

**INDIAN INSTITUTE OF TECHNOLOGY INDORE**  
**KHANDWA ROAD, SIMROL, INDORE 453552**  
**www.iiti.ac.in**



**TENDER**  
**FOR**

**SUPPLY, INSTALLATION, TESTING, COMMISSIONING &**  
**SAFETY CERTIFICATION OF PASSENGER LIFTS IN**  
**FACULTY HOUSING BUILDINGS AT**  
**IIT INDORE**

Tender No. IITI/ES/PR/NIT/E/FH07/L/2017-18/01

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**INDIAN INSTITUTE OF TECHNOLOGY INDORE**  
**SIMROL, KHANDWA ROAD, INDORE 453 552 (M.P.), India**

**Detailed Notice Inviting Tender**

**Tender No.** IITI/ES/PR/ NIT/E/ FH07/L/2017-18/01

The Project In Charge, IIT Indore invites sealed tender of under mentioned work from the following:

I) Original Equipment Manufacturer (OEM) of companies listed in item -2(i) below

OR

The tenderer should be authorized channel partner/ authorized dealer being authorized by OEM (listed in item – 2(i) below).

II) Contractors who are in CPWD approved list in Group „A“ category for passenger Lifts and authorized by companies listed in item -2 (i) below

Fulfilling the pre-qualification criteria enumerated below for the given work and Tender will be received at the office of **“The Project In Charge, INDIAN INSTITUTE OF TECHNOLOGY INDORE, SIMROL, KHANDWA ROAD, INDORE 453 552 (M.P.), India” up to 03.00 P.M. of April 17, 2017.** Envelope 1 will be opened at 3:30 PM on the same day.

**The tender shall be submitted in 2 different envelopes:**

**Envelope No. 1:** Envelope 1 should consists of two sealed envelope in which one should have EMD & Tender processing fee and other should contain Pre-qualification document and techno commercial details.

**Envelope No. 2:** Financial bid in the schedule of Quantity.

**Both Envelopes are then put up in a Big single envelope, which should be sealed & submitted.**

**Each envelope should be named and labeled clearly about the details.**

**2. (i) Only following manufacturer make are eligible for participation**

- (a) OTIS
- (b) KONE
- (c) Thyssen Krupp
- (d) Mitsubishi
- (e) Schindler
- (f) Johnson

**(ii) Bidder having service center in Indore shall only be qualified for opening of price bid (Details shall be provided)**

3. The work involves Design, Manufacture, Supply, Installation, Testing, Commissioning, Safety certification and Maintenance of 08 and 13 Passenger capacity Lift for IIT Indore as per the specifications laid down in the tender document.
4. Particulars of the work:

**Name of Work:** Supply, Installation, Testing, Commissioning & Safety Certification of Passenger Lifts in Faculty Housing building at IIT Indore.

<b>Estimated Cost</b>	<b>Rs. 99.50 Lakhs</b>
<b>Earnest Money</b>	<b>Rs. 1.99 Lakhs</b>
<b>Tender Processing fee:</b>	<b>Rs. 2,000/-</b>
<b>Completion Period</b>	<b>03 Months</b>

5. **The firms who are not approved in CPWD in appropriate class for lifts of Group „A“ category works will have to fulfill the following pre-qualification criteria:**

“The intending Tenderer should have completed satisfactorily at least 2 (two) similar passenger lift works, in their own name each costing not less than Rs. 15 Lakhs each in the last 07 years”.

Completion certificates issued by the Officer of the Client department of the rank of Executive Engineer or equivalent will have to be furnished along with the application. The Completion Certificate must clearly indicate:

- a) The date of completion of work
  - b) Nature of work
  - c) That the work has been completed satisfactorily.
6. Tender documents will also be issued on any working day during office hour within the last date of issue of Tender on payment of (non-refundable) demand draft/ banker’s cheque of Rs. 2,000/- in favour of “Registrar, IIT Indore” payable at Indore towards the cost of tender document. Tender paper may **also** be downloaded from the Institute’s website <http://www.iiti.ac.in/tender.php> .In such case; the cost of tender paper should be submitted along with the tender. The earnest money & tender cost shall be deposited along with the tender in the form of demand draft or banker’s cheque in favour of “Registrar, IIT Indore” payable at Indore.
  7. The bidders within 3 (three) days of receipt / downloading of Bidding Document, shall acknowledge the receipt / downloading of the same and confirm his intention to bid for the tendered work through Acknowledgement-cum-consent letter. Bidder also must intimate their intention of not quoting if they are not submitting their Bid within 4 days of receipt/ downloading of the Bidding Document positively. The Acknowledgement-

cum-consent letter may be sent by e-mail to: Project In Charge, IIT Indore e-mail: [pic@iiti.ac.in](mailto:pic@iiti.ac.in). It may be noted that clarification / corrigendum, if any shall only be communicated to the tenderers who submit acknowledgement-cum-consent letter besides uploading the same on the institute website.

8. The issue of tender paper to a contractor / Manufacturers does not automatically mean that the tenderer is considered qualified for the price part of the bid. Qualifying criteria stated in item – 1 are for participation / issue of tender document only. Technical bids of the tenders which fulfill the above qualifying criteria and which encloses all required documents and deposits (EMD & Cost of tender document) as specified in the tender document shall be considered for technical evaluation as per procedures and norms laid down in the tender document.
9. The application along with the enclosures shall be submitted in a sealed envelope which shall be superscripted **Tender for the work of "Supply, Installation, Testing, Commissioning & Safety Certification of Passenger Lifts in Faculty Housing Buildings at IIT Indore"** due on April 17, 2017.
10. The tenders shall be received at the office of **"The Project In Charge, INDIAN INSTITUTE OF TECHNOLOGY INDORE, SIMROL, KHANDWA ROAD, INDORE 453552 (M.P.), India" up to 03.00 P.M. of April 17, 2017.**
11. The IIT Indore reserves the right to reject or accept any tender application without assigning any reason.
12. Tender document can be downloaded from April 7, 2017 to April 17, 2017 Up to 02:00 P.M. from the official website of IIT Indore: <http://www.iiti.ac.in/tender.php>. The Banker's Cheque / Demand Draft / Fixed Deposit Receipt (FDR) for EMD of Rs. 1.99 Lakhs and tender fee of Rs. 2,000/- (Non Refundable) shall be submitted along with the bid. This submission is mandatory, accordingly offer of those shall be opened whose EMD and tender fees is received.
13. Bidder has to submit the Entire technical Bid in hard copy which includes the Pre-qualification documents mandatory to qualify in separate envelop on or before the submission date and time.
14. **Pre – bid meeting (along with site visit) would be held for this tender on April 12, 2017 at 02:30 PM** in Estate office, PoD PHY2 building, IIT Indore, Simrol, Khandwa Road, Indore 453 552. However if there are any queries regarding to this tender, the bidder should e-mail his queries on the given mail id [pic@iiti.ac.in](mailto:pic@iiti.ac.in) for the same upto 11:00 am of April 12, 2017.

- 15.** IIT Indore reserves the right to modify the tender condition, if needed to be and which will form a part of tender. Information regarding any changes / corrigendum will be given to all applicants through e-mail address available with IIT Indore & will also be uploaded on institute website.
- 16.** Bids invited are as per two-envelope system. Firms / Bidders are requested to submit technical and financial bid in two separate sealed envelope simultaneously, one containing the Technical Proposal along with the EMD & Tender fee and the other containing the Price Proposal. Both Envelopes are then put up in a Big single envelope, which should be sealed & submitted.
- 17.** Short listing will be made on the basis of statement of qualification and experience in handling similar nature and size of work as per Pre-qualification requirements.
- 18.** The employer shall not be responsible for any costs or expenses incurred by the bidders in connection with the preparation and delivery of bids, including costs and expenses related to visits to the sites etc.
- 19.** Technical Proposal not containing the EMD and Tender processing fee will be out-rightly rejected.
- 20.** Qualification requirements specifying financial capacity, technical, minimum acceptable levels with regards to Bidders experience in relevant work and other related factors such as work on hand, other commitments on that time frame and litigation history as given and described will be evaluated first and those qualification criteria will be considered for further evaluation. Technical Proposal, which is not considered substantially responsive, will be rejected. The short listed bidders' Price bids shall be opened on subsequent date for further evaluation in the presence of the Bidders who choose to attend the opening, which will be appraised on the day of technical bid opening.

# Commercial and Additional Conditions

## 1.0 General

- 1.1 This specification covers manufacture, testing as may be necessary before dispatch, deliver at site, all preparatory work, assembly and installation, commissioning putting into operation of passenger lift.
- 1.2 Location  
  
The passenger lift will be installed at Faculty Housing building at IIT Indore.
- 1.3 The work shall be executed as per CPWD general specifications for electrical works (Part-III Lifts & Escalators-2003) as per relevant IS and as per directions of Engineer-in-Charge. These additional specifications are to be read in conjunction with above and in case of variations; specifications given in this Additional Conditions shall apply. However, nothing extra shall be paid on account of these additional specifications & conditions as the same are to be read along with schedule of quantities for the work.
- 1.4 The Tenderer should in his own interest visit the site and familiarize himself with the site conditions before tendering.
- 1.5 No T&P shall be issued by the IIT Indore and nothing extra shall be paid on account of this.

## 2.0 Commercial Conditions

### 2.1 Type of Contract:

The work to be awarded by this tender shall be treated as indivisible works contract.

### 2.2 Submission and opening of Tenders:

2.2.1 The tender is in two parts:

- A) Part-I – Technical Cum Commercial Bid**
- B) Part-II – Price Bid**

#### 2.2.2 The tender shall be submitted in 2 different envelopes:

**Envelope No. 1:** Envelope 1 should consists of two sealed envelope in which one should have EMD & tender processing fee and other should contain Pre-qualification document and techno commercial details.

**Envelope No. 2:** Financial bid in the BOQ schedule.

- 2.2.3 The Tenderers are advised not to deviate from the technical specifications/ items, commercial terms and conditions of NIT like terms of payment, guarantee, arbitration clauses, escalation etc.
- 2.2.4 Qualification requirements specifying financial capacity, technical, minimum acceptable levels with regards to Bidders experience in relevant work and other related factors such as work on hand, other commitments on that time frame and litigation history as given and described will be evaluated first and those qualification criteria will be considered for further evaluation. Technical Proposal, which is not considered substantially responsive, will be rejected. The short listed bidders' Price bids shall be opened on subsequent date for further evaluation in the presence of the Bidders who choose to attend the opening, which will be appraised on the day of technical bid opening.
- 2.2.5 Employer reserves the right to alter the mode of selection, accept or reject any or all bids without assigning any reason thereof.
- 2.2.6 Necessary clarification required by the IIT Indore shall have to be furnished by the Tenderer within the time given by the IIT Indore for the same. The Tenderer will have to depute his representative to discuss with the officer(s) of the IIT Indore as and when so desired. In case, in the opinion of the IIT Indore a Tenderer is taking undue long time in furnishing the desired clarifications, his bid will be rejected without making any reference.
- 2.2.7 The Employer will open Bids of all the bidders in the presence of Bidders representatives who choose to attend the opening in the office of the Project In Charge, IIT Indore.
- 2.2.8 The Tenderer will have to fill up their rates only in the price bid (Part-II of tender). Tenders in whom the price bids are given in any other format are liable to be rejected.
- 2.2.9 In the price bid, there shall be NO conditions whatsoever. In case any tenderer mentions any condition including conditional rebates in their price part, tender shall be rejected forthwith.

A tenderer will also not be allowed to withdraw or modify any condition at a time after the technical bids have been accepted and the decision to open the price bid has been taken by the IIT Indore.

- 2.2.10** The IIT Indore reserves the right to reject any or all the price bids and call for fresh prices/ tenders as the case may be without assigning any reason.

**2.2.11 Shop drawings;**

The Contractor shall submit GA drawings of Lift System to Engineer-in-Charge for approval before commencement of work at site/fabrication/ manufacture. Shop drawings made on AutoCAD and colored prints, coordinated with other works, shall incorporate elevator manufacturer details and dimensions to ensure that same can be installed in space provided. Facilities for proper maintenance repair and



replacement of the equipment shall be clearly shown in the drawings. The coordinator shall also ascertain that facilities provided by other agencies in the form of space, access, lighting, ventilation and the like proposed / provided are adequate. The shop drawing shall be got approved from the Engineer-in-charge before undertaking manufacturing / fabrication / installation activities. AutoCAD drawing (soft copy) shall be provided to Institute Engineers.

### **3.0 Terms of Payment:**

Payments shall be released as per General Conditions of contract and the following conditions. All interim payments shall have deductions towards advances and other contract conditions.

- 70 %** of the value indicated against each item of work shall be made after delivery at site in good condition on pro-rata basis subject to deductions to be made against advances and security deposit.
- 20 %** of the value indicated against each item of the work shall be made after installation of the equipments and accessories at site in good condition and on giving successful trial run at site.
- 10%** on completion of testing, commissioning statutory approval and handing over to the IIT Indore for beneficiary use.
- The selected bidder has to deposit the security deposit also. The security deposit shall be collected by deductions from the running bill of the contractors a sum @ 2.5% of the gross amount of the bill and shall be deducted from each running bill as well as final bill of the contractor. Such deductions shall be made unless the contractor has deposited the amount of security at the rate mentioned in Government securities or Fixed Deposit Receipts. This is in addition to the performance guarantee that the contractor is required to deposit.

### **4.0 Rates:**

4.1 Subject to the nomenclature of the item as per schedule of quantities, the specification indicated in the tender documents, the rates quoted shall include all taxes (including works contract taxes), duties and levies and all charges for packing forwarding, insurance, freight and delivery, installation, testing, commissioning at site, cost of all materials including royalty and taxes if any, labor, sundry inputs, execution of work at all heights, levels, pattern and design for all leads, lifts and depths including overhead charges and contractor's profit. Nothing extra shall be paid on this account.

4.2 The contractor has to carry out routine & preventive maintenance for 12 months (Defect liabilities period) from the date of handing over. Nothing extra shall be paid.

### **5.0 Completeness of tender:**

All sundry equipment, fittings, units assemblies, accessories, hardware items, foundation bolts, termination lugs for electrical connections, and all other items which are useful and necessary for efficient assembly and installation of equipment and components of the work shall be deemed to have been included in the tender irrespectively of the whether such items are specifically mentioned in the tender document or not.

- 6.0 For items/equipments requiring initial inspection at manufacturer's work's the contractor will intimate the date of testing of equipment at the manufacturer's works before dispatch. The IIT Indore also reserves the right to inspect the fabrication job at factory and the successful tenderer has to make the arrangement for the same. The successful tenderer shall give sufficient advance notice regarding the dates proposed for such tests/ inspection to the IIT Indore's representative (s) to facilities his presence during testing/ fabrication. The Engineer-in-Charge at his discretion may witness such testing/ fabrication. The cost of the Engineer's visit to the factory will be borne by the IIT Indore. Also equipment may be inspected at the manufacturer's premises, before dispatch to the site by the contractor.
- 7.0 The lift machine room (if available) may be used for storage of sundry material and erection equipments if available or else the agency has to make his own arrangement. No separate storage accommodation shall be provided by the IIT Indore. Watch and ward of the stores and their safe custody shall be the responsibility of the contractor till the final taking over of the installation by the IIT Indore.

### **8.0 Completion Period:**

The completion period of 03 (Three) months indicated in the tender document is for the entire work of planning, designing, supplying, installation, testing, commissioning and handing over of the entire system to the satisfaction of the Engineer-in-Charge.

### **9.0 Performance Guarantee:**

The successful tenderer, after award of work will be referred to as the contractor, shall deposit an amount equal to 5% of the tendered and accepted value of the work (without limit) as performance guarantee in one of the following forms:

- (i) Government securities.
- (ii) Fixed Deposit Receipt (FDR) of a Scheduled Bank.
- (iii) An irrevocable bank guarantee bond of any scheduled bank or the State Bank of India in the prescribed form given in Annexure within a period ranging of 10 days of issue of the letter of acceptance. This period can be further extended at the written request of the contractor by the Engineer-in-charge for a maximum period of 15 days with late fee @ 0.1% per day, of performance guarantee amount. The letter for commencement of work shall be issued to the contractor only after he/she submits the performance guarantee in an acceptable form.

### **10.0 Guarantee:**

All equipments shall be guaranteed for a period of 12 months from the date of taking over the lift by the institute against unsatisfactory performance and/or break down due to defective design, workmanship of material. The equipments or components, or any part thereof, so found defective during guarantee period shall be forthwith repaired or replaced free of cost, to the satisfaction of the Engineer-in-Charge. In case it is felt by the institute that undue delay is being caused by the contractor in doing this, the same will be got done by the institute at the risk and cost of the contractor. The decision of the Engineer-in Charge in this regard shall be final.

#### **11.0 Power Supply:**

Electric service connection of 415V, 3 Phase, 4 wires, 50 Hz, AC supply shall be provided by the institute for installation purpose free of charge.

#### **13.0 Data Manual and Drawings to be furnished by the Tenderers:**

13.1 **With Tender:** The tenderer shall furnish along with the tender, detailed technical literature, pamphlets and performance data for appraisal and evaluation of the offer.

13.2 **After Award of work:** The successful tenderer would be required to submit the following drawings within 10 days of award of the work for approval before commencement of installation.

- a) Interior design of the Car Enclosure & Car doors for institute approval.
- b) All general arrangement drawings.
- c) Details of foundations for the equipment, load data, location etc. of various assembled equipments as may be needed generally by other agencies for purpose of their work.

The data will include breaking load on guides, reaction of buffers on lift

pits reaction on support points in machine room, lift well etc.

- c) Complete layout dimensions for every unit/group of units with dimensions required for erection purpose.
- d) Any other drawings/information not specified above but deemed to be necessary for the job by the contractor.

#### **14.0 Completion documents**

The contractors shall submit following documents

- a. Three sets of operation and maintenance manual with support drawings after completion of work.
- b. 3 sets of routine and type test certificates of the equipments carried out at the manufacturers premises and pre-commissioning tests carried out at site.
- c. 3 sets of as built "Completion" drawings.

## **15.0 Extent of work:**

15.1 The work shall comprise of entire labor including supervision and all materials necessary to make a complete installation and such tests and adjustments and commissioning as may be required by the institute. The term complete installation shall not only mean major items of the plant and equipments covered by specifications but all incidental sundry components necessary for complete execution and satisfactory performance of installation with all layout charts whether or not those have been mentioned in details in the tender document in connation with this contract.

15.2 Minor building works necessary for installation of equipment, foundation, making of opening in walls or in floors and restoring to their original condition, finish and necessary grouting etc. as required.

15.3 Maintenance (Routine & preventive) for One year from date of completion and handing over.

15.4 The work is turn key project. Any item required for completion of the project (like ELCB/RCCB/Isolators/MCBs/Fuses and any other items) but left-in-advertantly shall be executed with-in the quoted rates.

**16.0** After completion of the work in all respect the contractor shall offer the installation for testing and operation.

## **17.0 Validity**

The bid shall remain valid for a period not less than Ninety (90) days after the deadline for submission of bid.

