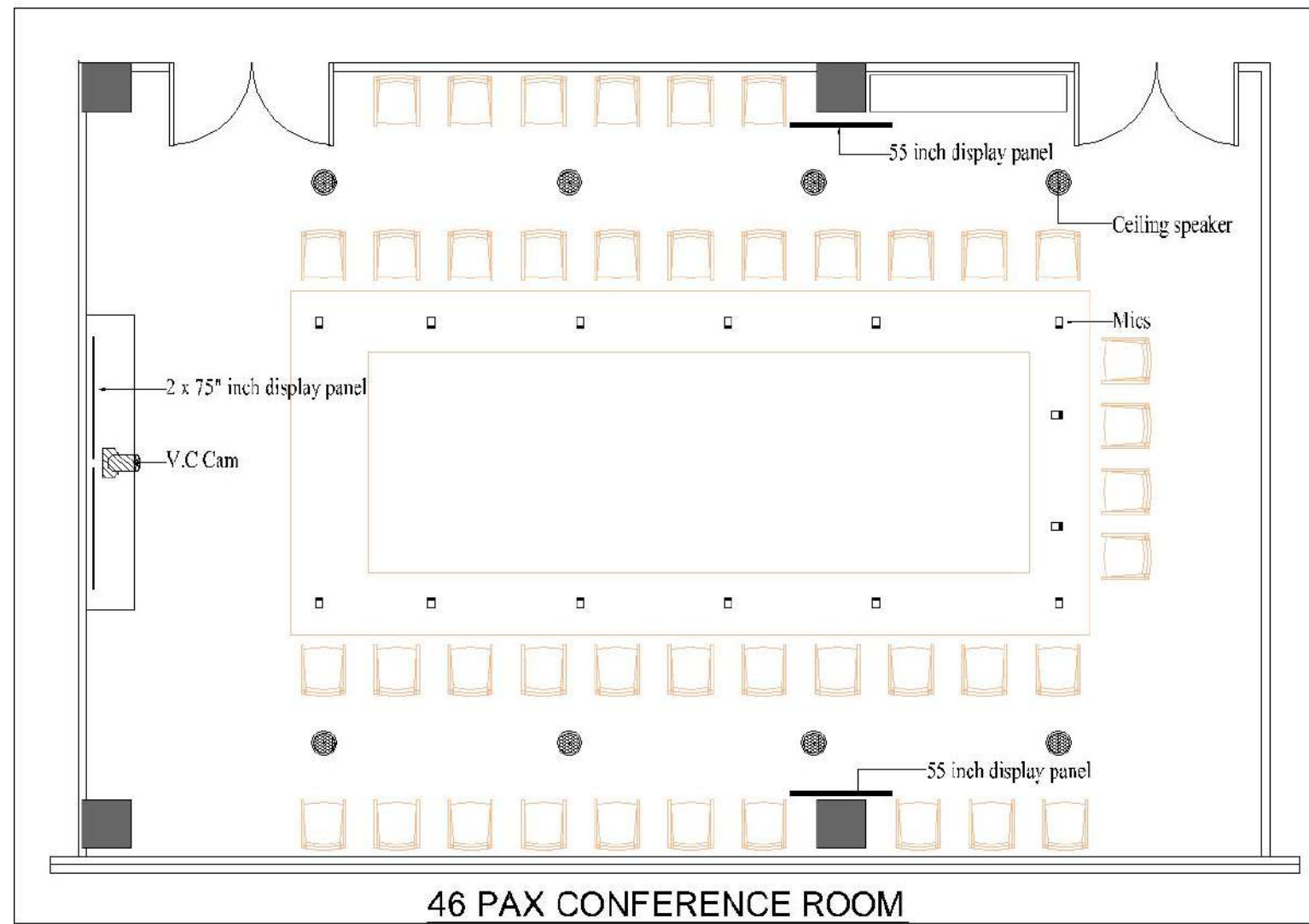
Sl. No.	Description of Items	Make
	DISPLAY	
1	LED backlit Professional displays	Samsung/ LG/ NEC
2	LCD laser Projector	Christie, Barco, NEC, Epson
3	Projector DLP Laser phosphor	Christie, Barco, NEC
4	Tab tensioned motorised	Draper / Dalite
5	Interactive Panel	Wacom/3M/ Hitachi
6	Document camera	Lumens / Elmo/ Wolfvision/ Equivalent
7	Teaching Platform	AHA/TechPodium/EAPL or approved equivalent
	VIDEO SWITCHING	
8	AV Over IP Scaling Multimedia Encoder & Decoders	Extron/ Kramer/ Crestron/ Atlona
9	VGA & HDMI scaler	Extron/Kramer/ Crestron/ Atlona
10	Cable manager	Extron/Kramer/ Crestron/ Atlona