## **18.0 COMPLIANCE WITH REGULATIONS AND INDIAN STANDARDS**

18.1 All works shall be carried out in accordance with relevant regulation, both statutory and those specified by the Indian Standards related to the works covered by these specifications. In particular, the equipment and installation will comply with the following:

- (i) Factories Act.
- (ii) Indian Electricity Rules
- (iii) I.S.& BS Standards as applicable
- (iv) Workmen's compensation Act
- (v) Statutory norms prescribed by local bodies like MPPKVV Co. Ltd, Electrical Inspectorate & safety IIT Indore, Government of M.P.
- vi) Any other statutory approvals/norms as required

18.2 Nothing in this specification shall be construed to relieve the successful tenderer of his responsibility for the design, manufacture and installation of the equipment with all accessories in accordance with currently applicable statutory regulations and safety codes.

- 18.3 Successful tenderer shall arrange for compliance with statutory provisions of safety regulations and owners requirements of safety codes in respect of labour employed on the work by the tenderer.

#### **STATUTORY APPROVALS;**

The Contractor shall submit required applications, drawings, etc., to the corporation, lift inspector, electrical inspector, factory inspector and/or any other statutory authority and obtain their approval, licenses and/or sanctions.

Obtaining approval from Lift inspector and NOC from M.P. Fire Service for satisfactory installation of the lift system as also for clearance to put the lift into regular use.

Obtaining any other statutory permission/clearance/approval from concerned authority as required.

Pay any licensing fee/submission fee/inspection fee payable to statutory authorities for obtaining above approvals.

Final completion certificate (certificate in name of IIT Indore) shall be obtained by the Contractor from all statutory authorities to enable the lifts to be commissioned for utilization.

The work shall not be deemed to have been completed until the above approval, certificates, etc., have been obtained by the Contractor.

No extra shall be paid for this.

#### **19.0 INDEMNITY**

The successful tenderer/bidder shall at all times indemnify the IIT Indore, consequent on this works contract. The successful tenderer/bidder shall be liable, in accordance with the Indian Law and Regulations for any accident occurring due to any cause and the IIT Indore shall not be responsible for any accident or damage incurred or claims arising there from during the period of erection, construction and putting into operation the equipments and ancillary equipment under the supervision of the successful tenderer/bidder in so far as the latter is responsible. The successful tenderer/bidder shall also provide all insurance including third party insurance as may be necessary to cover the risk. No extra payment would be made to the successful tenderer/bidder due to the above

#### **20.0 Coordination with other agencies**

The elevator Contractor shall be responsible to coordinate the work of elevator installation with other agencies working at site. The elevator Contractor shall have to carry out changes / modifications, if any, required due to lack of coordination with other agencies at his cost.

#### **21.0 Mobilization advance:**

No mobilization advance shall be paid for this work.

## **22.0 Insurance and storage:**

All consignments are to be duly insured upto the destination from warehouse to site of work at the cost of the suppliers. The insurance covers shall be valid till the equipment is handed over duly installed, tested and commissioned.

## **23.0 Verification of correctness of equipment at destination**

The contractor shall have to produce all the relevant records to certify that the genuine equipment from the manufacturers has been supplied and erected.

## **24.0 Painting:**

This shall include cost of painting of entire exposed iron work complete in the installation. All equipment works shall be painted at the works before dispatch to the site.

## **25.0 Training:**

The scope of works includes on job technical training of two persons at site. Nothing extra shall be payable on this account.

## **26.0 Maintenance:**

26.1 Sufficient trained and experienced staff shall be made available to meet any exigency of work during the guarantee period of one year from the handing over of the installation.

26.2 The maintenance routine as well as preventive maintenance for one year from the date of taking over the installation as per manufacturers recommendation shall be carried out and the record of the same shall have to be maintained.

## **27.0 Interpreting specifications**

In interpreting the specifications, the following order of decreasing importance shall be followed in case of contradictions:

- a) Schedule of Quantity
- b) Technical specifications
- c) Drawings (if any)
- d) General Specifications
- e) Relevant IS or other international codes in case IS code is not available.

28.0 A separate supplementary agreement shall be made with the successful tenderer for Comprehensive Maintenance for 5 years after guarantee period of 1 year. The payment for comprehensive maintenance shall be made quarterly after the end of each quarter.

## Qualification Data Sheets to be filled up by the Tenderers/ Bidders

Sl. no.	Information	Format of submission
1	Obligation / Compliance To Be Insured By Contractor	Annexure- „A“
2	Tax	Annexure- „B“
3	Indemnity by contractor	Annexure- „C“
4	Joint Venture Details (if applicable)	Annexure- „D“
5	Certificate in prescribed format	Annexure- „E“
6	Letter of Transmittal	Annexure- „F“

**Note:**

- 1 If necessary, additional sheets may be added to the forms.
2. Some of the forms will require attachments. Such attachments should be clearly marked as follows: Attachment I to Form # Attachment 2 to Form #. Etc.

## Annexure- "A"

### Obligation/Compliance to be insured by Contractor

Sr. No.	Items	Compliance of Contractor to be filled by Contractor	
		YES	NO
1	Registration		
2	Compliance of provisions of Child Labour Act, and Workmen compensation Act		
3	To ensure treatment in case of accident / injuries suffered in Performance of work including wages and compensation under WC Act.		
4	Send accident report to Regional Labour Commissioner (RLC)		

## Annexure – „B“

### Tax

Attach copy of minimum last three years tax returns details



**Annexure- „C“**

**INDEMNITY (To be filled by Contractor)**

I on behalf of M/s ..... hereby agree and undertake that I have understood all the safety rules and procedures and all staff working on behalf of M/s

..... will abide by all safety rules and procedures. I declare that I M/s ..... will be responsible for any safety violations/ accident etc. IIT Indore will not be responsible in case of any accident / incident and will not compensate financially or otherwise.

I hereby declare that I am sole responsible on behalf of M/s.....  
..... for giving such declaration.

-----  
Name of Indemnifier

-----  
Signature of Indemnifier

Stamp/Seal of the Indemnifier /Contractor

## Annexure- „D“

### Joint Venture Details (If applicable)

A copy of the joint venture agreement must be attached to Form. In case the joint venture agreement is not acceptable to IIT, the joint venture may be requested to modify the agreement accordingly. Failure to submit a modified Joint venture agreement within three days upon receipt by the applicant of the request for modification will disqualify the applicant for further consideration.

<b>Names of all partner of a joint venture</b>	<b>Name of firm</b>	<b>Financial stake of a firm (In percentage)</b>
1 Lead partner		
2 Partner		

3 Partner

Joint Venture Details (to be continued) Enclosure to be attached with Joint Venture Agreement

<b>Name and address of JV</b>	<b>Role and Responsibilities (Specify in details)</b>	<b>Financial stake in percentage</b>

**SIGNED ON BEHALF OF:**

(Name of Lead Partner)

(Name of Joint Venture Consortium Member)

**CONSTITUTED ATTORNEY**

**CONSTITUTED ATTORNEY**

**Annexure- „E“**

**CERTIFICATE**

**(to be provided on letter head of the firm)**

I hereby certify that the above firm has not been ever blacklisted by any Central/State Government/Public Undertaking/Institute on any account.

I also certify that the above information is true and correct. In every respect and in any case at a later date, if it is found that any details provided above are incorrect, any contract given to the above firm may be summarily terminated and the firm blacklisted.

Date:

Place:

Signature of Contractor

**Annexure- „F“**

**Letter of Transmittal**

**(To be provided on letterhead of the firm)**

From:

\_\_\_\_\_  
\_\_\_\_\_

To:

The Project In Charge, IIT Indore  
Simrol, Khandwa Road,

Indore – 453 556 (M.P.)

**Subject:** Submission of bids for the work of "Supply, Installation, Testing, Commissioning & Safety Certification of Passenger Lifts in Faculty Housing Buildings at IIT Indore."

Sir,

Having examined the details given in press notice and bid document for the above work, I/we hereby submit the relevant information.

1. I/we hereby certify that all the statement made and information supplied in the tender document and accompanying statement are true and correct.
2. I/we have furnished all information and details necessary for eligibility and have no further pertinent information to supply.
3. I/we submit the requisite certified solvency certificate and authorize the IIT Indore authorities to approach the Bank issuing the solvency certificate to confirm the correctness thereof. I/we also authorize IIT Indore authorities to approach individuals, employers, firms and corporation to verify our competence and general reputation.
4. I/we submit the following certificates in support of our suitability, technical knowledge and capability for having successfully completed the following works:

Name of work

Certificate from

**Enclosures: Duly filled form "A" to "G"**

Seal of bidder

Date of submission:

Signature(s) of Bidder(s).

## FORM „A“

### Financial Information

I. Financial Analysis – Details to be furnished duly supported by figures in balance sheet/ profit & loss account for the last five years duly certified by the Chartered Accountant, as submitted by the applicant to the Income Tax IIT Indore (Copies to be attached).

#### Years

2012-13	2013-14	2014-15	2015-16	2016-17
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(i) Gross Annual turnover.

(ii) Profit/Loss.

II. Financial arrangements for carrying out the proposed work.

III. Solvency Certificate from Bankers of the bidder in the prescribed Form "B".

Signature of Chartered Accountant with Seal

Signature of Bidder(s).

## FORM „B“

### Form of Banker's Certificate from a scheduled bank

This is to certify that to the best of our knowledge and information that

M/s./Shri.....having marginally noted address, a customer of our bank are/is respectable and can be treated as good for any engagement upto a limit of Rs.....

(Rupees.....)

This certificate is issued without any guarantee or responsibility on the bank or any of the officers.

(Signature) For the Bank

NOTE (1) Bankers certificates should be on letter head of the Bank, sealed in cover addressed to tendering authority.

(2) In case of partnership firm, certificate should include names of all partners as recorded with the Bank.

## FORM „C“

**Details of all works of similar class completed during the last Seven Years ending last day of the month.....**

Sl.No.	Name of work/project and location	Owner or sponsoring organization	Cost of work (In Rs.)	Date of commencement as per contract	Stipulated date of completion	Actual date of completion	Litigation/arbitration cases pending/in progress with details*	Name and address/ telephone of the officers to whom reference may be made	Remarks
1	2	3	4	5	6	7	8	9	10

\* Indicate gross amount claimed and amount awarded by the Arbitrator.

Signature of Bidder(s)

**FORM „D“**  
**Projects under execution or awarded**

Sl.No.	Name of work/ project and location	Owner or sponsoring organization	Cost of work (In Rs.)	Date of commencement as per contract	Stipulated date of completion	Upto date percentage progress of work	Slow progress if any and reason thereof	Name and address/ telephone of the officers to whom reference may be made	Remarks
1	2	3	4	5	6	7	8	9	10

Certified that the above list of works is complete and no work has been left out and that the information given is correct to my knowledge and belief.

Signature of Bidder(s)



## FORM „E“

### Performance report of works referred to in Form “B” & „C”

1. Name of work/project & location
2. Agreement no.
3. Estimated cost
4. Tendered cost
5. Date of start
6. Date of completion
7. Stipulated date of completion
8. Actual date of completion
9. Amount of compensation levied for delayed completion, if any
10. Amount of reduced rate items, if any
11. Performance Report

(1) Quality of work	Very Good/Good/Fair/Poor
(2) Financial soundness	Very Good/Good/Fair/Poor
(3) Technical Proficiency	Very Good/Good/Fair/Poor
(4) Resourcefulness	Very Good/Good/Fair/Poor
(5) General Behaviour	Very Good/Good/Fair/Poor

Dated:

Executive Engineer or Equivalent

## FORM "F"

### STRUCTURE & ORGANISATION

1. Name & address of the bidder:
2. Telephone no. & E-mail address:
3. Legal status of the bidder (attach copies of original document defining the legal status)
  - (a) An Individual
  - (b) A proprietary firm
  - (c) A firm in partnership
  - (d) A limited company or Corporation
4. Particulars of registration with various Government Bodies (attach attested photocopy)  
Organization/Place of registration No.
  - 1.
  - 2.
  - 3.
5. Names and titles of Directors & Officers with designation to be concerned with this work.
6. Designation of individuals authorized to act for the organization
7. Was the bidder ever required to suspend construction for a period of more than six months continuously after he commenced the construction? If so, give the name of the project and reasons of suspension of work.
8. Has the bidder, or any constituent partner in case of partnership firm, ever abandoned the awarded work before its completion? If so, give name of the project and reasons for abandonment.
9. Has the bidder, or any constituent partner in case of partnership firm, ever been debarred/black listed for tendering in any organization at any time? If so, give details.
10. Has the bidder, or any constituent partner in case of partnership firm, ever been convicted by the court of law? If so, give details.
11. In which field of Electrical Engineering construction the bidder has specialization and interest?
12. Any other information considered necessary but not included above.

Signature of Bidder(s)

**FORM „G“**

**Details of technical & Administrative personnel to be employed for the work**

Sl No.	Designation	Total number	Number available for this work	Name	Qualifications	Professional experience and details of work carried out	How this would be involved in this work	Remarks
1	2	3	4	5	6	7	8	9

Signature of Bidder(s)

# GENERAL CONDITION OF CONTRACT

## CLAUSES OF CONTRACT

### CLAUSE 1

- (i) The contractor shall submit an irrevocable Performance Guarantee of 5% (Five percent) of the tendered amount in addition to other deposits mentioned elsewhere in the contract for his proper performance of the contract agreement, (not withstanding and/or without prejudice to any other provisions in the contract) within period specified in Schedule „F“ from the date of issue of letter of acceptance. This period can be further extended by the Engineer-in-Charge up to a maximum period as specified in schedule „F“ on written request of the contractor stating the reason for delays in procuring the Performance Guarantee, to the satisfaction of the Engineer-in-Charge. This guarantee shall be in the form of Cash (in case guarantee amount is less than Rs. 10,000/-) or

Deposit at Call receipt of any scheduled bank/Banker“s Cheque of any scheduled bank/Demand Draft of any scheduled bank/Pay Order of any scheduled bank (in case guarantee amount is less than Rs. 1,00,000/-) or Government Securities or Fixed Deposit Receipts or Guarantee Bonds of any Scheduled Bank or the State Bank of India in accordance with the form annexed hereto. In case a fixed deposit receipt of any Bank is furnished by the contractor to the Government as part of the performance guarantee and the Bank is unable to make payment against the said fixed deposit receipt, the loss caused thereby shall fall on the contractor and the contractor shall forthwith on demand furnish additional security to the Government to make good the deficit.

- (ii) The Performance Guarantee shall be initially valid up to the stipulated date of completion plus 60 days beyond that. In case the time for completion of work gets enlarged, the contractor shall get the validity of Performance Guarantee extended to cover such enlarged time for completion of work. After recording of the completion certificate for the work by the competent authority, the performance guarantee shall be returned to the contractor, without any interest. However, in case of contracts involving maintenance of building and services/any other work after construction of same building and services/other work, then 50% of Performance Guarantee shall be retained as Security Deposit. The same shall be returned year wise proportionately.
- (iii) The Engineer-in-Charge shall not make a claim under the performance guarantee except for amounts to which the Director, IIT Indore is entitled under the contract (not withstanding and/or without prejudice to any other provisions in the contract agreement) in the event of:
- a. Failure by the contractor to extend the validity of the Performance Guarantee as described herein above, in which event the Engineer-in-Charge may claim the full amount of the Performance Guarantee.

- b. Failure by the contractor to pay Director, IIT Indore any amount due, either as agreed by the contractor or determined under any of the Clauses/Conditions of the agreement, within 30 days of the service of notice to this effect by Engineer-in-Charge.
- (iv) In the event of the contract being determined or rescinded under provision of any of the Clause/Condition of the agreement, the performance guarantee shall stand forfeited in full and shall be absolutely at the disposal of the Director, IIT Indore.

**(v) CLAUSE 1 A  
Recovery of Security Deposit**

The person/persons whose tender(s) may be accepted (hereinafter called the contractor) shall permit Government at the time of making any payment to him for work done under the contract to deduct a sum at the rate of 2.5% of the gross amount of each running and final bill till the sum deducted will amount to security deposit of 2.5% of the tendered value of the work. Such deductions will be made and held by Government by way of Security Deposit unless he/they has/have deposited the amount of Security at the rate mentioned above in cash or in the form of Government Securities or fixed deposit receipts. In case a fixed deposit receipt of any Bank is furnished by the contractor to the Government as part of the security deposit and the Bank is unable to make payment against the said fixed deposit receipt, the loss caused thereby shall fall on the contractor and the contractor shall forthwith on demand furnish additional security to the Government to make good the deficit.

All compensations or the other sums of money payable by the contractor under the terms of this contract may be deducted from, or paid by the sale of a sufficient part of his security deposit or from the interest arising therefrom, or from any sums which may be due to or may become due to the contractor by Government on any account whatsoever and in the event of his Security Deposit being reduced by reason of any such deductions or sale as aforesaid, the contractor shall within 10 days make good in cash or fixed deposit receipt tendered by the State Bank of India or by Scheduled Banks or Government Securities (if deposited for more than 12 months) endorsed in favour of the Engineer-in-Charge, any sum or sums which may have been deducted from, or raised by sale of his security deposit or any part thereof. The security deposit shall be collected from the running bills and the final bill of the contractor at the rates mentioned above.

The security deposit as deducted above can be released against bank guarantee issued by a scheduled bank, on its accumulations to a minimum of Rs. 5 lac subject to the condition that amount of such bank guarantee, except last one, shall not be less than Rs. 5 lac. Provided further that the validity of bank guarantee including the one given against the earnest money shall be in conformity with provisions contained in clause 17 which shall be extended from time to time depending upon extension of contract granted under provisions of clause 2 and clause 5.

In case of contracts involving maintenance of building and services/any other work after construction of same building and services/other work, then 50% of Performance Guarantee shall be retained as Security Deposit. The same shall be returned yearwise proportionately.

**Note-1:** Government papers tendered as security will be taken at 5% (five per cent) below its market price or at its face value, whichever is less. The market price of Government paper would be ascertained by the Executive Engineer at the time of collection of interest and the amount of interest to the extent of deficiency in value of the Government paper will be withheld if necessary.

**Note-2:** Government Securities will include all forms of Securities mentioned in Rule No. 274 of the G.F. Rules except fidelity bond. This will be subject to the observance of the condition mentioned under the rule against each form of security.

**Note-3:** Note 1 & 2 above shall be applicable for both clause 1 and 1A

## **CLAUSE 2**

### **Compensation for Delay**

If the contractor fails to maintain the required progress in terms of clause 5 or to complete the work and clear the site on or before the contract or extended date of completion, he shall, without prejudice to any other right or remedy available under the law to the Government on account of such breach, pay as agreed compensation the amount calculated at the rates stipulated below as the authority specified in schedule „F“ (whose decision in writing shall be final and binding) may decide on the amount of tendered value of the work for every completed day/month (as applicable) that the progress remains below that specified in Clause 5 or that the work remains incomplete.

This will also apply to items or group of items for which a separate period of completion has been specified.

- (i) Compensation @ 1.5 % per month of delay for delay of work to be computed on per day basis Provided always that the total amount of compensation for delay to be paid under this Condition shall not exceed 10% of the Tendered Value of work or of the Tendered Value of the item or group of items of work for which a separate period of completion is originally given.

The amount of compensation may be adjusted or set-off against any sum payable to the Contractor under this or any other contract with the Government. In case, the contractor does not achieve a particular milestone mentioned in schedule F, or the re-scheduled milestone(s) in terms of Clause 5.4, the amount shown against that milestone shall be withheld, to be adjusted against the compensation levied at the final grant of Extension of Time. With-holding of this amount on failure to achieve a milestone, shall be automatic without any notice to the contractor. However, if the contractor catches up with the progress of work on the subsequent milestone(s), the withheld amount shall be released. In case the contractor fails to make up for the delay in subsequent milestone(s), amount mentioned against each milestone missed subsequently also shall be withheld. However, no interest, whatsoever, shall be payable on such withheld amount.

## **CLAUSE 2A**

## **Incentive for early Completion-Deleted**

### **CLAUSE 3**

#### **When Contract can be Determined**

Subject to other provisions contained in this clause, the Engineer-in-Charge may, without prejudice to his any other rights or remedy against the contractor in respect of any delay, inferior workmanship, any claims for damages and/or any other provisions of this contract or otherwise, and whether the date of completion has or has not elapsed, by notice in writing absolutely determine the contract in any of the following cases:

- (i) If the contractor having been given by the Engineer-in-Charge a notice in writing to rectify, reconstruct or replace any defective work or that the work is being performed in an inefficient or otherwise improper or un-workman like manner shall omit to comply with the requirement of such notice for a period of seven days thereafter.
- (ii) If the contractor has, without reasonable cause, suspended the progress of the work or has failed to proceed with the work with due diligence so that in the opinion of the Engineer-in-Charge (which shall be final and binding) he will be unable to secure completion of the work by the date for completion and continues to do so after a notice in writing of seven days from the Engineer-in-Charge.
- (iii) If the contractor fails to complete the work within the stipulated date or items of work with individual date of completion, if any stipulated, on or before such date(s) of completion and does not complete them within the period specified in a notice given in writing in that behalf by the Engineer-in-Charge.
- (iv) If the contractor fails to complete the work within the stipulated date or items of work with individual date of completion, if any stipulated, on or before such date(s) of completion and does not complete them within the period specified in a notice given in writing in that behalf by the Engineer-in-Charge.
- (v) If the contractor persistently neglects to carry out his obligations under the contract and/ or commits default in complying with any of the terms and conditions of the contract and does not remedy it or take effective steps to remedy it within 7 days after a notice in writing is given to him in that behalf by the Engineer-in-Charge.
- (vi) If the contractor shall offer or give or agree to give to any person in Government service or to any other person on his behalf any gift or consideration of any kind as an inducement or reward for doing or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of this or any other contract for Government.
- (vii) If the contractor shall enter into a contract with Government in connection with which commission has been paid or agreed to be paid by him or to his knowledge, unless the particulars of any such commission and the terms of

payment thereof have been previously disclosed in writing to the Engineer-in-Charge.

- (viii) If the contractor had secured the contract with Government as a result of wrong tendering or other non-bonafide methods of competitive tendering or commits breach of Integrity Agreement.
- (ix) If the contractor being an individual, or if a firm, any partner thereof shall at any time be adjudged insolvent or have a receiving order or order for administration of his estate made against him or shall take any proceedings for liquidation or composition (other than a voluntary liquidation for the purpose of amalgamation or reconstruction) under any Insolvency Act for the time being in force or make any conveyance or assignment of his effects or composition or arrangement for the benefit of his creditors or purport so to do, or if any application be made under any Insolvency Act for the time being in force for the sequestration of his estate or if a trust deed be executed by him for benefit of his creditors.
- (x) If the contractor being a company shall pass a resolution or the court shall make an order that the company shall be wound up or if a receiver or a manager on behalf of a creditor shall be appointed or if circumstances shall arise which entitle the court or the creditor to appoint a receiver or a manager or which entitle the court to make a winding up order.
- (xi) If the contractor shall suffer an execution being levied on his goods and allow it to be continued for a period of 21 days.
- (xii) If the contractor assigns, transfers, sublets (engagement of labour on a piece-work basis or of labour with materials not to be incorporated in the work, shall not be deemed to be subletting) or otherwise parts with or attempts to assign, transfer, sublet or otherwise parts with the entire works or any portion thereof without the prior written approval of the Engineer -in-Charge.

When the contractor has made himself liable for action under any of the cases aforesaid, the Engineer-in-Charge on behalf of the Director, IIT Indore shall have powers:

- (a) To determine the contract as aforesaid (of which termination notice in writing to the contractor under the
- (b) hand of the Engineer-in-Charge shall be conclusive evidence). Upon such determination, the Security Deposit already recovered and Performance Guarantee under the contract shall be liable to be forfeited and shall be absolutely at the disposal of the Government
- (c) After giving notice to the contractor to measure up the work of the contractor and to take such whole, or the balance or part thereof, as shall be un-executed out of his hands and to give it to another contractor to complete the work. The contractor, whose contract is determined as above, shall not be allowed to participate in the tendering process for the balance work.



In the event of above courses being adopted by the Engineer-in-Charge, the contractor shall have no claim to compensation for any loss sustained by him by reasons of his having purchased or procured any materials or entered into any engagements or made any advances on account or with a view to the execution of the work or the performance of the contract. And in case action is taken under any of the provision aforesaid, the contractor shall not be entitled to recover or be paid any sum for any work thereof or actually performed under this contract unless and until the Engineer-in-Charge has certified in writing the performance of such work and the value payable in respect thereof and he shall only be entitled to be paid the value so certified.

### **CLAUSE 3A**

In case, the work cannot be started due to reasons not within the control of the contractor within 1/8th of the stipulated time for completion of work or one month whichever is higher, either party may close the contract. In case contractor wants to close the contract, he shall give notice to the IIT Indore stating the failure on the part of IIT Indore. In such eventuality, the Performance Guarantee of the contractor shall be refunded within

following time limits :

- |  |          |
|--|----------|
| (i) If the Tendered value of work is up to Rs. 45 lac :                              | 15 days. |
| (ii) If the Tendered value of work is more than Rs. 45 lac and up to Rs. 2.5 Crore : | 21 days. |
| (iii) If the Tendered value of work exceeds Rs. 2.5 Crore :                          | 30 days. |

If Performance Guarantee is not released within prescribed time limit, then a simple interest @ 0.25% per month shall be payable on Performance Guarantee amount to the contractor from the date of expiry of prescribed time limit.

A compensation for such eventuality, on account of damages etc. shall be payable @ 0.25% of tendered amount subject to maximum limit of Rs. 10 lacs.

### **CLAUSE 4**

#### **Contractor liable to pay Compensation even if action not taken under Clause 3**

In any case in which any of the powers conferred upon the Engineer-in-Charge by Clause-3 thereof, shall have become exercisable and the same are not exercised, the non-exercise thereof shall not constitute a waiver of any of the conditions hereof and such powers shall notwithstanding be exercisable in the event of any future case of default by the contractor and the liability of the contractor for compensation shall remain unaffected. In the event of the Engineer-in-Charge putting in force all or any of the powers vested in him under the preceding clause he may, if he so desires after giving a notice in writing to the contractor, take possession of (or at the sole discretion of the Engineer-in-Charge which shall be final and binding on the contractor) use as on hire (the amount of the hire money being also in the final determination of the Engineer-in-Charge) all or any toolplant, materials and stores, in or upon the works, or the site thereof belonging to the contractor, or procured by the contractor and intended to be used for the execution of the work/or any part thereof, paying or allowing for the same in account at the contract rates, or, in the case of these not being applicable, at current market rates to be certified by the Engineer-in-Charge, whose

certificate thereof shall be final, and binding on the contractor, clerk of the works, foreman or other authorized agent to remove such tools, plant, materials, or stores from the premises (within a time to be specified in such notice) in the event of the contractor failing to comply with any such requisition, the Engineer-in-Charge may remove them at the contractor's expense or sell them by auction or private sale on account of the contractor and his risk in all respects and the certificate of the Engineer-in-Charge as to the expenses of any such removal and the amount of the proceeds and expenses of any such sale shall be final and conclusive against the contractor

## **CLAUSE 5**

### **Time and Extension for Delay**

The time allowed for execution of the Works as specified in the Schedule „F“ or the extended time in accordance with these conditions shall be the essence of the Contract. The execution of the works shall commence from such time period as mentioned in schedule „F“ or from the date of handing over of the site whichever is later. If the

Contractor commits default in commencing the execution of the work as aforesaid, Government shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the performance guarantee absolutely

**5.1** As soon as possible after the Contract is concluded, the Contractor shall submit a Time and Progress Chart for each mile stone and get it approved by the IIT Indore. The Chart shall be prepared in direct relation to the time stated in the Contract documents for completion of items of the works. It shall indicate the forecast of the dates of commencement and completion of various trades of sections of the work and may be amended as necessary by agreement between the Engineer-in-Charge and the Contractor within the limitations of time imposed in the Contract documents, and further to ensure good progress during the execution of the work, the contractor shall in all cases in which the time allowed for any work, exceeds one month (save for special jobs for which a separate programme has been agreed upon) complete the work as per mile stones given in Schedule „F“.

(a) Project Management shall be done by using project management software for works costing more than Rs. 5 Crore.

(b) The project management shall be done using M.S. Project software for works costing more than Rs. 5 Crore and up to Rs. 20 Crore.

For works costing more than Rs. 20 Crore, project management shall be done using Primavera Software.

### **PROGRAMME CHART**

- (i) The Contractor shall prepare an integrated programme chart in MS Project/Primavera software for the execution of work, showing clearly all activities from the start of work to completion, with details of manpower, equipment and machinery required for the fulfillment of the programme within the stipulated period or earlier and submit the same for approval to the Engineer-

in- Charge within ten days of award of the contract. A recovery of Rs.2500/- (for works costing upto Rs. 20 Crores) / Rs. 5000/- (for works costing more than Rs. 20 Crores) shall be made on per day basis in case of delay in submission of the above programme.

- (ii) The programme chart should include the following:
  - (a) Descriptive note explaining sequence of the various activities.
  - (b) Network (PERT / CPM / BAR CHART).
  - (c) Programme for procurement of materials by the contractor.

Programme of procurement of machinery / equipments having adequate capacity, commensurate with the quantum of work to be done within the stipulated period, by the contractor. In addition to above, to achieve the progress of Work as per programme, the contractor must bring at site adequate shuttering material required for cement concrete and R.C.C. works etc. for three floors within one month from the date of start of work till the completion of RCC work as per requirement of work. The contractor shall submit shuttering schedule adequate to complete structure work within laid down physical milestone.

- (iii) If at any time, it appears to the Engineer-in-Charge that the actual progress of work does not conform to the approved programme referred above or after rescheduling of milestones, the contractor shall produce a revised programme within 7 (seven) days, showing the modifications to the approved programme to ensure timely completion of the work. The modified schedule of programme shall be approved by the Engineer in Charge. A recovery of Rs. 2500/- (for works costing upto Rs. 20 Crores) / Rs. 5000/- (for works costing more than Rs. 20 Crores) shall be made on per day basis in case of delay in submission of the modified programme.
- (iv) The submission for approval by the Engineer-in-Charge of such programme or such particulars shall not relieve the contractor of any of the duties or responsibilities under the contract. This is without prejudice to the right of Engineer-in-Charge to take action against the contractor as per terms and conditions of the agreement.
- (v) The contractor shall submit the progress report using MS Project/Primavira software with base line programme referred above for the work done during previous month to the Engineer-in-charge on or before 5th day of each month failing which a recovery Rs. 2500/- (for works costing upto Rs. 20 Crores) / Rs. 5000/- (for works costing more than Rs. 20 Crores) shall be made on per day basis in case of delay in submission of the monthly progress report.

**5.2** If the work(s) be delayed by:-

- (i) force majeure, or
- (ii) abnormally bad weather, or
- (iii) serious loss or damage by fire, or

- (iv) civil commotion, local commotion of workmen, strike or lockout, affecting any of the trades employed on the work, or
- (v) delay on the part of other contractors or tradesmen engaged by Engineer-in- Charge in executing work not forming part of the Contract, or
- (vi) non-availability of stores, which are the responsibility of Government to supply or non-availability or break down of tools and Plant to be supplied or supplied by Government or
- (vii) any other cause which, in the absolute discretion of the Engineer-in-Charge is beyond the Contractor's control.

then upon the happening of any such event causing delay, the Contractor shall immediately give notice thereof in writing to the authority as indicated in Schedule „F“ but shall nevertheless use constantly his best endeavours to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Engineer-in-Charge to proceed with the works.

**5.3** Request for rescheduling of Mile stones and extension of time, to be eligible for consideration, shall be made by the Contractor in writing within fourteen days of the happening of the event causing delay on the prescribed form to the authority as indicated in Schedule „F“. The Contractor may also, if practicable, indicate in such a request the period for which extension is desired.

**5.4** In any such case the authority as indicated in Schedule „F“ may give a fair and reasonable extension of time and reschedule the mile stones for completion of work. Such extension or rescheduling of the milestones shall be communicated to the Contractor by the authority as indicated in Schedule „F“ in writing, within 3 months or 4 weeks of the date of receipt of such request respectively. Non application by the contractor for extension of time/ rescheduling of the milestones shall not be a bar for giving a fair and reasonable extension/ rescheduling of the milestones by the authority as indicated in Schedule „F“ and this shall be binding on the contractor.

## **CLAUSE 6**

### **Measurements of work Done**

Engineer-in-Charge shall, except as otherwise provided, ascertain and determine by measurement, the value in accordance with the contract of work done.

All measurement of all items having financial value shall be entered in Measurement Book and/or level field book so that a complete record is obtained of all works performed under the contract.

All measurements and levels shall be taken jointly by the Engineer-in-Charge or his authorized representative and by the contractor or his authorized representative from time to time during the progress of the work and such measurements shall be signed and dated by the Engineer in-Charge and the contractor or their representatives in token of their acceptance. If the contractor objects to any of the measurements recorded, a note shall be made to that effect with reason and signed by both the parties.

If for any reason the contractor or his authorized representative is not available and the work of recording measurements is suspended by the Engineer-in-Charge or his representative, the Engineer-in-Charge and the IIT Indore shall not entertain any claim from contractor for any loss or damages on this account. If the contractor or his authorized representative does not remain present at the time of such measurements after the contractor or his authorized representative has been given a notice in writing three (3) days in advance or fails to countersign or to record objection within a week from the date of the measurement, then such measurements recorded in his absence by the Engineer-in-Charge or his representative shall be deemed to be accepted by the Contractor.

The contractor shall, without extra charge, provide all assistance with every appliance, labour and other things necessary for measurements and recording levels.

Except where any general or detailed description of the work expressly shows to the contrary, measurements shall be taken in accordance with the procedure set forth in the specifications notwithstanding any provision in the relevant Standard Method of measurement or any general or local custom. In the case of items which are not covered by specifications, measurements shall be taken in accordance with the relevant standard method of measurement issued by the Bureau of Indian Standards and if for any item no such standard is available, then a mutually agreed method shall be followed.

The contractor shall give, not less than seven days" notice to the Engineer-in-Charge or his authorized representative in charge of the work, before covering up or otherwise placing beyond the reach of measurement any work in order that the same may be measured and correct dimensions thereof be taken before the same is covered up or placed beyond the reach of measurement and shall not cover up and place beyond reach of measurement any work without consent in writing of the Engineer-in-Charge or his authorized representative in charge of the work who shall within the aforesaid period of seven days inspect the work, and if any work shall be covered up or placed beyond the reach of measurements without such notice having been given or the Engineer-in-Charge"s consent being obtained in writing, the same shall be uncovered at the Contractor"s expense, or in default thereof no payment or allowance shall be made for such work or the materials with which the same was executed.

Engineer-in-Charge or his authorized representative may cause either themselves or through another officer of the IIT Indore to check the measurements recorded jointly or otherwise as aforesaid and all provisions stipulated herein above shall be applicable to such checking of measurements or levels.

It is also a term of this contract that recording of measurements of any item of work in the measurement book and/or its payment in the interim, on account or final bill shall not be

considered as conclusive evidence as to the sufficiency of any work or material to which it relates nor shall it relieve the contractor from liabilities from any over measurement or defects noticed till completion of the defects liability period.

**CLAUSE 6A**  
**Computerized Measurement Book**

Engineer-in-Charge shall, except as otherwise provided, ascertain and determine by measurement the value of work done in accordance with the contract.

All measurements of all items having financial value shall be entered by the contractor and compiled in the shape of the Computerized Measurement Book having pages of A-4 size as per the format of the IIT Indore so that a complete record is obtained of all the items of works performed under the contract.

All such measurements and levels recorded by the contractor or his authorized representative from time to time, during the progress of the work, shall be got checked by the contractor from the Engineer-in-Charge or his authorized representative as per interval or program fixed in consultation with Engineer-in-Charge or his authorized representative. After the necessary corrections made by the Engineer-in-Charge, the measurement sheets shall be returned to the contractor for incorporating the corrections and for resubmission to the Engineer-in-Charge for the dated signatures by the Engineer-in-Charge and the contractor or their representatives in token of their acceptance.

Whenever bill is due for payment, the contractor would initially submit draft computerized measurement sheets and these measurements would be got checked/test checked from the Engineer-in-Charge and/or his authorized representative. The contractor will, thereafter, incorporate such changes as may be done during these checks/test checks in his draft computerized measurements, and submit to the IIT Indore a computerized measurement book, duly bound, and with its pages machine numbered. The Engineer-in-Charge and/or his authorized representative would thereafter check this MB, and record the necessary certificates for their checks/test checks.

The final, fair, computerized measurement book given by the contractor, duly bound, with its pages machine numbered, should be 100% correct, and no cutting or over-writing in the measurements would thereafter be allowed. If at all any error is noticed, the contractor shall have to submit a fresh computerized MB with its pages duly machine numbered and bound, after getting the earlier MB cancelled by the IIT Indore. Thereafter, the MB shall be taken in the Divisional Office records, and allotted a number as per the Register of Computerised MBs. This should be done before the corresponding bill is submitted to the Division Office for payment. The contractor shall submit two spare copies of such computerized MB"s for the purpose of reference and record by the various officers of the IIT Indore.

The contractor shall also submit to the IIT Indore separately his computerized Abstract of Cost and the bill based on these measurements, duly bound, and its pages machine numbered along with two spare copies of the "bill. Thereafter, this bill will be processed by the Division Office and allotted a number as per the computerized record in the same way as done for the measurement book meant for measurements.

The contractor shall, without extra charge, provide all assistance with every appliance, labour and other things necessary for checking of measurements/levels by the Engineer-in-Charge or his representative.

Except where any general or detailed description of the work expressly shows to the contrary, measurements shall be taken in accordance with the procedure set forth in the specifications notwithstanding any provision in the relevant Standard Method of measurement or any general or local custom. In the case of items which are not covered by specifications, measurements shall be taken in accordance with the relevant standard method of measurement issued by the Bureau of Indian Standards and if for any item no such standard is available then a mutually agreed method shall be followed.

The contractor shall give not less than seven days" notice to the Engineer-in-Charge or his authorized representative in charge of the work before covering up or otherwise placing beyond the reach of checking and/or test checking the measurement of any work in order that the same may be checked and/or test checked and correct dimensions thereof be taken before the same is covered up or placed beyond the reach of checking and/or test checking measurement and shall not cover up and place beyond reach of measurement any work without consent in writing of the Engineer-in-Charge or his authorized representative in charge of the work who shall within the aforesaid period of seven days inspect the work, and if any work shall be covered up or placed beyond the reach of hecking and/or test checking measurements without such notice having been given or the Engineer-in-Charge"s consent being obtained in writing the same shall be uncovered at the Contractor"s expense, or in default thereof no payment or allowance shall be made for such work or the materials with which the same was executed.