11	Wireless presentation	Kramer/ Crestron/ Atlona
12	Touch screen	Apple
13	Control Processor	Extron/Kramer/ Crestron/ Atlona
14	8 Button panel	Extron/Kramer/ Crestron/ Atlona
15	PTZ Camera	Lumens/ Sony/ Vaddio
16	Recording & Webcasting Hardware	Media pointe / Media site / Lumens/ Maxell /Hitachi/Impartus
	AUDIO SYSTEM	
17	Ceiling Loudspeaker	Bose/ Martin Audio/ Tannoy
18	Dual channel power Amplifier /Digital Amplifiers	Bose/ Powersoft / Labgruppen
19	Wired /Wireless Microphones	Shennehiser / Shure / Audio Technica
20	Digital Signal Processor	Clearone/ Biamp / Klarktechnik
21	Conference - Delegate / Chairman / Central Control) units	Bosch / Schenniser / Shure/ Audio Technica
22	Conference Unit cables	Bosch/ Schenniser / Shure/ Audio

		Technica
23	WorkStation with I7 processor	Dell/ HP/ Lenovo
24	Video Conferencing System	Polycom / Cisco
25	Network Switch	Ruckus/ Allied Telesys/ Netgear/DLink
26	Speaker cable	Extron/ Kramer/ Crestron / Atlona
27	Microphone Cable	Extron/ Kramer/ Crestron/ Atlona
28	HDMI / VGA cables	Extron/ Kramer/ Crestron / Atlona
29	Equipment Rack	Rithal / AW Rack/Valrack
30	Digital GPS Clock	Essae or Equivalent
31	25mm PVC conduit with accessories.	AKG, BEC
32	Presentation Remote	Logitech or Equivalent
33	Monitor	LG, Samsung, Nec

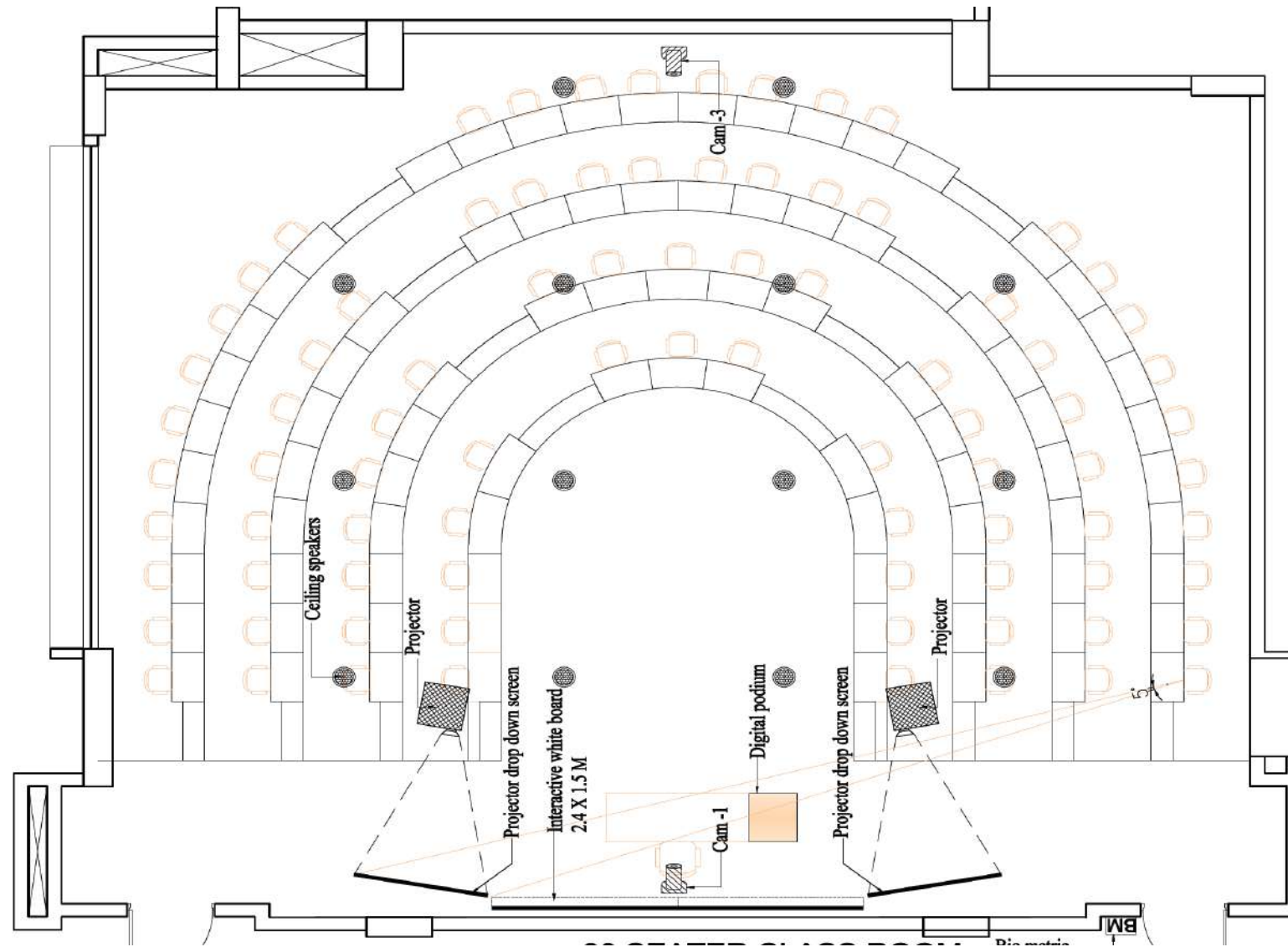