Engineer-in-Charge or his authorized representative may cause either themselves or through another officer of the IIT Indore to check the measurements recorded by contractor and all provisions stipulated herein above shall be applicable to such checking of measurements or levels.

It is also a term of this contract that checking and/or test checking the measurements of any item of work in the measurement book and/or its payment in the interim, on account of final bill shall not be considered as conclusive evidence as to the sufficiency of any work or material to which it relates nor shall it relieve the contractor from liabilities from any over measurement or defects noticed till completion of the defects liability period.

#### **CLAUSE 7**

##### **Payment on Intermediate Certificate to be regarded as Advances**

No payment shall be made for work, estimated to cost Rs. Twenty thousand or less till after the whole of the work shall have been completed and certificate of completion given. For works estimated to cost over Rs. Twenty thousand, the interim or running account bills shall be submitted by the contractor for the work executed on the basis of such recorded measurements on the format of the IIT Indore in triplicate on or before the date of every month fixed for the same by the Engineer-in-Charge. The contractor shall not be entitled to be paid any such interim payment if the gross work done together with net payment/ adjustment of advances for material collected, if any, since the last such payment is less than the amount specified in Schedule „F“, in which case the interim bill shall be prepared

on the appointed date of the month after the requisite progress is achieved. Engineer-in-Charge shall arrange to have the bill verified by taking or causing to be taken, where necessary, the requisite measurements of the work. In the event of the failure of the contractor to submit the bills, Engineer-in-Charge shall prepare or cause to be prepared such bills in which event no claims whatsoever due to delays on payment including that of interest shall be payable to the contractor. Payment on account of amount admissible shall be made by the Engineer-In-charge certifying the sum to which the contractor is considered entitled by way of interim payment at such rates as decided by the Engineer-in-Charge. The amount admissible shall be paid by 10th working day after the day of presentation of the bill by the Contractor to the Engineer-in-Charge or his Asstt. Engineer together with the account of the material issued by the IIT Indore, or dismantled materials, if any. In the case of works outside the headquarters of the Engineer- in-Charge, the period of ten working days will be extended to fifteen working days. In case of delay in payment of intermediate bills after 45 days of submission of bill by the contractor provided the bill submitted by the contractor found to be in order, a simple interest @ 7.5% per annum shall be paid to the contractor from the date of expiry of prescribed time limit which will be compounded on yearly basis.

All such interim payments shall be regarded as payment by way of advances against final payment only and shall not preclude the requiring of bad, unsound and imperfect or unskilled work to be rejected, removed, taken away and reconstructed or re-erected. Any certificate given by the Engineer-in-Charge relating to the work done or materials delivered forming part of such payment, may be modified or corrected by any subsequent such certificate(s) or by the final certificate and shall not by itself be conclusive evidence that any work or materials to which it relates is/are in accordance with the contract and specifications. Any such interim payment, or any part thereof shall not in any respect conclude, determine or affect in any way powers of the Engineer-in-Charge under the contract or any of such payments be treated as final settlement and adjustment of accounts or in any way vary or affect the contract.

Pending consideration of extension of date of completion, interim payments shall continue to be made as herein provided without prejudice to the right of the IIT Indore to take action under the terms of this contract for delay in the completion of work, if the extension of date of completion is not granted by the competent authority.

The Engineer-in-Charge in his sole discretion on the basis of a certificate from the Asstt. Engineer to the effect that the work has been completed up to the level in question make interim advance payments without detailed measurements for work done (other than foundations, items to be covered under finishing items) up to lintel level (including sunshade etc.) and slab level, for each floor working out at 75% of the assessed value. The advance payments so allowed shall be adjusted in the subsequent interim bill by taking detailed measurements thereof.

### **Payments in composite Contracts**

In case of composite tenders, running payment for the major component shall be made by EE of major discipline to the main contractor. Running payment for minor component shall be made by the Engineer-in-Charge of the discipline of minor component directly to the main contractor.



In case main contractor fails to make the payment to the contractor associated by him within 15 days of receipt of each running account payment, then on the written complaint of contractor associated for such minor component, Engineer in charge of minor component shall serve the show cause to the main contractor and if reply of main contractor either not received or found unsatisfactory, he may make the payment directly to the contractor associated for minor component as per the terms and conditions of the agreement drawn between main contractor and associate contractor fixed by him. Such payment made to the associate contractor shall be recovered by Engineer-in-charge of major or minor component from the next R/A/ final bill due to main contractor as the case may be.

## **CLAUSE 8**

### **Completion Certificate and Completion Plans**

Within ten days of the completion of the work, the contractor shall give notice of such completion to the Engineer-in-Charge and within thirty days of the receipt of such notice, the Engineer-in-Charge shall inspect the work and if there is no defect in the work, shall furnish the contractor with a final certificate of completion, otherwise a provisional certificate of physical completion indicating defects (a) to be rectified by the contractor and/or (b) for which payment will be made at reduced rates, shall be issued. But no final certificate of completion shall be issued, nor shall the work be considered to be complete until the contractor shall have removed from the premises on which the work shall be executed all scaffolding, surplus materials, rubbish and all huts and sanitary arrangements required for his/their work people on the site in connection with the execution of the works as shall have been erected or constructed by the contractor(s) and cleaned off the dirt from all wood work, doors, windows, walls, floor or other parts of the building, in, upon, or about which the work is to be executed or of which he may have had possession for the purpose of the execution; thereof, and not until the work shall have been measured by the Engineer-in-Charge. If the contractor shall fail to comply with the requirements of this Clause as to removal of scaffolding, surplus materials and rubbish and all huts and sanitary arrangements as aforesaid and cleaning off dirt on or before the date fixed for the completion of work, the Engineer-in-Charge may at the expense of the contractor remove such scaffolding, surplus materials and rubbish etc., and dispose of the same as he thinks fit and clean off such dirt as aforesaid, and the contractor shall have no claim in respect of scaffolding or surplus materials as aforesaid except for any sum actually realized by the sale thereof.

## **CLAUSE 8A**

### **Contractor to Keep Site Clean**

When the annual repairs and maintenance of works are carried out, the splashes and droppings from white washing, colour washing, painting etc., on walls, floor, windows, etc shall be removed and the surface cleaned simultaneously with the completion of these items of work in the individual rooms, quarters or premises etc. where the work is done: without waiting for the actual completion of all the other items of work in the contract. In case the contractor fails to comply with the requirements of this clause, the Engineer-in-Charge shall have the right to get this work done at the cost of the contractor either IIT Indoreally or through any other agency. Before taking such action, the Engineer-in-Charge shall give ten days notice in writing to the contractor.

## **CLAUSE 8B**

### **Completion Plans to be Submitted by the Contractor**

The contractor shall submit completion plan as required vide General Specifications for Electrical works (Part-I internal) 2005 and (Part-II External) 1994 as applicable within thirty days of the completion of the work.

In case, the contractor fails to submit the completion plan as aforesaid, he shall be liable to pay a sum equivalent to 2.5% of the value of the work subject to a ceiling of Rs.15,000 (Rs. Fifteen thousand only) as may be fixed by the Project In Charge concerned and in this respect the decision of the Project In Charge shall be final and binding on the contractor.

The contractor shall submit completion plan for water, sewerage and drainage line plan within thirty days of the completion of the work.

In case, the contractor fails to submit the completion plan as aforesaid, , the IIT Indore will get it done through other agency at his cost and actual expenses incurred plus Rs. 15,000/- for the same shall be recovered from the contractor.

## **CLAUSE 9**

### **Payment of Final Bill**

The final bill shall be submitted by the contractor in the same manner as specified in interim bills within three months of physical completion of the work or within one month of the date of the final certificate of completion furnished by the Engineer-in-Charge whichever is earlier. No further claims shall be made by the contractor after submission of the final bill and these shall be deemed to have been waived and extinguished. Payments of those items of the bill in respect of which there is no dispute and of items in dispute, for quantities and rates as approved by Engineer-in-Charge, will, as far as possible be made within the period specified hereinunder, the period being reckoned from the date of receipt of the bill by the Engineer-in-Charge or his authorized Asstt. Engineer, complete with account of materials issued by the IIT Indore and dismantled materials.

(i) If the Tendered value of work is up to Rs. 45 lac : 2  
months

(ii) If the Tendered value of work is more than Rs.45 lac and up to Rs. 2.5 Crore : 3  
months

(iii) If the Tendered value of work exceeds Rs. 2.5 Crore : 6  
months

In case of delay in payment of final bills after prescribed time limit, a simple interest @ 7.5% per annum shall be paid to the contractor from the date of expiry of prescribed time limit which will be compounded on yearly basis, provided the final bill submitted by the contractor found to be in order.

## **CLAUSE 9A**

### **Payment of Contractor's Bills to Banks**

Payments due to the contractor may, if so desired by him, be made to his bank, registered financial, co-operative or thrift societies or recognized financial institutions instead of direct to him provided that the contractor furnishes to the Engineer-in-Charge (1) an authorization in the form of a legally valid document such as a power of attorney conferring authority on the bank; registered financial, co-operative or thrift societies or recognized financial institutions to receive payments and (2) his own acceptance of the correctness of the amount made out as being due to him by Government or his signature on the bill or other claim preferred against Government before settlement by the Engineer-in-Charge of the account or claim by payment to the bank, registered financial, co-operative or thrift societies or recognized financial institutions. While the receipt given by such banks; registered financial, co-operative or thrift societies or recognized financial institutions shall constitute a full and sufficient discharge for the payment, the contractor shall whenever possible present his bills duly receipted and discharged through his bank, registered financial, co-operative or thrift societies or recognized financial institutions.

Nothing herein contained shall operate to create in favour of the bank; registered financial, co-operative or thrift societies or recognized financial institutions any rights or equities visavis the Director, IIT Indore.

## **CLAUSE 10**

### **Materials supplied by Government-Deleted**

## **CLAUSE 10A**

### **Materials to be provided by the Contractor**

The contractor shall, at his own expense, provide all materials, required for the works other than those which are stipulated to be supplied by the Government.

The contractor shall, at his own expense and without delay, supply to the Engineer-in-Charge samples of materials to be used on the work and shall get these approved in advance. All such materials to be provided by the Contractor shall be in conformity with the specifications laid down or referred to in the contract. The contractor shall, if requested by the Engineer-in-Charge furnish proof, to the satisfaction of the Engineer-in-Charge that the materials so comply. The Engineer-in-Charge shall within thirty days of supply of samples or within such further period as he may require intimate to the Contractor in writing whether samples are approved by him or not. If samples are not approved, the Contractor shall forthwith arrange to supply to the Engineer-in-Charge for his approval, fresh samples complying with the specifications laid down in the contract. When materials are required to be tested in accordance with specifications, approval of the Engineer-in-Charge shall be issued after the test results are received.

The Contractor shall at his risk and cost submit the samples of materials to be tested or analyzed and shall not make use of or incorporate in the work any materials represented by the samples until the required tests or analysis have been made and materials finally accepted by the Engineer-in-Charge. The Contractor shall not be eligible for any claim or

compensation either arising out of any delay in the work or due to any corrective measures required to be taken on account of and as a result of testing of materials.

The contractor shall, at his risk and cost, make all arrangements and shall provide all facilities as the Engineer-in-Charge may require for collecting, and preparing the required number of samples for such tests at such time and to such place or places as may be directed by the Engineer-in-Charge and bear all charges and cost of testing unless specifically provided for otherwise elsewhere in the contract or specifications. The Engineer-in-Charge or his authorized representative shall at all times have access to the works and to all workshops and places where work is being prepared or from where materials, manufactured articles or machinery are being obtained for the works and the contractor shall afford every facility and every assistance in obtaining the right to such access.

The Engineer-in-Charge shall have full powers to require the removal from the premises of all materials which in his opinion are not in accordance with the specifications and in case of default, the Engineer-in-Charge shall be at liberty to employ at the expense of the contractor, other persons to remove the same without being answerable or accountable for any loss or damage that may happen or arise to such materials. The Engineer-in-Charge shall also have full powers to require other proper materials to be substituted thereof and in case of default, the Engineer-in-Charge may cause the same to be supplied and all costs which may attend such removal and substitution shall be borne by the Contractor.

The contractor shall at his own expense, provide a material testing lab at the site for conducting routine field tests. The lab shall be equipped at least with the testing equipment as specified in schedule F.

#### **CLAUSE 10B**

##### **Secured Advance on Non-perishable Materials-Deleted**

#### **CLAUSE 10C**

##### **Payment on Account of Increase in Prices/Wages due to Statutory Order(s)**

If after submission of the tender, the price of any material incorporated in the works (excluding the materials covered under Clause 10CA and not being a material supplied from the Engineer-in-Charge's stores in accordance with Clause 10 thereof) and/or wages of labour increases as a direct result of the coming into force of any fresh law, or statutory rule or order (but not due to any changes of rate in sales tax/VAT, Central/State Excise/Custom Duty) beyond the prices/wages prevailing at the time of the last stipulated date of receipt of tenders including extensions, if any, for the work during contract period including the justified period extended under the provisions of clause 5 of the contract without any action under clause 2, then the amount of the contract shall accordingly be varied and provided further that any such increase shall be limited to the price/wages prevailing at the time of updated stipulated date of completion considering effect of extra work (extra time to be calculated on prorata basis only as cost of extra work x stipulated period/tendered amount).

If after submission of the tender, the price of any material incorporated in the works (excluding the materials covered under Clause 10CA and not being a material supplied from the Engineer-in-Charge's stores in accordance with Clause 10 thereof) and/or wages of labour as prevailing at the time of last stipulated date of receipt of tender including extensions, if any, is decreased as a direct result of the coming into force of any fresh law or statutory rules or order (but not due to any changes of rate in sales tax/VAT, Central/State Excise/Custom Duty), Government shall in respect of materials incorporated in the works (excluding the materials covered under Clause 10CA and not being material supplied from the Engineer-in-Charge's stores in accordance with Clause 10 hereof) and/or labour engaged on the execution of the work after the date of coming into force of such law statutory rule or order be entitled to deduct from the dues of the contractor, such amount as shall be equivalent to the difference between the prices of the materials and/or wages as prevailed at the time of the last stipulated date for receipt of tenders including extensions if any for the work and the prices of materials and/or wages of labour on the coming into force of such law, statutory rule or order. This will be applicable for the contract period including the justified period extended under the provisions of clause 5 of the contract without any action under clause 2.

Engineer-in-Charge may call books of account and other relevant documents from the contractor

to satisfy himself about reasonability of increase in prices of materials and wages.

The contractor shall, within a reasonable time of his becoming aware of any alteration in the price of any such materials and/or wages of labour, give notice thereof to the

Engineer-in-Charge stating that the same is given pursuant to this condition together with all information relating thereto which he may be in position to supply.

For this purpose, the labour component of the work executed during period under consideration shall be the percentage as specified in Schedule F, of the value of work done during that period and the increase/decrease in labour shall be considered on the minimum daily wages in rupees of any unskilled adult male mazdoor, fixed under any law, statutory rule or order.

## **CLAUSE 10 CA**

### **Payment due to variation in prices of materials after receipt of tender**

If after submission of the tender, the price of materials specified in Schedule F increases/decreases beyond the base price(s) as indicated in Schedule F for the work, then the amount of the contract shall accordingly be varied and provided further that any such variations shall be effected for stipulated period of Contract including the justified period extended under the provisions of Clause 5 of the Contract without any action under Clause 2. However for work done/during the justified period extended as above, it will be limited to indices prevailing at the time of updated stipulated date of completion considering the effect of extra work (extra time to be calculated on pro-rata basis only as cost of extra work x stipulated period/tendered cost).

The increase/decrease in prices of cement, steel reinforcement, structural steel and POL shall be determined by the Price indices issued by the Director General, CPWD. For other items provided in the Schedule „F“, this shall be determined by the All India Wholesale Price Indices of materials as published by Economic Advisor to Government of India, Ministry of Commerce and Industry. Base price for cement, steel reinforcement, structural steel and POL shall be as issued under the authority of Director General CPWD applicable for Delhi including Noida, Gurgaon, Faridabad & Ghaziabad and for other places as issued under the authority of Zonal Project In Charge, CPWD and base price of other materials issued by concerned Zonal Project In Charge and as indicated in Schedule „F“. In case, price index of a particular material is not issued by Ministry of Commerce and Industry, then the price index of nearest similar material as indicated in Schedule „F“ shall be followed.

The amount of the contract shall accordingly be varied for all such materials and will be worked out as per the formula given below for individual material:-

Adjustment for component of individual material

$$V = P \times Q \times \frac{C_1 - C_{10}}{C_1}$$

where,

0

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

P = Base Price of material as issued under authority of DG, CPWD or concerned Zonal Project In Charge and as indicated in Schedule "F".

For Projects and Original Works

Q = Quantity of material brought at site for bonafide use in the works since previous bill excluding any such quantity consumed in the deviated quantity of items beyond deviation limit and extra /substituted item, paid/to be paid at rates derived on the basis of market rate under clause 12.2.

For Maintenance Works

Q = Quantity of material brought at site for bonafide use in the works since previous bill including any such quantity consumed in the deviated quantity of items beyond deviation limit paid at agreement rate and extra /substituted item being scheduled items, but excluding non schedule extra /substituted item paid/to be paid at market rate under clause 12.2.

C<sub>10</sub> = Price index for cement, steel reinforcement bars structural steel and POL as issued by the DG, CPWD and corresponding to the time of base price of respective material indicated in Schedule „F“. For other items, if any, provided in Schedule „F“, All India Wholesale Price Index for the material as published by the Economic Advisor to Government of India, Ministry of Industry and Commerce and corresponding to the time of base price of respective material indicated in Schedule „F“.

CI = Price index for cement, steel reinforcement bars, structural steel and POL as issued under the authority of DG, CPWD for period under consideration.  
For other items, if any, provided in Schedule „F“, All India Wholesale Price

Index for the material for period under consideration as published by Economic Advisor to Government of India, Ministry of Industry and Commerce.

Note: (i) In respect of the justified period extended under the provisions of clause 5 of the contract without any action under clause 2, the index prevailing at the time of updated stipulated date of completion considering the effect of extra work (extra time to be calculated on prorata basis only as cost of extra work x stipulated period/ tendered cost) shall be considered.

Provided always that provisions of the preceding Clause 10 C shall not be applicable in respect of Materials covered in this Clause.

(ii) If during progress of work or at the time of completion of work, it is noticed that any material brought at site is in excess of requirement, then amount of escalation if paid earlier on such excess quantity of material shall be recovered on the basis of cost indices as applied at the time of payment of escalation or as prevailing at the time of effecting recovery, whichever is higher.

(iii) Cement mentioned wherever in this clause includes Cement component used in RMC brought at site from outside approved RMC plants, if any.

(iv) The date wise record of ready mix concrete shall be kept in a register and the cement consumption for the same shall be calculated accordingly.

(v) If built-up steel items are brought at site from workshop, then the variation shall be paid for the structural steel up to the period when the built up item/finished product is brought at site.