NAME OF BLOCK / TYPE OF ROOMS		HDMI over HDBT receiver	Matrix Switcher (6x6)	Matrix Switcher (8x8)	IP CAMERA	8 BUTTON CONTRL PANEL	TOUCH PANEL	Three-input Switcher (HDMI and VGA)	Switcher with four input and two output	CABLE CUBBY 6 MODULE	8 PORT SWITCH	24 PORT SWITCH	NECK HANGING MICS	WIRELESS MIC LAPEL	WIRELESS MIC HANDHELD	DSP 12X8(1/CR)	CEILING SPKRS(12/CR)	FOH SPKRS(2/CR)	AMPS FOR CEILING SPKR(2/CR)	FOH LINE ARRAY SPKRS	AMPS FOR LA SPKR	CONTROL SYS 512MB RAM	DIGITAL CLOCK	HDMI Patch cable 6 feet	VGA Patch cable	Bulk connector and adaptors as required	LASER PRESENTATION REMOTE	Spotlight Presentation Remote	Equipment Rack	AV Rack	Speaker Cable	Microphone Cable				
		HOSTELS																																		
LOUNGES	15																							15												
ESSENTIAL & HEALTH CARE CENTRE																																				
ENTRANCE LOBBY	1																							1												
SPORTS																																				
GYM	1																12		1					1												
YOGA AEROBIC	1																6		1					1												
DINING																																				
STUDENT DINING 1&2	2																							4												
FACULTY DINING	1																							1												
PRIVATE DINING	2																							2												
PARTY HALL	1																																			