#### **CLAUSE 10 CC**

Payment due to Increase/Decrease in Prices/Wages (excluding materials covered under clause 10 CA) after Receipt of Tender for Works

If the prices of materials (not being materials supplied or services rendered at fixed prices by the IIT Indore in accordance with clause 10 & 34 thereof) and/or wages of labour required for execution of the work increase, the contractor shall be compensated for such increase as per provisions detailed below and the amount of the contract shall accordingly be varied, subject to the condition that that such compensation for escalation in prices and wages shall be available only for the work done during the stipulated period of the contract including the justified period extended under the provisions of clause 5 of the contract without any action under clause 2. However, for the work done during the justified period extended as above, the compensation as detailed below will be limited to prices/wages prevailing at the time of updated stipulated date of completion considering the

effect of extra work ( extra time to be calculated on pro-rata basis only as cost of extra work x stipulated period/tendered cost).No such compensation shall be payable for a work for which the stipulated period of completion is equal to or less than the time as specified in Schedule F. Such compensation for escalation in the prices of materials and labour, when due, shall be worked out based on the following provisions:-

**(i)** The base date for working out such escalation shall be the last stipulated date of receipt of tenders including extension, if any.

**(ii)** The cost of work on which escalation will be payable shall be reckoned as below :

**(a)** Gross value of work done up to this quarter : (A)

**(b)** Gross value of work done up to the last quarter : (B)

**(c)** Gross value of work done since previous quarter(A-B) ; (C)

**(d)** Full assessed value of Secured Advance (excluding materials Covered under Clause 10 CA) fresh paid in this quarter : (D)

**(e)** Full assessed value of Secured Advance (excluding materials

Covered under Clause 10 CA) recovered in this quarter : (E)

**(f)** Full assessed value of Secured Advance for which escalation Payable in this quarter (D-E): (F)

**(g)** Advance payment made during this quarter: (G)

**(h)** Advance payment recovered during this quarter: (H)

**(i)** Advance payment for which escalation is payable in this Quarter(G-H): (I)

**(j)** Extra items/deviated quantities of items paid as per Clause 12 Based on prevailing market rates during this quarter: (J)

$$\text{Then, } M = C+F+I-J$$

$$N = 0.85 M$$

**(k)** Less cost of material supplied by the IIT Indore as per Clause 10 and recovered during the quarter (K)

**(l)** Less cost of services rendered at fixed charges as per Clause 34 and recovered during the quarter (L)

**Cost of work for which escalation is applicable:**

$$W = N - (K + L)$$

**(iii)** Components for materials (except cement, reinforcement bars, structural steel, POL or other materials covered under clause 10 CA) labour, etc. shall be pre-determined for every work and incorporated in the conditions of contract attached to the tender papers included in Schedule „F“. The decision of the Engineer-in-Charge in working out such percentage shall be binding on the contractors.



**(iv)** The compensation for escalation for other materials (excluding cement, reinforcement bars, structural steel, POL or other materials covered under clause 10 CA) shall be worked as per the formula given below:-

(a) Adjustment for civil component (except cement, structural steel, reinforcement bars, POL and other materials covered under clause 10CA) / electrical component of construction „Materials“

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

W = Cost of Work done worked out as indicated in sub-para (ii) of Clause 10CC.

Xm = Component of „materials“ (except cement, structural steel, reinforcement bars POL and other materials covered under clause 10CA) expressed as percent of the total value of work.

MI = All India Wholesale Price Index for civil component/electrical component\* of construction material as worked out on the basis of All India Wholesale Price Index for Individual Commodities/ Group Items for the period under consideration as published by Economic Advisor to Govt. of India, Ministry of Industry & Commerce and applying weightages to the Individual Commodities/Group Items. (In respect of the justified period extended under the provisions of clause 5 of the contract without any action under clause 2, the index prevailing at the time of updated stipulated date of completion considering the effect of extra work (extra time to be calculated on prorata basis only as cost of extra work x stipulated period/tendered cost, shall be considered.)

Mlo = All India Wholesale Price Index for civil component/electrical component\* of construction material as worked out on the basis of All India Wholesale Price Index for Individual Commodities/Group Items valid on the last stipulated date of receipt of tender including extension, if any, as published by the Economic Advisor to Govt. of India, Ministry of Industry & Commerce and applying weightages to the Individual Commodities/Group items.

**\*Note:** relevant component only will be applicable.

(v) The following principles shall be followed while working out the indices mentioned in para (iv) above.

**(a)** The compensation for escalation shall be worked out at quarterly intervals and shall be with respect to the cost of work done as per bills paid during the three calendar months of the said quarter. The dates of preparation of bills as finally entered in the Measurement Book by the Assistant Engineer/ date of submission of bill finally by the contractor to the IIT Indore in case of computerised measurement books shall be the guiding factor to decide the bills relevant to the quarterly interval. The first such payment shall be made at the end of three months after the month (excluding the month in which tender was accepted) and thereafter at three months“ interval. At the time of completion of the work, the last period for payment might become less than 3 months, depending on the actual date of completion.

**(b)** The index (MI/FI etc.) relevant to any quarter/period for which such compensation is paid shall be the arithmetical average of the indices relevant to the three calendar months. If the period up to date of completion after the quarter covered by the last such installment of payment, is less than three months, the index MI and FI shall be the average of the indices for the months falling within that period.

**(vi)** The compensation for escalation for labour shall be worked out as per the formula given below:-

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

W : Value of work done, worked out as indicated in sub-para (ii) above.

Y : Component of labour expressed as a percentage of the total value of the work.

LI : Minimum wage in rupees of an unskilled adult male mazdoor, fixed under any law, statutory rule or order as applicable on the last date of the quarter previous to the one under consideration. (In respect of the justified period extended under the provisions of clause 5 of the contract without any action under clause 2, the minimum wage prevailing on the last date of quarter previous to the quarter pertaining to updated stipulated date of Completion considering the effect of extra work (extra time to be calculated on prorata basis only as cost of extra work x stipulated period/tendered cost, shall be considered.)

Llo : Minimum daily wage in rupees of an unskilled adult male mazdoor, fixed under any law, statutory rule or order as on the last stipulated date of receipt of tender including extension, if any.

(vii) The following principles will be followed while working out the compensation as per subpara (vi) above.

(a) The minimum wage of an unskilled male mazdoor mentioned in sub-para (vi) above shall be the higher of the wage notified by Government of India, Ministry of Labour and that notified by the local administration both relevant to the place of work and the period of reckoning.

(b) The escalation for labour also shall be paid at the same quarterly intervals when escalation due to increase in cost of materials is paid under this clause. If such revision of minimum wages takes place during any such quarterly intervals, the escalation compensation shall be payable at revised rates only for work done in subsequent quarters;

(c) Irrespective of variations in minimum wages of any category of labour, for the purpose of this clause, the variation in the rate for an unskilled adult male mazdoor alone shall form the basis for working out the escalation compensation payable on the labour component.

(viii) In the event the price of materials and/or wages of labour required for execution of the work decrease/s, there shall be a downward adjustment of the cost of work so that such price of materials and/or wages of labour shall be deductible from the cost of work under this contract and in this regard the formula herein before stated under this Clause 10CC shall mutatis mutandis apply, provided that:

(a) no such adjustment for the decrease in the price of materials and/or wages of labour aforementioned would be made in case of contracts in which the stipulated period of completion of the work is equal to or less than the time as specified in Schedule „F“.

(b) the Engineer-in-Charge shall otherwise be entitled to lay down the procedure by which the provision of this sub-clause shall be implemented from time to time and the decision of the Engineer-in-Charge in this behalf shall be final and binding on the contractor.

(ix) Provided always that:-

(a) Where provisions of clause 10CC are applicable, provisions of clause 10C will not be applicable but provisions of clause 10CA will be applicable.

(b) Where provisions of clause 10CC are not applicable, provisions of clause 10C and 10CA will become applicable.

Note: Updated stipulated date of completion (period of completion plus extra time for extra work for compensation under clause 10C, 10CA and 10CC, the factor of 1.25 taken into account for calculating the extra time under clause 12.1 for extra time shall not be considered while calculating the updated stipulated date of completion for this purpose in clause 10C, clause 10CA, and clause 10CC.

## **CLAUSE 10 D**

### **Dismantled Material Govt. Property**

The contractor shall treat all materials obtained during dismantling of a structure, excavation of the site for a work, etc. as Government's property and such materials shall be disposed off to the best advantage of Government according to the instructions in writing issued by the Engineer-in-Charge.

## **CLAUSE 11**

### **Work to be Executed in Accordance with Specifications, Drawings, Orders etc.**

The contractor shall execute the whole and every part of the work in the most substantial and workmanlike manner both as regards materials and otherwise in every respect in strict accordance with the specifications. The contractor shall also conform exactly, fully and faithfully to the design, drawings and instructions in writing in respect of the work signed by the Engineer-in-Charge and the contractor shall be furnished free of charge one copy of the contract documents together with specifications, designs, drawings and instructions as are not included in the standard specifications of Central Public Works IIT Indore specified in Schedule „F“ or in any Bureau of Indian Standard or any other, published standard or code or, Schedule of Rates or any other printed publication referred to elsewhere in the contract.

The contractor shall comply with the provisions of the contract and with the care and diligence execute and maintain the works and provide all labour and materials, tools and plants including for measurements and supervision of all works, structural plans and other

things of temporary or permanent nature required for such execution and maintenance in so far as the necessity for providing these, is specified or is reasonably inferred from the contract. The Contractor shall take full responsibility for adequacy, suitability and safety of all the works and methods of construction.

**CLAUSE 12 :**  
**Deviations/Variations Extent and Pricing**

The Engineer-in-Charge shall have power (i) to make alteration in, omissions from, additions to, or substitutions for the original specifications, drawings, designs and instructions that may appear to him to be necessary or advisable during the progress of the work, and (ii) to omit a part of the works in case of non-availability of a portion of the site or for any other reasons and the contractor shall be bound to carry out the works in accordance with any instructions given to him in writing signed by the Engineer-in-Charge and such alterations, omissions, additions or substitutions shall form part of the contract as if originally provided therein and any altered, additional or substituted work which the contractor may be directed to do in the manner specified above as part of the works, shall be carried out by the contractor on the same conditions in all respects including price on which he agreed to do the main work except as hereafter provided.

The completion cost of any agreement for Maintenance works including works of upgradation, aesthetic, special repair, addition/ alteration shall not exceed 1.25 times of Tendered amount.

12.1 The time for completion of the works shall, in the event of any deviations resulting in additional cost over the tendered value sum being ordered, be extended, if requested by the contractor, as follows :

(i) In the proportion which the additional cost of the altered, additional or substituted work, bears to the original tendered value plus

(ii) 25% of the time calculated in (i) above or such further additional time as may be considered reasonable by the Engineer-in-Charge.

12.2 A. For Project and original works:

### **Deviation, Extra Items and Pricing**

In the case of extra item(s) (items that are completely new, and are in addition to the items contained in the contract), the contractor may within fifteen days of receipt of order or occurrence of the item(s) claim rates, supported by proper analysis, for the work and the engineer-in-charge shall within prescribed time limit of the receipt of the claims supported by analysis, after giving consideration to the analysis of the rates submitted by the contractor, determine the rates on the basis of the market rates and the contractor shall be paid in accordance with the rates so determined.

B. For Maintenance works including works of upgradation, aesthetic, special repair, addition/ alteration: In the case of Extra Item(s) being the schedule items (Delhi Schedule of Rates items), these shall be paid as per the schedule rate plus cost index (at the time of tender) plus/minus percentage above/ below quoted contract amount.

Payment of Extra items in case of non-schedule items (Non-DSR items) shall be made as per the prevailing market rate.

A. For Project and original works:

### **Deviation, Substituted Items, Pricing**

In the case of substituted items (items that are taken up with partial substitution or in lieu of items of work in the contract), the rate for the agreement item (to be substituted) and substituted item shall also be determined in the manner as mentioned in the following para.

(a) If the market rate for the substituted item so determined is more than the market rate of the agreement item (to be substituted), the rate payable to the contractor for the substituted item shall be the rate for the agreement item (to be substituted) so increased to the extent of the difference between the market rates of substituted item and the agreement item (to be substituted).

(b) If the market rate for the substituted item so determined is less than the market rate of the agreement item (to be substituted), the rate payable to the contractor for the substituted item shall be the rate for the agreement item (to be substituted) so decreased to the extent of the difference between the market rates of substituted item and the agreement item (to be substituted).

B. For Maintenance works including works of upgradation, aesthetic, special repair, addition/ alteration: In the case of Substitute Item(s) being the schedule items (Delhi Schedule of Rates items), these shall be paid as per the schedule rate plus cost index (at the time of

tender) plus/minus percentage above/ below quoted contract amount. Payment of Substitute in case of non-schedule items (Non-DSR items) shall be made as per the prevailing market rate.

### **Deviation, Deviated Quantities, Pricing**

#### **A. For Project and original works:**

In the case of contract items, substituted items, contract cum substituted items, which exceed the limits laid down in schedule F, the contractor may within fifteen days of receipt of order or occurrence of the excess, claim revision of the rates, supported by proper analysis for the work in excess of the above mentioned limits, provided that if the rates so claimed are in excess of the rates specified in the schedule of quantities, the Engineer-in-Charge shall within prescribed time limit of

receipt of the claims supported by analysis, after giving consideration to the analysis of the rates submitted by the contractor, determine the rates on the basis of the market rates and the contractor shall be paid in accordance with the rates so determined.

#### **B. For Maintenance works including works of upgradation, aesthetic, special repair, addition/ alteration:**

In the case of contract items, which exceed the limits laid down in schedule F, the contractor shall be paid rates specified in the schedule of quantities.

The prescribed time limits for finalising rates for Extra Item(s), Substitute Item(s) and Deviated Quantities of contract items are as under:

(i) If the Tendered value of work is up to Rs. 45 lac : 30 days. (ii) If the Tendered value of work is more than Rs 45 lac and up to Rs. 2.5 Crore :

45 days.

(iii) If the Tendered value of work exceeds Rs. 2.5 Crore :

60 days.

#### **12.3 A. For Project and original works:**

The provisions of the preceding paragraph shall also apply to the decrease in the rates of items for the work in excess of the limits laid down in Schedule F, and the Engineer-in-Charge shall after giving notice to the contractor within one month of occurrence of the excess and after taking into consideration any reply received from him within fifteen days of the receipt of the notice, revise the rates for the work in question within one month of the expiry of the said period of fifteen days having regard to the market rates.

#### **B. For Maintenance works including works of upgradation, aesthetic, special repair, addition/ alteration:**

In case of decrease in the rates prevailing in the market of items for the work in excess of the limits laid down in Schedule F, the Engineer-in-Charge shall after giving notice to the contractor within one month of occurrence of the excess and after taking into consideration any reply received from him within fifteen days of the receipt of the notice, revise the rates for the work in question within one month of the expiry of the said period of fifteen days having regard to the market rates.

**12.4** The contractor shall send to the Engineer-in-Charge once every three months, an up to date account giving complete details of all claims for additional payments to which the

contractor may consider himself entitled and of all additional work ordered by the Engineer-in-Charge which he has executed during the preceding quarter failing which the contractor shall be deemed to have waived his right. However, the Project In Charge may authorise consideration of such claims on merits.

**12.5** For the purpose of operation of Schedule "F", the following works shall be treated as works relating to foundation unless & otherwise defined in the contract:

(i) For Buildings : All works up to 1.2 metres above ground level or up to floor 1 level whichever is lower.

(ii) For abutments, piers and well staining : All works up to 1.2 m above the bed level.

(iii) For retaining walls, wing walls, compound walls, chimneys, over head reservoirs/ tanks and other elevated structures : All works up to 1.2 metres above the ground level. (iv) For reservoirs/tanks (other than overhead reservoirs/tanks) : All works up to 1.2 metres above the ground level.

(v) For basement: All works up to 1.2 m above ground level or up to floor 1 level whichever is lower.

(vi) For Roads, all items of excavation and filling including treatment of sub base.

**12.6** Any operation incidental to or necessarily has to be in contemplation of tenderer while filing. tender, or necessary for proper execution of the item included in the Schedule of quantities or in the schedule of rates mentioned above, whether or not, specifically indicated in the description of the item and the relevant specifications, shall be deemed to be included in the rates quoted by the tenderer or the rate given in the said schedule of rates, as the case may be. Nothing extra shall be admissible for such operations.

### **CLAUSE 13**

#### **Foreclosure of contract due to Abandonment or Reduction in Scope of Work**

If at any time after acceptance of the tender, Engineer-in-charge shall decide to abandon or reduce the scope of the works for any reason whatsoever and hence not require the whole or any part of the works to be carried out, the Engineer-in-Charge shall give notice in writing to that effect to the contractor and the contractor shall act accordingly in the matter. The contractor shall have no claim to any payment of compensation or otherwise whatsoever, on account of any profit or advantage which he might have derived from the execution of the works in full but which he did not derive in consequence of the foreclosure of the whole or part of the works.

The contractor shall be paid at contract rates, full amount for works executed at site and, in addition, a reasonable amount as certified by the Engineer-in-Charge for the items hereunder mentioned which could not be utilized on the work to the full extent in view of the foreclosure;

(i) Any expenditure incurred on preliminary site work, e.g. temporary access roads, temporary labour huts, staff quarters and site office; storage accommodation and water storage tanks.

(ii) Government shall have the option to take over contractor's materials or any part thereof either brought to site or of which the contractor is legally bound to accept delivery

from suppliers (for incorporation in or incidental to the work) provided, however Government shall be bound to take over the materials or such portions thereof as the contractor does not desire to retain. For materials taken over or to be taken over by Government, cost of such materials as detailed by Engineer-in- Charge shall be paid. The cost shall, however, take into account purchase price, cost of transportation and deterioration or damage which may have been caused to materials whilst in the custody of the contractor.

(iii) If any materials supplied by Government are rendered surplus, the same except normal wastage shall be returned by the contractor to Government at rates not exceeding those at which these were originally issued, less allowance for any deterioration or damage which may have been caused whilst the materials were in the custody of the contractor.

In addition, cost of transporting such materials from site to Government stores, if so required by Government, shall be paid.

(iv) Reasonable compensation for transfer of T & P from site to contractor's permanent stores or to his other works, whichever is less. If T & P are not transported to either of the said places, no cost of transportation shall be payable.

(v) Reasonable compensation for repatriation of contractor's site staff and imported labour to the extent necessary.

The contractor shall, if required by the Engineer- in-Charge, furnish to him, books of account, wage books, time sheets and other relevant documents and evidence as may be necessary to enable him to certify the reasonable amount payable under this condition.

The reasonable amount of items on (i), (iv) and (v) above shall not be in excess of 2% of the cost of the work remaining incomplete on the date of closure, i.e. total stipulated cost of the work as per accepted tender less the cost of work actually executed under the contract and less the cost of contractor's materials at site taken over by the Government as per item (ii) above. Provided always that against any payments due to the contractor on this account or otherwise, the Engineer-in-Charge shall be entitled to recover or be credited with any outstanding balances due from the contractor for advance paid in respect of any tool, plants and materials and any other sums which at the date of termination were recoverable by the Government from the contractor under the terms of the contract.

A compensation for such eventuality, on account of damages etc. shall be payable @ 0.5% of cost of work remaining incomplete on date of closure i.e. total stipulated cost of the work less the cost of work actually executed under the contract shall be payable.

#### **Clause 14**

##### **Carrying out part work at risk & cost of contractor**

If contractor:

(i) At any time makes default during currency of work or does not execute any part of the work with due diligence and continues to do so even after a notice in writing of 7 days in this respect from the Engineer-in-Charge; or

(ii) Commits default in complying with any of the terms and conditions of the contract and does not remedy it or takes effective steps to remedy it within 7 days even after a notice in writing is given in that behalf by the Engineer-in-Charge; or



Fails to complete the work(s) or items of work with individual dates of completion, on or before the date(s) so determined, and does not complete them within the period specified in the notice given in writing in that behalf by the Engineer-in-Charge.

The Engineer- in-Charge without invoking action under clause 3 may, without prejudice to any other right or remedy against the contractor which have either accrued or accrue thereafter to Government, by a notice in writing to take the part work / part incomplete work of any item(s) out of his hands and shall have powers to:

(a) Take possession of the site and any materials, constructional plant, implements, stores, etc., thereon; and/or

(b) Carry out the part work / part incomplete work of any item(s) by any means at the risk and cost of the contractor.

The Engineer-in-Charge shall determine the amount, if any, is recoverable from the contractor for completion of the part work/ part incomplete work of any item(s) taken out of his hands and execute at the risk and cost of the contractor, the liability of contractor on account of loss or damage suffered by Government because of action under this clause shall not exceed 10% of the tendered value of the work.

In determining the amount, credit shall be given to the contractor with the value of work done in all respect in the same manner and at the same rate as if it had been carried out by the original contractor under the terms of his contract, the value of contractor's materials taken over and incorporated in the work and use of plant and machinery belonging to the contractor. The certificate of the Engineer-in-Charge as to the value of work done shall be final and conclusive against the contractor provided always that action under this clause shall only be taken after giving notice in writing to the contractor. Provided also that if the expenses incurred by the IIT Indore are less than the amount payable to the contractor at his agreement rates, the difference shall not be payable to the contractor.

Any excess expenditure incurred or to be incurred by Government in completing the part work/ part incomplete work of any item(s) or the excess loss of damages suffered or may be suffered by Government as aforesaid after allowing such credit shall without prejudice to any other right or remedy available to Government in law or per as agreement be recovered from any money due to the contractor on any account, and if such money is insufficient, the contractor shall be called upon in writing and shall be liable to pay the same within 30 days.

If the contractor fails to pay the required sum within the aforesaid period of 30 days, the Engineer-in-Charge shall have the right to sell any or all of the contractors' unused materials, constructional plant, implements, temporary building at site etc. and adjust the proceeds of sale thereof towards the dues recoverable from the contractor under the contract and if thereafter there remains any balance outstanding, it shall be recovered in accordance with the provisions of the contract.

In the event of above course being adopted by the Engineer-in-Charge, the contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any materials or entered into any engagements or made any

advance on any account or with a view to the execution of the work or the performance of the contract.

**CLAUSE 15**  
**Suspension of Work**

(i) The contractor shall, on receipt of the order in writing of the Engineer-in-Charge, (whose decision shall be final and binding on the contractor) suspend the progress of the works or any part thereof for such time and in such manner as the Engineer-in-Charge may consider necessary so as not to cause any damage or injury to the work already done or endanger the safety thereof for any of the following reasons:

(a) on account of any default on the part of the contractor or;

(b) for proper execution of the works or part thereof for reasons other than the default of the contractor; or

(c) for safety of the works or part thereof.

The contractor shall, during such suspension, properly protect and secure the works to the extent necessary and carry out the instructions given in that behalf by the Engineer-in-Charge.

(ii) If the suspension is ordered for reasons (b) and (c) in sub-para (i) above:

(a) the contractor shall be entitled to an extension of time equal to the period of every such suspension PLUS 25%, for completion of the item or group of items of work for which a separate period of completion is specified in the contract and of which the suspended work forms a part, and;

(b) If the total period of all such suspensions in respect of an item or group of items or work for which a separate period of completion is specified in the contract exceeds thirty days, the contractor shall, in addition, be entitled to such compensation as the Engineer-in-Charge may consider reasonable in respect of salaries and/or wages paid by the contractor to his employees and labour at site, remaining idle during the period of suspension, adding thereto 2% to cover indirect expenses of the contractor provided the contractor submits his claim supported by details to the Engineer-in-Charge within fifteen days of the expiry of the period of 30 days.

(iii) If the works or part thereof is suspended on the orders of the Engineer-in-Charge for more than three months at a time, except when suspension is ordered for reason (a) in subpara (i) above, the contractor may after receipt of such order serve a written notice on the Engineer-in-Charge requiring permission within fifteen days from receipt by the Engineer-in-Charge of the said notice, to proceed with the work or part thereof in regard to which progress has been suspended and if such permission is not granted within that time, the contractor, if he intends to treat the suspension, where it affects only a part of the works as an omission of such part by Government or where it affects whole of the works, as an abandonment of the works by Government, shall within ten days of expiry of such period of 15 days give notice in writing of his intention to the Engineer-in-Charge. In the event of the contractor treating the suspension as an abandonment of the contract by Government, he shall have no claim to payment of any compensation on account of any profit or

advantage which he might have derived from the execution of the work in full but which he could not derive in consequence of the abandonment. He shall, however, be entitled to such compensation, as the Engineer-in-Charge may consider reasonable, in respect of salaries and/or wages paid by him to his employees and labour at site, remaining idle in consequence adding to the total thereof 2% to cover indirect expenses of the contractor provided the contractor submits his claim supported by details to the Engineer-in-Charge within 30 days of the expiry of the period of 3 months.

#### **CLAUSE 15 A**

##### **Compensation in case of Delay of Supply of Material by Govt.**

The contractor shall not be entitled to claim any compensation from Government for the loss suffered by him on account of delay by Government in the supply of materials in schedule 'B' where such delay is covered by the difficulties relating to the supply of wagons, force majeure or any reasonable cause beyond the control of the Government.

This clause 15 A will not be applicable for works where no material is stipulated.

#### **CLAUSE 16**

##### **Action in case Work not done as per Specifications**

All works under or in course of execution or executed in pursuance of the contract, shall at all times be open and accessible to the inspection and supervision of the Engineer-Incharge, his authorized subordinates in charge of the work and all the superior officers, officer of the Quality Assurance Unit of the IIT Indore or any organization engaged by the

IIT Indore for Quality Assurance and of the Chief Technical Examiner's Office, and the contractor shall, at all times, during the usual working hours and at all other times at which reasonable notice of the visit of such officers has been given to the contractor, either himself be present to receive orders and instructions or have a responsible agent duly accredited in writing, present for that purpose. Orders given to the Contractor's agent shall be considered to have the same force as if they had been given to the contractor himself.

If it shall appear to the Engineer-in-charge or his authorized subordinates incharge of the work or to the Project In Charge in charge of Quality Assurance or his subordinate officers or the officers of the organization engaged by the IIT Indore for Quality Assurance or to the Chief Technical Examiner or his subordinate officers, that any work has been executed with unsound, imperfect, or unskillful workmanship, or with materials or articles provided by him for the execution of the work which are unsound or of a quality inferior to that contracted or otherwise not in accordance with the contract, the contractor shall, on demand in writing which shall be made within twelve months (six months in the case of work costing Rs. 10 Lac and below except road work) of the completion of the work from the Engineer-in-Charge specifying the work, materials or articles complained of notwithstanding that the same may have been passed, certified and paid for forthwith rectify, or remove and reconstruct the work so specified in whole or in part, as the case may require or as the case may be, remove the materials or articles so specified and provide other proper and suitable materials or articles at his own charge and cost. In the event of the failing to do so within a period specified by the Engineer-in- Charge in his demand aforesaid, then the contractor shall be liable to pay compensation at the same rate as under clause 2 of the contract (for non-completion of the work in time) for this default.

In such case the Engineer-in-Charge may not accept the item of work at the rates applicable under the contract but may accept such items at reduced rates as the authority specified in schedule „F“ may consider reasonable during the preparation of on account bills or final bill if the item is so acceptable without detriment to the safety and utility of the item and the structure or he may reject the work outright without any payment and/or get it and other connected and incidental items rectified, or removed and re-executed at

the risk and cost of the contractor. Decision of the Engineer-in-Charge to be conveyed in writing in respect of the same will be final and binding on the contractor

#### **CLAUSE 17**

##### **Contractor Liable for Damages, defects during defect liability period**

If the contractor or his working people or servants shall break, deface, injure or destroy any part of building in which they may be working, or any building, road, road kerb, fence, enclosure, water pipe, cables, drains, electric or telephone post or wires, trees, grass or grassland, or cultivated ground contiguous to the premises on which the work or any part is being executed, or if any damage shall happen to the work while in progress, from any cause whatever or if any defect, shrinkage or other faults appear in the work within twelve months (six months in the case of work costing Rs. Ten lacs and below except road work) after a certificate final or otherwise of its completion shall have been given by the Engineer-in-Charge as aforesaid arising out of defect or improper materials or workmanship the contractor shall upon receipt of a notice in writing on that behalf make the same good at his own expense or in default the Engineer-in-Charge cause the same to be made good by other workmen and deduct the expense from any sums that may be due or at any time thereafter may become due to the contractor, or from his security deposit or the proceeds of sale thereof or of a sufficient portion thereof. The security deposit of the contractor shall not be refunded before the expiry of twelve months (six months in the case of work costing Rs. Ten lacs and below except road work) after the issue of the certificate final or otherwise, of completion of work, or till the final bill has been prepared and passed whichever is later. Provided that in the case of road work, if in the opinion of the Engineer-in-Charge, half of the security deposit is sufficient, to meet all liabilities of the contractor under this contract, half of the security deposit will be refundable after six months and the remaining half after twelve months of the issue of the said certificate of completion or till the final bill has been prepared and passed whichever is later.

In case of Maintenance and Operation works of E&M services, the security deposit deducted from contractors shall be refunded within one month from the date of final payment or within one month from the date of completion of the maintenance contract whichever is earlier.

#### **CLAUSE 18**

##### **Contractor to Supply Tools & Plants etc.**

The contractor shall provide at his own cost all materials (except such special materials, if any, as may in accordance with the contract be supplied from the Engineer-in-Charge“s stores), machinery, tools & plants as specified in schedule F. In addition to this, appliances, implements, other plants, ladders, cordage, tackle, scaffolding and temporary works required for the proper execution of the work, whether original, altered or substituted and whether included in the specifications or other documents forming part of the contract or referred to in these conditions or not, or which may be necessary for the purpose of

satisfying or complying with the requirements of the Engineer-in-Charge as to any matter as to which under these conditions he is entitled to be satisfied, or which he is entitled to require together with carriage therefore to and from the work. The contractor shall also supply without charge the requisite number of persons with the means and materials, necessary for the purpose of setting out works, and counting, weighing and assisting the measurement for examination at any time and from time to time of the work or materials. Failing his so doing, the same may be provided by the Engineer-in-Charge at the expense of the contractor and the expenses may be deducted, from any money due to the contractor, under this contract or otherwise and/or from his security deposit or the proceeds of sale thereof, or of a sufficient portions thereof.

#### **CLAUSE 18 A**

##### **Recovery of Compensation paid to Workmen**

In every case in which by virtue of the provisions sub-section (1) of Section 12, of the

Workmen's Compensation Act, 1923, Government is obliged to pay compensation to a workman employed by the contractor, in execution of the works, Government will recover from the contractor, the amount of the compensation so paid; and, without prejudice to the rights of the Government under sub-section (2) of Section 12, of the said Act, Government shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due by Government to the contractor whether under this contract or otherwise. Government shall not be bound to contest any claim made against it under sub-section (1) of Section 12, of the said Act, except on the written request of the contractor and upon his giving to Government full security for all costs for which Government might become liable in consequence of contesting such claim.

#### **CLAUSE 18 B**

##### **Ensuring Payment and Amenities to Workers if Contractor fails**

In every case in which by virtue of the provisions of the Contract Labour (Regulation and Abolition) Act, 1970, and of the Contract Labour (Regulation and Abolition) Central Rules, 1971, Government is obliged to pay any amounts of wages to a workman employed by the contractor in execution of the works, or to incur any expenditure in providing welfare and health amenities required to be provided under the above said Act and the rules under

Clause 19H or under the C.P.W.D. Contractor's Labour Regulations, or under the Rules framed by Government from time to time for the protection of health and sanitary arrangements for workers employed by C.P.W.D. Contractors, Government will recover from the contractor, the amount of wages so paid or the amount of expenditure so incurred; and without prejudice to the rights of the Government under sub-section(2) of Section 20, and sub-section (4) of Section 21, of the Contract Labour (Regulation and Abolition) Act, 1970, Government shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due by Government to the contractor whether under this contract or otherwise Government shall not be bound to contest any claim made against it under sub-section (1) of Section 20, sub-section (4) of Section 21, of the said Act, except on the written request of the contractor and upon his giving to the Government full security for all costs for which Government might become liable in contesting such claim.

#### **CLAUSE 19**

##### **Labour Laws to be complied by the Contractor**

The contractor shall obtain a valid licence under the Contract Labour (R&A) Act, 1970, and the Contract Labour (Regulation and Abolition) Central Rules, 1971, before the commencement of the work, and continue to have a valid license until the completion of the work. The contractor shall also abide by the provisions of the Child Labour (Prohibition and Regulation) Act, 1986.

The contractor shall also comply with the provisions of the building and other Construction Workers (Regulation of Employment & Conditions of Service) Act, 1996 and the building and other Construction Workers Welfare Cess Act, 1996.

Any failure to fulfil these requirements shall attract the penal provisions of this contract arising out of the resultant non-execution of the work.

#### **CLAUSE 19A**

No labour below the age of fourteen years shall be employed on the work.

#### **CLAUSE 19 B**

##### **Payment of Wages**

Payment of wages:

(i) The contractor shall pay to labour employed by him either directly or through subcontractors, wages not less than fair wages as defined in the C.P.W.D. Contractor's

Labour Regulations or as per the provisions of the Contract Labour (Regulation and Abolition) Act, 1970 and the contract Labour (Regulation and Abolition) Central Rules, 1971, wherever applicable.

(ii) The contractor shall, notwithstanding the provisions of any contract to the contrary, cause to be paid fair wage to labour indirectly engaged on the work, including any labour engaged by his sub-contractors in connection with the said work, as if the labour had been immediately employed by him.

(iii) In respect of all labour directly or indirectly employed in the works for performance of the contractor's part of this contract, the contractor shall comply with or cause to be complied with the Central Public Works IIT Indore contractor's Labour Regulations made by Government from time to time in regard to payment of wages, wage period, deductions from wages recovery of wages not paid and deductions unauthorisedly made, maintenance of wage books or wage slips, publication of scale of wages and other terms of employment, inspection and submission of periodical returns and all other matters of the like nature or as per the provisions of the Contract Labour (Regulation and Abolition) Act, 1970, and the Contract Labour (Regulation and Abolition) Central Rules, 1971, wherever applicable.

(iv) (a) The Engineer-in-Charge concerned shall have the right to deduct from the moneys due to the contractor any sum required or estimated to be required for making good the loss suffered by a worker or workers by reason of non-fulfilment of the conditions of the contract for the benefit of the workers, non-payment of wages or of deductions made from his or their wages which are not justified by their terms of the contract or non-observance of the Regulations.

(b) Under the provision of Minimum Wages (Central) Rules, 1950, the contractor is bound to allow to the labours directly or indirectly employed in the works one day rest for 6 days continuous work and pay wages at the same rate as for duty. In the event of default, the Engineer-in-Charge shall have the right to deduct the sum or sums not paid on account of

wages for weekly holidays to any labours and pay the same to the persons entitled thereto from any money due to the contractor by the Engineer-in-Charge concerned.

In the case of Union Territory of Delhi, however, as the all inclusive minimum daily wages fixed under Notification of the Delhi Administration No.F.12(162)MWO/DAB/43884-91, dated 31-12-1979 as amended from time to time are inclusive of wages for the weekly day of rest, the question of extra payment for weekly holiday would not arise.

(v) The contractor shall comply with the provisions of the Payment of Wages Act, 1936,

Minimum Wages Act, 1948, Employees Liability Act, 1938, Workmen's Compensation Act, 1923, Industrial Disputes Act, 1947, Maternity Benefits Act, 1961, and the Contractor's

Labour (Regulation and Abolition) Act 1970, or the modifications thereof or any other laws relating thereto and the rules made thereunder from time to time.

(vi) The contractor shall indemnify and keep indemnified Government against payments to be made under and for the observance of the laws aforesaid and the C.P.W.D. Contractor's Labour Regulations without prejudice to his right to claim indemnity from his sub-contractors.

(vii) The laws aforesaid shall be deemed to be a part of this contract and any breach thereof shall be deemed to be a breach of this contract.

(viii) Whatever is the minimum wage for the time being, or if the wage payable is higher than such wage, such wage shall be paid by the contractor to the workmen directly without the intervention of Jamadar and that Jamadar shall not be entitled to deduct or recover any amount from the minimum wage payable to the workmen as and by way of commission or otherwise.

(ix) The contractor shall ensure that no amount by way of commission or otherwise is deducted or recovered by the Jamadar from the wage of workmen.

#### **CLAUSE 19C**

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

#### **CLAUSE 19 D**

The contractor shall submit by the 4th and 19th of every month, to the Engineer-in-Charge, a true statement showing in respect of the second half of the preceding month and the first half of the current month respectively:-

(1) the number of labourers employed by him on the work,

- (2) their working yours,
- (3) the wages paid to them,

(4) the accidents that occurred during the said fortnight showing the circumstances under which they happened and the extent of damage and injury caused by them, and

(5) the number of female workers who have been allowed maternity benefit according to Clause 19F and the amount paid to them.

Failing which the contractor shall be liable to pay to Government, a sum not exceeding Rs.200/- for each default or materially incorrect statement. The decision of the Executive Engineer shall be final in deducting from any bill due to the contractor, the amount levied as fine and be binding on the contractor.

#### **CLAUSE 19 E**

In respect of all labour directly or indirectly employed in the works for the performance of the contractor's part of this contract, the contractor shall comply with or cause to be complied with all the rules framed by Government from time to time for the protection of health and sanitary arrangements for workers employed by the Central Public Works IIT Indore and its contractors.

#### **CLAUSE 19 F**

Leave and pay during leave shall be regulated as follows:-

1. Leave :

(i) in the case of delivery - maternity leave not exceeding 8 weeks, 4 weeks up to and including the day of delivery and 4 weeks following that day,

(ii) in the case of miscarriage - upto 3 weeks from the date of miscarriage.

2. Pay :

(i) in the case of delivery - leave pay during maternity leave will be at the rate of the women's average daily earnings, calculated on total wages earned on the days when full time work was done during a period of three months immediately preceding the date on which she gives notice that she expects to be confined or at the rate of Rupee one only a day whichever is greater.

(ii) in the case of miscarriage - leave pay at the rate of average daily earning calculated on the total wages earned on the days when full time work was done during a period of three months immediately preceding the date of such miscarriage.

3. Conditions for the grant of Maternity Leave:

No maternity leave benefit shall be admissible to a woman unless she has been employed for a total period of not less than six months immediately preceding the date on which she proceeds on leave.

4. The contractor shall maintain a register of Maternity (Benefit) in the Prescribed Form as shown in appendix -I and II, and the same shall be kept at the place of work.