VISITOR																																				
ENTRANCE LOBBY	1																							1												
SERVICE CENTRE & Estate Manager Office																																				
MEETING ROOM	2					2		2		2														2	4	2			2							
TECHNICAL ROOM	3					3		3		3														3	6	3			3							
TOTAL		63	20	1	12	18	21	64	9	85	19	20	21	27	40	27	254	32	43	16	8	21	111	273	85	36	67	7	1	21	1000	200				



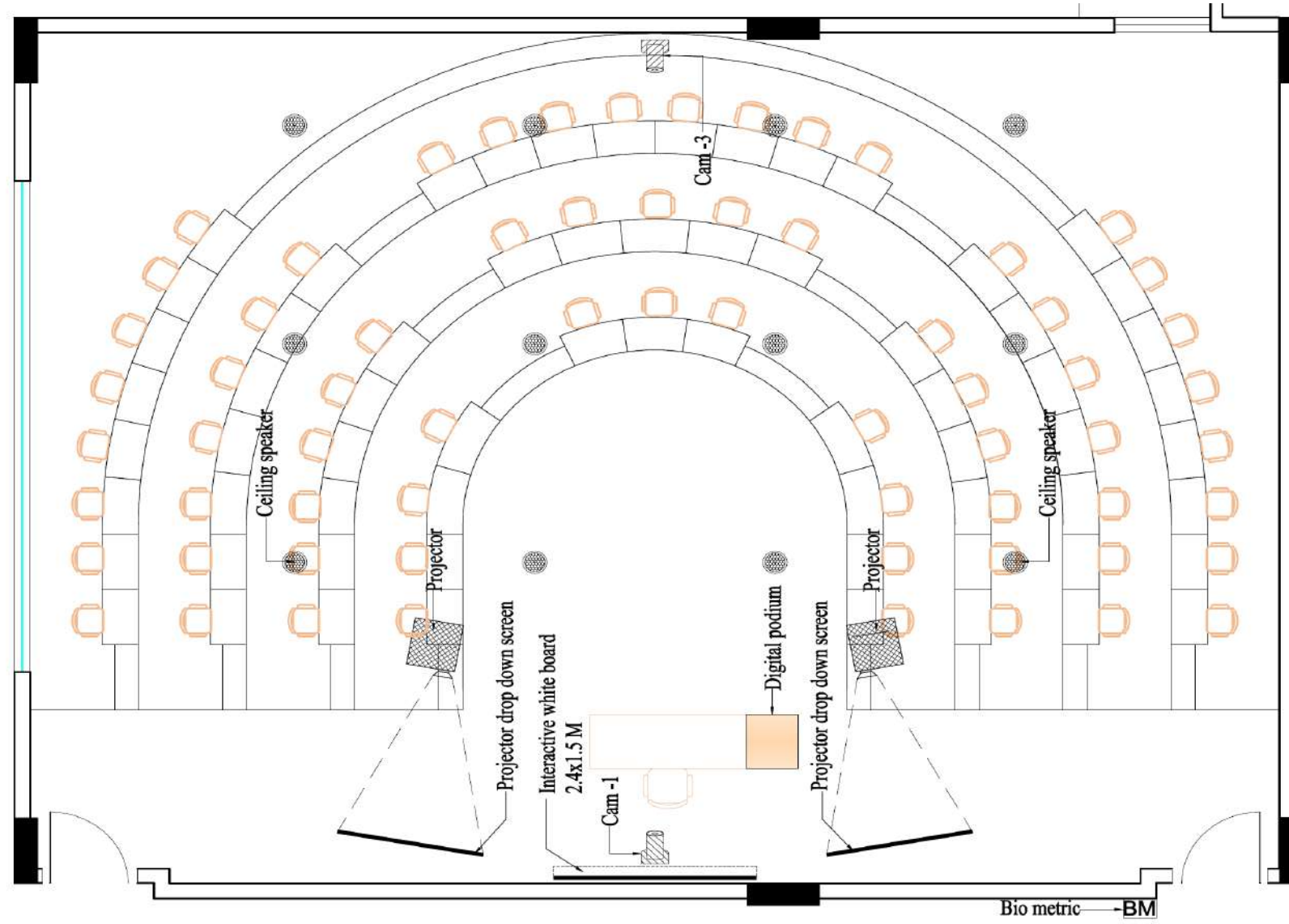
TENDER DRG



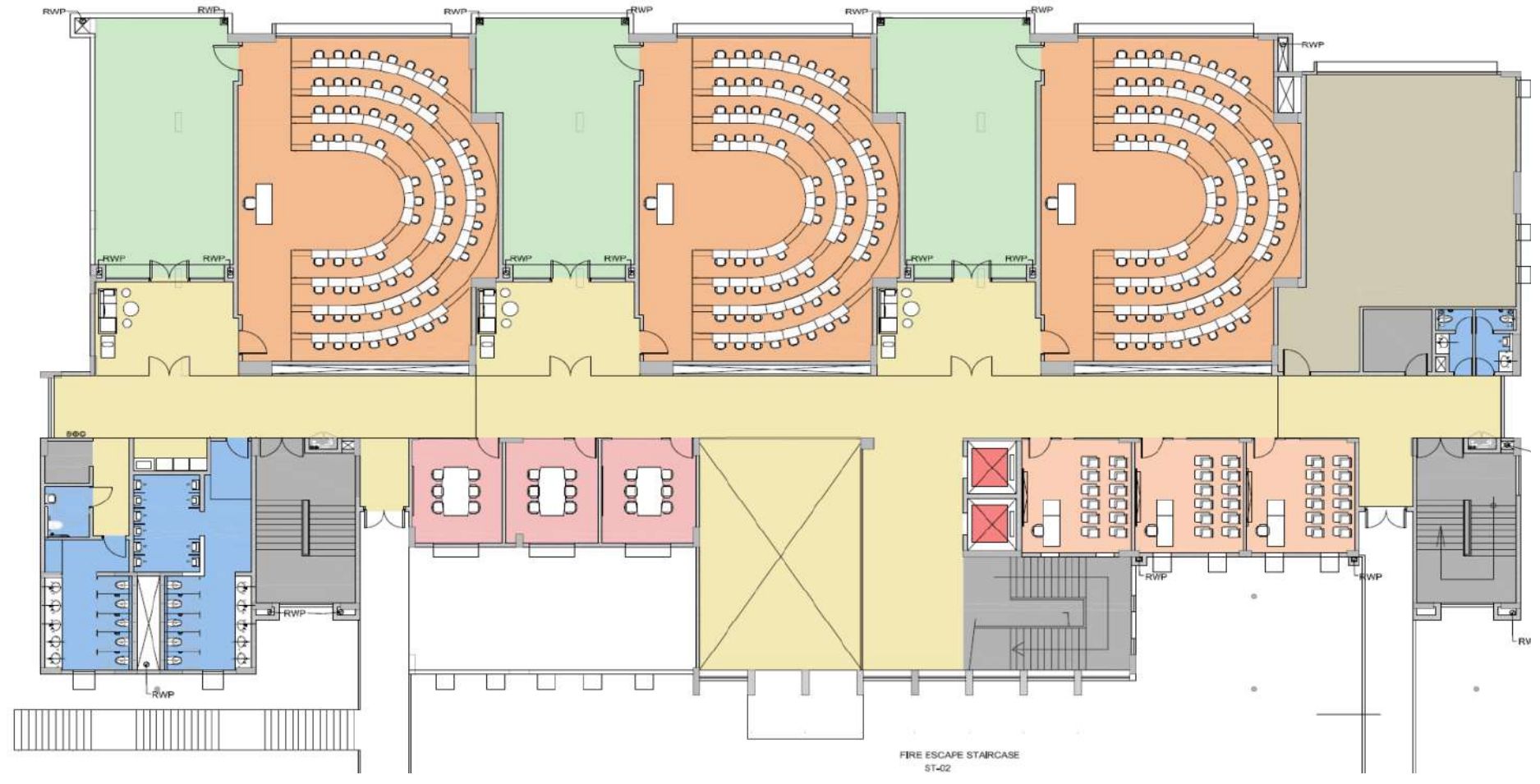
TENDER DRG



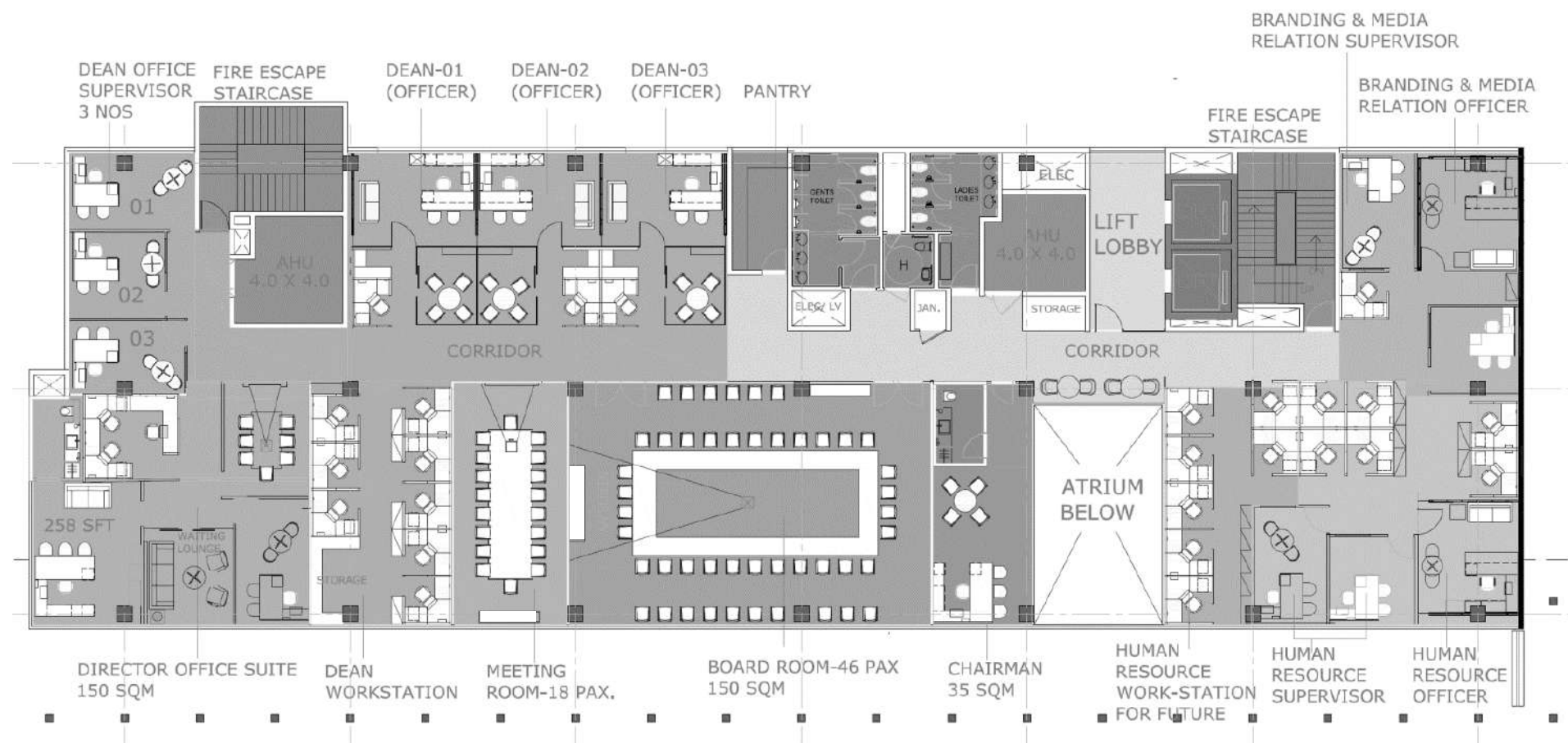
TENDER DRG 84 SEATER



TENDER DRG 50 SEATER



TENDER DRG TYPICAL CLASSROOM LAYOUT



TENDER DRG TYPICAL ADMIN BLOCK LAYOUT