#### **CLAUSE 19 G**



In the event of the contractor(s) committing a default or breach of any of the provisions of the Central Public Works IIT Indore, Contractor's Labour Regulations and Model Rules for the protection of health and sanitary arrangements for the workers as amended from time to time or furnishing any information or submitting or filing any statement under the provisions of the above Regulations and" Rules which is materially incorrect, he/they shall, without prejudice to any other liability, pay to the Government a sum not exceeding Rs.200/- for every default, breach or furnishing, making, submitting, filing such materially incorrect statements and in the event of the contractor(s) defaulting continuously in this respect, the penalty may be enhanced to Rs.200/- per day for each day of default subject to a maximum of 5 per cent of the estimated cost of the work put to tender. The decision of the Engineer-in-Charge shall be final and binding on the parties. Should it appear to the Engineer-in-Charge that the contractor(s) is/are not properly observing and complying with the provisions of the C.P.W.D. Contractor's Labour Regulations and Model Rules and the provisions of the Contract Labour (Regulation and Abolition) Act 1970, and the Contract Labour (R& A) Central Rules 1971, for the protection of health and sanitary arrangements for work-people employed by the contractor(s) (hereinafter referred as "the said Rules") the Engineer-in-Charge shall have power to give notice in writing to the contractor(s) requiring that the said Rules be complied with and the amenities prescribed therein be provided to the work-people within a reasonable time to be specified in the notice. If the contractor(s) shall fail within the period specified in the notice to comply with and/observe the said Rules and to provide the amenities to the work-people as aforesaid, the Engineer-in-Charge shall have the power to provide the amenities hereinbefore mentioned at the cost of the contractor(s). The contractor(s) shall erect, make and maintain at his/their own expense and to approved standards all necessary huts and sanitary arrangements required for his/their work-people on the site in connection with the execution of the works, and if the same shall not have been erected or constructed, according to approved standards, the Engineer-in-Charge shall have power to give notice in writing to the contractor(s) requiring that the said huts and sanitary arrangements be remodelled and/or reconstructed according to approved standards, and if the contractor(s) shall fail to remodel or reconstruct such huts and sanitary arrangements according to approved standards within the period specified in the notice, the Engineer-in-Charge shall have the power to remodel or reconstruct such huts and sanitary arrangements according to approved standards at the cost of the contractor(s).

#### **CLAUSE 19 H**

The contractor(s) shall at his/their own cost provide his/their labour with a sufficient number of huts (hereinafter referred to as the camp) of the following specifications on a suitable plot of land to be approved by the Engineer-in-Charge.

(i) (a) The minimum height of each hut at the eaves level shall be 2.10m (7 ft.) and the floor area to be provided will be at the rate of 2.7 sq.m. (30 sq.ft.) for each member of the worker's family staying with the labourer.

(b) The contractor(s) shall in addition construct suitable cooking places having a minimum area of 1.80m x 1.50m (6"x5') adjacent to the hut for each family.

(c) The contractor(s) shall also construct temporary latrines and urinals for the use of the labourers each on the scale of not less than four per each one hundred of the total strength, separate latrines and urinals being provided for women.

(d) The contractor(s) shall construct sufficient number of bathing and washing places, one unit for every 25 persons residing in the camp. These bathing and washing places shall be suitably screened.

(ii) (a) All the huts shall have walls of sun-dried or burnt-bricks laid in mud mortar or other suitable local materials as may be approved by the Engineer-in-Charge. In case of sun-dried bricks, the walls should be plastered with mud gobi on both sides. The floor may be kutcha but plastered with mud gobi and shall be at least 15 cm (6") above the surrounding ground. The roofs shall be laid with thatch or any other materials as may be approved by the Engineer-in-Charge and the contractor shall ensure that throughout the period of their occupation, the roofs remain water-tight.

(b) The contractor(s) shall provide each hut with proper ventilation.

(c) All doors, windows, and ventilators shall be provided with suitable leaves for security purposes.

(d) There shall be kept an open space of at least 7.2m (8 yards) between the rows of huts which may be reduced to 6m (20 ft.) according to the availability of site with the approval of the Engineer-in-Charge. Back to back construction will be allowed.

(iii) Water Supply - The contractor(s) shall provide adequate supply of water for the use of labourers. The provisions shall not be less than two gallons of pure and wholesome water per head per day for drinking purposes and three gallons of clean water per head per day for bathing and washing purposes. Where piped water supply is available, supply shall be at stand posts and where the supply is from wells or river, tanks which may be of metal or masonry, shall be provided. The contractor(s) shall also at his/ their own cost make arrangements for laying pipe lines for water supply to his/ their labour camp from the existing mains wherever available, and shall pay all fees and charges therefore.

(iv) The site selected for the camp shall be high ground, removed from jungle.

(v) Disposal of Excreta - The contractor(s) shall make necessary arrangements for the disposal of excreta from the latrines by trenching or incineration which shall be according to the requirements laid down by the Local Health Authorities. If trenching or incineration is not allowed, the contractor(s) shall make arrangements for the removal of the excreta through the Municipal Committee/authority and inform it about the number of labourers employed so that arrangements may be made by such Committee/authority for the removal of the excreta. All charges on this account shall be borne by the contractor and paid direct by him to the Municipality/authority. The contractor shall provide one sweeper for every eight seats in case of dry system.

(vi) Drainage - The contractor(s) shall provide efficient arrangements for draining away sullage water so as to keep the camp neat and tidy.

(vii) The contractor(s) shall make necessary arrangements for keeping the camp area sufficiently lighted to avoid accidents to the workers.

(viii) Sanitation - The contractor(s) shall make arrangements for conservancy and sanitation in the labour camps according to the rules of the Local Public Health and Medical Authorities.

#### **CLAUSE 19 I**

The Engineer-in-Charge may require the contractor to dismiss or remove from the site of the work any person or persons in the contractors' employ upon the work who may be

incompetent or misconduct himself and the contractor shall forthwith comply with such requirements. In respect of maintenance/repair or renovation works etc. where the labour have an easy access to the individual houses, the contractor shall issue identity cards to the labourers, whether temporary or permanent and he shall be responsible for any untoward action on the part of such labour. AE/JE will display a list of contractors working in the colony/Blocks on the notice board in the colony and also at the service centre, to apprise the residents about the same.

#### **CLAUSE 19J**

It shall be the responsibility of the contractor to see that the building under construction is not occupied by any body unauthorisedly during construction, and is handed over to the Engineer-in-Charge with vacant possession of complete building. If such building though completed is occupied illegally, then the Engineer-in-Charge shall have the option to refuse to accept the said building/buildings in that position. Any delay in acceptance on this account will be treated as the delay in completion and for such delay, a levy upto 5% of tendered value of work may be imposed by the Project In Charge whose decision shall be final both with regard to the justification and quantum and be binding on the contractor.

However, the Project In Charge, through a notice, may require the contractor to remove the illegal occupation any time on or before construction and delivery.

#### **CLAUSE 19K**

##### **Employment of skilled/semi-skilled workers**

The contractor shall, at all stages of work, deploy skilled/semi-skilled tradesmen who are qualified and possess certificate in particular trade from CPWD Training Institute/Industrial Training Institute/National Institute of construction Management and Research (NICMAR)/ National Academy of Construction, CIDC or any similar reputed and recognized Institute managed/ certified by State/Central Government. The number of such qualified tradesmen shall not be less than 20% of total skilled/semi skilled workers required in each trade at any stage of work. The contractor shall submit number of man days required in respect of each trade, its scheduling and the list of qualified tradesmen along with requisite certificate from recognized Institute to Engineer in charge for approval. Notwithstanding such approval, if the tradesmen are found to have inadequate skill to execute the work of respective trade, the contractor shall substitute such tradesmen within two days of written notice from Engineer-in- Charge. Failure on the part of contractor to obtain approval of Engineer-in-Charge or failure to deploy qualified tradesmen will attract a compensation to be paid by contractor at the rate of Rs. 100 per such tradesman per day. Decision of Engineer in Charge as to whether particular tradesman possesses requisite skill and amount of compensation in case of default shall be final and binding.

Provided always, that the provisions of this clause, shall not be applicable for works with estimated cost put to tender being less than Rs. 5 crores.

#### **CLAUSE 19L**

##### **Contribution of EPF and ESI**

The ESI and EPF contributions on the part of employer in respect of this contract shall be paid

by the contractor. These contributions on the part of the employer paid by the contractor shall be reimbursed by the Engineer-in-charge to the contractor on actual basis.

#### **CLAUSE 20**

##### **Minimum Wages Act to be Complied With**

The contractor shall comply with all the provisions of the Minimum Wages Act, 1948, and Contract Labour (Regulation and Abolition) Act, 1970, amended from time to time and rules framed thereunder and other labour laws affecting contract labour that may be brought into force from time to time.

#### **CLAUSE 21**

##### **Work not to be sublet. Action in case of insolvency**

The contract shall not be assigned or sublet without the written approval of the Engineer-in-Charge. And if the contractor shall assign or sublet his contract, or attempt to do so, or become insolvent or commence any insolvency proceedings or make any composition with his creditors or attempt to do so, or if any bribe, gratuity, gift, loan, perquisite, reward or advantage pecuniary or otherwise, shall either directly or indirectly, be given, promised or offered by the contractor, or any of his servants or agent to any public officer or person in the employ of Government in any way relating to his office or employment, or if any such officer or person shall become in any way directly or indirectly interested in the contract, the Engineer-in-Charge on behalf of the Director, IIT Indore shall have power to adopt the course specified in Clause 3 hereof in the interest of Government and in the event of such course being adopted, the consequences specified in the said Clause 3 shall ensue.

#### **CLAUSE 22**

All sums payable by way of compensation under any of these conditions shall be considered as reasonable compensation to be applied to the use of Government without reference to the actual loss or damage sustained and whether or not any damage shall have been sustained.

#### **CLAUSE 23**

##### **Changes in firm's Constitution to be Intimated**

Where the contractor is a partnership firm, the previous approval in writing of the Engineer-in-Charge shall be obtained before any change is made in the constitution of the firm. Where the contractor is an individual or a Hindu undivided family business concern, such approval as aforesaid shall likewise be obtained before the contractor enters into any partnership agreement where under the partnership firm would have the right to carry out the works hereby undertaken by the contractor. If previous approval as aforesaid is not obtained, the contract shall be deemed to have been assigned in contravention of Clause 21 hereof and the same action may be taken, and the same consequences shall ensue as provided in the said Clause 21.

#### **CLAUSE 24**

All works to be executed under the contract shall be executed under the direction and subject to the approval in all respects of the Engineer-in-Charge who shall be entitled to

direct at what point or points and in what manner they are to be commenced, and from time to time carried on.

## **CLAUSE 25**

### **Settlement of Disputes & Arbitration**

Except where otherwise provided in the contract, all questions and disputes relating to the meaning of the specifications, design, drawings and instructions here-in before mentioned and as to the quality of workmanship or materials used on the work or as to any other question, claim, right, matter or thing whatsoever in any way arising out of or relating to the contract, designs, drawings, specifications, estimates, instructions, orders or these conditions or otherwise concerning the works or the execution or failure to execute the same whether arising during the progress of the work or after the cancellation, termination, completion or abandonment thereof shall be dealt with as mentioned hereinafter:

(i) If the contractor considers any work demanded of him to be outside the requirements of the contract, or disputes any drawings, record or decision given in writing by the Engineer-in-Charge

on any matter in connection with or arising out of the contract or carrying out of the work, to be unacceptable, he shall promptly within 15 days request the Project In Charge in writing for written instruction or decision. Thereupon, the Project In Charge shall give his written instructions or decision within a period of one month from the receipt of the contractor's letter.

If the Project In Charge fails to give his instructions or decision in writing within the aforesaid period or if the contractor is dissatisfied with the instructions or decision of the Chief

Engineer, the contractor may, within 15 days of the receipt of Project In Charge's decision, appeal to the Director, IIT Indore who shall afford an opportunity to the contractor to be heard, if the latter so desires, and to offer evidence in support of his appeal. The Director,

IIT Indore shall give his decision within 30 days of receipt of contractor's appeal. If the contractor is dissatisfied with the decision of the Director, IIT Indore, the contractor may within 30 days from the receipt of the Director, IIT Indore decision, appeal before the Dispute Redressal Committee (DRC) along with a list of disputes with amounts claimed in respect of each such dispute and giving reference to the rejection of his disputes by the Director, IIT Indore. The Dispute Redressal Committee (DRC) shall give his decision within a period of 90 days from the receipt of Contractor's appeal. The constitution of Dispute Redressal Committee (DRC) shall be as indicated in Schedule „F“. If the Dispute

Redressal Committee (DRC) fails to give his decision within the aforesaid period or any party is dissatisfied with the decision of Dispute Redressal Committee (DRC), then either party may within a period of 30 days from the receipt of the decision of Dispute Redressal Committee (DRC), give notice to the Director IIT Indore for appointment of arbitrator on prescribed proforma as per Appendix XV, failing which the said decision shall be final binding and conclusive and not referable to adjudication by the arbitrator.

It is a term of contract that each party invoking arbitration must exhaust the aforesaid mechanism of settlement of claims/disputes prior to invoking arbitration.

(ii) Except where the decision has become final, binding and conclusive in terms of Sub Para (i) above, disputes or difference shall be referred for adjudication through arbitration by a sole arbitrator appointed by the Director IIT Indore. If the arbitrator so appointed is unable or unwilling to act or resigns his appointment or vacates his office due to any reason whatsoever, another sole arbitrator shall be appointed in the manner aforesaid.

Such person shall be entitled to proceed with the reference from the stage at which it was left by his predecessor.

It is a term of this contract that the party invoking arbitration shall give a list of disputes with amounts claimed in respect of each such dispute along with the notice for appointment of arbitrator and giving reference to the rejection by the Project In Charge of the appeal.

It is also a term of this contract that no person, other than a person appointed by such Director IIT Indore, as aforesaid, should act as arbitrator and if for any reason that is not possible, the matter shall not be referred to arbitration at all.

It is also a term of this contract that if the contractor does not make any demand for appointment of arbitrator in respect of any claims in writing as aforesaid within 120 days of receiving the intimation from the Engineer-in-charge that the final bill is ready for payment, the claim of the contractor shall be deemed to have been waived and absolutely barred and the Government shall be discharged and released of all liabilities under the contract in respect of these claims.

The arbitration shall be conducted in accordance with the provisions of the Arbitration and Conciliation Act, 1996 (26 of 1996) or any statutory modifications or re-enactment thereof and the rules made thereunder and for the time being in force shall apply to the arbitration proceeding under this clause.

It is also a term of this contract that the arbitrator shall adjudicate on only such disputes as are referred to him by the appointing authority and give separate award against each dispute and claim referred to him and in all cases where the total amount of the claims by any party exceeds Rs. 1,00,000/-, the arbitrator shall give reasons for the award.

It is also a term of the contract that if any fees are payable to the arbitrator, these shall be paid equally by both the parties

It is also a term of the contract that the arbitrator shall be deemed to have entered on the reference on the date he issues notice to both the parties calling them to submit their statement of claims and counter statement of claims. The venue of the arbitration shall be such place as may be fixed by the arbitrator in his sole discretion. The fees, if any, of the arbitrator shall, if required to be paid before the award is made and published, be paid half and half by each of the parties. The cost of the reference and of the award (including the fees, if any, of the arbitrator) shall be in the discretion of the arbitrator who may direct to any by whom and in what manner, such costs or any part thereof shall be paid and fix or settle the amount of costs to be so paid.

## **CLAUSE 26**

### **Contractor to indemnify Govt. against Patent Rights**

The contractor shall fully indemnify and keep indemnified the Director, IIT Indore against any action, claim or proceeding relating to infringement or use of any patent or design or

any alleged patent or design rights and shall pay any royalties which may be payable in respect of any article or part thereof included in the contract. In the event of any claims made under or action brought against Government in respect of any such matters as aforesaid, the contractor shall be immediately notified thereof and the contractor shall be at liberty, at his own expense, to settle any dispute or to conduct any litigation that may arise there from, provided that the contractor shall not be liable to indemnify the Director, IIT Indore if the infringement of the patent or design or any alleged patent or design right is the direct result of an order passed by the Engineer-in-Charge in this behalf

#### **CLAUSE 27**

#### **Lump sum Provisions in Tender-Deleted**

#### **CLAUSE 28**

#### **Action where no Specifications are Specified**

In the case of any class of work for which there is no such specifications as referred to in Clause 11, such work shall be carried out in accordance with the Bureau of Indian Standards Specifications. In case there are no such specifications in Bureau of Indian

Standards, the work shall be carried out as per manufacturers' specifications, if not available then as per District Specifications. In case there are no such specifications as required above, the work shall be carried out in all respects in accordance with the instructions and requirements of the Engineer-in-Charge.

#### **CLAUSE 29**

#### **Withholding and lien in respect of sum due from contractor**

(i) Whenever any claim or claims for payment of a sum of money arises out of or under the contract or against the contractor, the Engineer-in-Charge or the Government shall be entitled to withhold and also have a lien to retain such sum or sums in whole or in part from the security, if any deposited by the contractor and for the purpose aforesaid, the Engineer in- Charge or the Government shall be entitled to withhold the security deposit, if any, furnished as the case may be and also have a lien over the same pending finalisation or adjudication of any such claim. In the event of the security being insufficient to cover the claimed amount or amounts or if no security has been taken from the contractor, the Engineer-in-Charge or the Government shall be entitled to withhold and have a lien to retain to the extent of such claimed amount or amounts referred to above, from any sum or sums found payable or which may at any time thereafter become payable to the contractor under the same contract or any other contract with the Engineer-in-Charge of the Government or any contracting person through the Engineer in-Charge pending finalization of adjudication of any such claim.

It is an agreed term of the contract that the sum of money or moneys so withheld or retained under the lien referred to above by the Engineer-in-Charge or Government will be kept withheld or retained as such by the Engineer-in-Charge or Government till the claim arising out of or under the contract is determined by the arbitrator (if the contract is governed by the arbitration clause) by the competent court, as the case may be and that the contractor will have no claim for interest or damages whatsoever on any account in respect of such withholding or retention under the lien referred to above and duly notified as such to the contractor. For the purpose of this clause, where the contractor is a partnership firm or a limited company, the Engineer-in-Charge or the Government shall be entitled to withhold and also have a lien to retain towards such claimed amount or amounts

in whole or in part from any sum found payable to any partner/limited company as the case may be, whether in his individual capacity or otherwise.

(ii) Government shall have the right to cause an audit and technical examination of the works and the final bills of the contractor including all supporting vouchers, abstract, etc., to be made after payment of the final bill and if as a result of such audit and technical examination any sum is found to have been overpaid in respect of any work done by the contractor under the contract or any work claimed to have been done by him under the contract and found not to have been executed, the contractor shall be liable to refund the amount of over-payment and it shall be lawful for Government to recover the same from him in the manner prescribed in sub-clause (i) of this clause or in any other manner legally permissible; and if it is found that the contractor was paid less than what was due to him under the contract in respect of any work executed by him under it, the amount of such under payment shall be duly paid by Government to the contractor, without any interest thereon whatsoever. Provided that the Government shall not be entitled to recover any sum overpaid, nor the contractor shall be entitled to payment of any sum paid short where such payment has been agreed upon between the Project In Charge or Executive Engineer on the one hand and the contractor on the other under any term of the contract permitting payment for work after assessment by the Project In Charge or the Executive Engineer.

#### **CLAUSE 29A**

##### **Lien in respect of claims in other Contracts**

Any sum of money due and payable to the contractor (including the security deposit returnable to him) under the contract may be withheld or retained by way of lien by the Engineer-in-Charge or the Government or any other contracting person or persons through Engineer-in-Charge against any claim of the Engineer-in-Charge or Government or such other person or persons in respect of payment of a sum of money arising out of or under any other contract made by the contractor with the Engineer- in-Charge or the Government or with such other person or persons.

It is an agreed term of the contract that the sum of money so withheld or retained under this clause by the Engineer-in-Charge or the Government will be kept withheld or retained as such by the Engineer-in-Charge or the Government or till his claim arising out of the same contract or any other contract is either mutually settled or determined by the arbitration clause or by the competent court, as the case may be and that the contractor shall have no claim for interest or damages whatsoever on this account or on any other ground in respect of any sum of money withheld or retained under this clause and duly notified as such to the contractor.

#### **CLAUSE 30**

##### **Employment of coal mining or controlled area labour not permissible-Deleted**

#### **CLAUSE 31**

##### **Unfiltered water Supply-Deleted**

#### **CLAUSE 31 A**

##### **IIT Indore water supply, if available-Deleted**

#### **CLAUSE 32**

##### **Alternate water Arrangements-Deleted**



### **CLAUSE 33**

#### **Return of Surplus materials**

Notwithstanding anything contained to the contrary in this contract, where any materials for the execution of the contract are procured with the assistance of Government either by issue from Government stocks or purchase made under orders or permits or licenses issued by Government, the contractor shall hold the said materials economically and solely for the purpose of the contract and not dispose of them without the written permission of the Government and return, if required by the Engineer-in-Charge, all surplus or unserviceable materials that may be left with him after the completion of the contract or at its termination for any reason whatsoever on being paid or credited such price as the Engineer-in-Charge shall determine having due regard to the condition of the materials. The price allowed to the contractor however shall not exceed the amount charged to him excluding the element of storage charges. The decision of the Engineer-in-Charge shall be final and conclusive. In the event of breach of the aforesaid condition, the contractor shall in addition to throwing himself open to action for contravention of the terms of the licence or permit and/or for criminal breach of trust, be liable to Government for all moneys, advantages or profits resulting or which in the usual course would have resulted to him by reason of such breach.

### **CLAUSE 34**

#### **Hire of Plant & Machinery-Deleted**

### **CLAUSE 35**

#### **Condition relating to use of asphalted materials-Deleted**

### **CLAUSE 36**

#### **Employment of Technical Staff and employees**

Contractors Superintendence, Supervision, Technical Staff & Employees

(i) The contractor shall provide all necessary superintendence during execution of the work and all along thereafter as may be necessary for proper fulfilling of the obligations under the contract.

The contractor shall immediately after receiving letter of acceptance of the tender and before commencement of the work, intimate in writing to the Engineer-in-Charge, the name(s), qualifications, experience, age, address(s) and other particulars along with certificates, of the principal technical representative to be in charge of the work and other technical representative(s) who will be supervising the work. Minimum requirement of such technical representative(s) and their qualifications and experience shall not be lower than specified in Schedule „F“. The Engineer-in-Charge shall within 3 days of receipt of such communication intimate in writing his approval or otherwise of such a representative(s) to the contractor. Any such approval may at any time be withdrawn and in case of such withdrawal, the contractor shall appoint another such representative(s) according to the provisions of this clause. Decision of the tender accepting authority shall be final and binding on the contractor in this respect. Such a principal technical representative and other technical representative(s) shall be appointed by the contractor soon after receipt of the approval from Engineer-in-charge and shall be available at site before start of work.

All the provisions applicable to the principal technical representative under the Clause will also be applicable to other technical representative(s) The principal technical representative

and other technical representative(s) shall be present at the site of work for supervision at all times when any construction activity is in progress and also present himself/themselves, as required, to the Engineer-in-Charge and/or his designated representative to take instructions. Instructions given to the principal technical representative or other technical representative(s) shall be deemed to have the same force as if these have been given to the contractor. The principal technical representative and other technical representative(s) shall be actually available at site fully during all stages of execution of work, during recording/checking/test checking of measurements of works and whenever so required by the Engineer-in-Charge and shall also note down instructions conveyed by the Engineer-in-Charge or his designated representative(s) in the site order book and shall affix his/their signature in token of noting down the instructions and in token of acceptance of measurements/ checked measurements/ test checked measurements. The representative(s) shall not look after any other work. Substitutes, duly approved by Engineer-in-Charge of the work in similar manner as aforesaid shall be provided in event of absence of any of the representative(s) by more than two days.

If the Engineer-in-Charge, whose decision in this respect is final and binding on the contractor, is convinced that no such technical representative(s) is/are effectively appointed or is/are effectively attending or fulfilling the provision of this clause, a recovery (nonrefundable) shall be effected from the contractor as specified in Schedule „F“ and the decision of the Engineer-In-Charge as recorded in the site order book and measurement recorded checked/test checked in Measurement Books shall be final and binding on the contractor. Further if the contractor fails to appoint suitable technical Principal technical representative and/or other technical representative(s) and if such appointed persons are not effectively present or are absent by more than two days without duly approved. Substitute or do not discharge their responsibilities satisfactorily, the Engineer-in-Charge shall have full powers to suspend the execution of the work until such date as suitable other technical representative(s) is/are appointed and the contractor shall be held responsible for the delay so caused to the work. The contractor shall submit a certificate of employment of the technical representative(s) (in the form of copy of Form-16 or CPF deduction issued to the Engineers employed by him) alongwith every on account bill final bill and shall produce evidence if at any time so required by the Engineer-in-Charge.

(ii) The contractor shall provide and employ on the site only such technical assistants as are skilled and experienced in their respective fields and such foremen and supervisory staff as are competent to give proper supervision to the work. The contractor shall provide and employ skilled, semiskilled and unskilled labour as is necessary for proper and timely execution of the work. The Engineer-in-Charge shall be at liberty to object to and require the contractor to remove from the works any person who in his opinion misconducts himself, or is incompetent or negligent in the performance of his duties or whose employment is otherwise considered by the Engineer-in-Charge to be undesirable. Such person shall not be employed again at works site without the written permission of the Engineer-in-Charge and the persons so removed shall be replaced as soon as possible by competent substitutes.

### **CLAUSE 37**

#### **Levy/Taxes payable by Contractor**

(i) Sales Tax/VAT (except Service Tax), Building and other Construction Workers Welfare Cess or any other tax or Cess in respect of this contract shall be payable by the contractor and Government shall not entertain any claim whatsoever in this respect. However, in respect of service tax, same shall be paid by the contractor to the concerned IIT Indore on

demand and it will be reimbursed to him by the Engineer-in-Charge after satisfying that it has been actually and genuinely paid by the contractor.

(ii) The contractor shall deposit royalty and obtain necessary permit for supply of the red bajri, stone, kankar, etc. from local authorities.

If pursuant to or under any law, notification or order any royalty, Cess or the like becomes payable by the Government of India and does not any time become payable by the contractor to the State Government, Local authorities in respect of any material used by the contractor in the works, then in such a case, it shall be lawful to the Government of India and it will have the right and be entitled to recover the amount paid in the circumstances as aforesaid from dues of the contractor.

## **CLAUSE 38**

### **Conditions for reimbursement of levy/taxes if levied after receipt of tenders**

(i) All tendered rates shall be inclusive of all taxes and levies (except Service Tax) payable under respective statutes. However, if any further tax or levy or cess is imposed by Statute, after the last stipulated date for the receipt of tender including extensions if any and the contractor thereupon necessarily and properly pays such taxes/levies/cess, the contractor shall be reimbursed the amount so paid, provided such payments, if any, is not, in the opinion of the Project In Charge (whose decision shall be final and binding on the contractor) attributable to delay in execution of work within the control of the contractor.

(ii) The contractor shall keep necessary books of accounts and other documents for the purpose of this condition as may be necessary and shall allow inspection of the same by a duly authorized representative of the Government and/or the Engineer-in-Charge and shall also furnish such other information/document as the Engineer-in-Charge may require from time to time.

(iii) The contractor shall, within a period of 30 days of the imposition of any such further tax or levy or cess, give a written notice thereof to the Engineer-in-charge that the same is given pursuant to this condition, together with all necessary information relating thereto.

## **CLAUSE 39**

### **Termination of Contract on death of contractor**

Without prejudice to any of the rights or remedies under this contract, if the contractor dies, the Executive Engineer on behalf of the Director, IIT Indore shall have the option of terminating the contract without compensation to the contractor

## **CLAUSE 40**

### **If relative working in IITI then the contractor not allowed to tender**

The contractor shall not be permitted to tender for works in the IITI responsible for award and execution of contracts in which his near relative is posted as Divisional Accountant or as an officer in any capacity between the grades of the Project In Charge and Junior Engineer (both inclusive). He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any Officer

in the IITI. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of this IIT Indore. If however the contractor

is registered in any other IIT Indore, he shall be debarred from tendering in IITI for any breach of this condition.

NOTE: By the term "near relatives" is meant wife, husband, parents and grandparents, children and grandchildren, brothers and sisters, uncles, aunts and cousins and their corresponding in-laws.

#### **CLAUSE 41**

##### **No Gazetted Engineer to work as Contractor within one year of retirement**

No engineer of gazetted rank or other gazetted officer employed in engineering or administrative duties in an engineering IIT Indore of the Government of India shall work as a contractor or employee of a contractor for a period of one year after his retirement from government service without the previous permission of Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found at any time to be such a person who had not obtained the permission of Government of India as aforesaid, before submission of the tender or engagement in the contractor's service, as the case may be.

#### **CLAUSE 42**

##### **Return of material & recovery for excess material issued.**

(i) After completion of the work and also at any intermediate stage in the event of nonreconciliation of materials issued, consumed and in balance - (see Clause 10), theoretical quantity of materials issued by the Government for use in the work shall be calculated on the basis and method given hereunder:-

(a) Quantity of cement & bitumen shall be calculated on the basis of quantity of cement & bitumen required for different items of work as shown in the Schedule of Rates mentioned in Schedule „F“. In case any item is executed for which standard constants for the consumption of cement or bitumen are not available in the above mentioned schedule/statement or cannot be derived from the same shall be calculated on the basis of standard formula to be laid down by the Engineer-in-Charge.

(b) Theoretical quantity of steel reinforcement or structural steel sections shall be taken as the quantity required as per design or as authorized by Engineer-in-Charge, including authorized lappages, chairs etc. plus 3% wastage due to cutting into pieces, such theoretical quantity being determined and compared with the actual issues each diameter wise, section wise and category wise separately

(c) Theoretical quantity of G.I. & C.I. or other pipes, conduits, wires and cables, pig lead and G.I./M.S. sheets shall be taken as quantity actually required and measured plus 5% for wastage due to cutting into pieces (except in the case of G.I./M.S. sheets it shall be 10%), such determination & comparison being made diameter wise & category wise.

(d) For any other material as per actual requirements.

(ii) Over the theoretical quantities of materials so computed a variation shall be allowed as specified in Schedule „F“. The difference in the net quantities of material actually issued to

the contractor and the theoretical quantities including such authorized variation, if not returned by the contractor or if not fully reconciled to the satisfaction of the Engineer-in-Charge within fifteen days of the issue of written notice by the Engineer-in-charge to this effect shall be recovered at the rates specified in Schedule „F“, without prejudice to the provision of the relevant conditions regarding return of materials governing the contract. Decision of Engineer-in-Charge in regard to theoretical quantities of materials, which should have been actually used as per the Annexure of the standard schedule of rates and recovery at rates specified in Schedule „F“, shall be final & binding on the contractor. For non scheduled items, the decision of the Project In Charge regarding theoretical quantities of materials which should have been actually used, shall be final and binding on the contractor.

(iii) The said action under this clause is without prejudice to the right of the Government to take action against the contractor under any other conditions of contract for not doing the work according to the prescribed specifications.

### **CLAUSE 43**

#### **Compensation during warlike situations**

The work (whether fully constructed or not) and all materials, machines, tools and plants, scaffolding, temporary buildings and other things connected therewith shall be at the risk of the contractor until the work has been delivered to the Engineer-in-Charge and a certificate from him to that effect obtained. In the event of the work or any materials properly brought to the site for incorporation in the work being damaged or destroyed in consequence of hostilities or warlike operation, the contractor shall when ordered (in writing) by the Engineer-in-Charge to remove any debris from the site, collect and properly stack or remove in store all serviceable materials salvaged from the damaged work and shall be paid at the contract rates in accordance with the provision of this agreement for the work of clearing the site of debris, stacking or removal of serviceable material and for reconstruction of all works ordered by the Engineer-in-Charge, such

payments being in addition to compensation upto the value of the work originally executed before being damaged or destroyed and not paid for. In case of works damaged or destroyed but not already measured and paid for, the compensation shall be assessed by the Executive Engineer upto Rs.5,000/- and by the Project In Charge concerned for a higher amount. The contractor shall be paid for the damages/destruction suffered and for restoring the material at the rate based on analysis of rates tendered for in accordance with the provision of the contract. The certificate of the Engineer-in-Charge regarding the quality and quantity of materials and the purpose for which they were collected shall be final and binding on all parties to this contract.

Provided always that no compensation shall be payable for any loss in consequence of hostilities or warlike operations (a) unless the contractor had taken all such precautions against air raid as are deemed necessary by the A.R.P. Officers or the Engineer-in-Charge

(b) for any material etc. not on the site of the work or for any tools, plant, machinery, scaffolding, temporary building and other things not intended for the work.

In the event of the contractor having to carry out reconstruction as aforesaid, he shall be allowed such extension of time for its completion as is considered reasonable by the Executive Engineer.

### **CLAUSE 44**

## **Apprentices Act provisions to be complied with**

The contractor shall comply with the provisions of the Apprentices Act, 1961 and the rules and orders issued thereunder from time to time. If he fails to do so, his failure will be a breach of the contract and the Project In Charge may, in his discretion, cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provisions of the said Act.

### **CLAUSE 45**

#### **Release of Security deposit after labour clearance**

Release of Security Deposit of the work shall not be refunded till the contractor produces a clearance deposit after labour certificate from the Labour Officer. As soon as the work is virtually complete the contractor shall apply for the clearance certificate to the Labour Officer under intimation to the Engineer-in-Charge. The Engineer-in-Charge, on receipt of the said communication, shall write to the Labour Officer to intimate if any complaint is pending against the contractor in respect of the work. If no complaint is pending, on record till after 3 months after completion of the work and/or no communication is received from the Labour Officer to this effect till six months after the date of completion, it will be deemed to have received the clearance certificate and the Security Deposit will be released if otherwise due.

**INTEGRITY PACT**

To,  
.....,  
.....,  
.....

Sub: NIT No. .... for the work .....

Dear Sir,

It is here by declared that IIT Indore 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 IIT Indore.

Yours faithfully

Project In Charge

**INTEGRITY PACT**

To,  
Project In Charge,  
.....,

.....

Sub: Submission of Tender for the work of .....

Dear Sir,

I/We acknowledge that IIT Indore is committed to follow the principles thereof as enumerated in the Integrity Agreement enclosed with the tender/bid document.

I/We agree that the Notice Inviting Tender (NIT) is an invitation to offer made on the condition that I/We will sign the enclosed integrity Agreement, which is an integral part of tender documents, failing which I/We will stand disqualified from the tendering process. I/We acknowledge that THE MAKING OF THE BID SHALL BE REGARDED AS AN UNCONDITIONAL AND ABSOLUTE ACCEPTANCE of this condition of the NIT.

I/We confirm acceptance and compliance with the Integrity Agreement in letter and spirit and further agree that execution of the said Integrity Agreement shall be separate and distinct from the main contract, which will come into existence when tender/bid is finally accepted by IIT Indore. I/We acknowledge and accept the duration of the Integrity Agreement, which shall be in the line with Article 1 of the enclosed Integrity Agreement.

I/We acknowledge that in the event of my/our failure to sign and accept the Integrity Agreement, while submitting the tender/bid, IIT Indore shall have unqualified, absolute and unfettered right to disqualify the tenderer/bidder and reject the tender/bid in accordance with terms and conditions of the tender/bid.

Yours faithfully

(Duly authorized signatory of the Bidder)



**To be signed by the bidder and same signatory competent / authorized to sign the relevant contract on behalf of IIT Indore.**

## **INTEGRITY AGREEMENT**

This Integrity Agreement is made at ..... on this ..... day of ..... 20.....

### **BETWEEN**

Director, IIT Indore represented through Project In Charge,

.....,

....., (Hereinafter

referred as the „**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 (NIT No. ....)

(hereinafter referred to as “Tender/Bid”) and intends to award, under laid down

organizational ..... procedure, ..... contract

for.....

(Na

me of work) 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 relation 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**

(1) The Principal/Owner commits itself to take all measures necessary to prevent corruption and to observe the following principles:

(a) 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.

(b) 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.

(c) The Principal/Owner shall endeavour to exclude from the Tender process any person, whose conduct in the past has been of biased nature.

(2) 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 Chief Vigilance Officer 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 Government / IIT Indore 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 participate 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.

(d) 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.

(3) The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

(4) 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 Government interests.

(5) 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, IIT Indore.

**Article 7- Other Provisions**

(1) This Pact is subject to Indian Law, place of performance and jurisdiction is the Head quarters 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 intensions.

(5) It is 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 :

## **SAFETY CODES**

1. Suitable scaffolds should be provided for workmen for all works that cannot safely be done from the ground, or from solid construction except such short period work as can be done safely from ladders. When a ladder is used, an extra mazdoor shall be engaged for holding the ladder and if the ladder is used for carrying materials as well suitable footholds and hand-hold shall be provided on the ladder and the ladder shall be given an inclination not steeper than  $\frac{1}{4}$  to 1( $\frac{1}{4}$  horizontal and 1 vertical.)
2. Scaffolding of staging more than 3.6 m (12ft.) above the ground or floor, swung or suspended from an overhead support or erected with stationary support shall have a guard rail properly attached or bolted, braced and otherwise secured at least 90 cm. (3ft.) high above the floor or platform of such scaffolding or staging and extending along the entire length of the outside and ends there of with only such opening 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.
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 3.6 m (12ft.) above ground level or floor level, they should be closely boarded, should have adequate width and should be suitably fastened as described in (2) above.
4. Every opening in the floor of a building or in a working platform shall be provided with suitable means to prevent the fall of person or materials by providing suitable fencing or railing whose minimum height shall be 90 cm. (3ft.)
5. 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 9m. (30ft.) in length while the width between side rails in rung ladder shall in no case be less than 29 cm. (11½") for ladder upto and including 3 m. (10 ft.) in length. For longer ladders, this width should be increased at least  $\frac{1}{4}$ " for each additional 30 cm. (1 foot) of length. Uniform step spacing of not more than 30 cm shall be kept. Adequate precautions shall be taken to prevent danger from electrical equipment. No materials on any of the sites or work shall be so stacked or placed as to cause danger or inconvenience to any person or the public. The contractor shall provide all necessary fencing and lights to protect the public from accident and shall be bound to bear the expenses of defence of every suit, action or other proceedings at law that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay any damages and cost which may be awarded in any such suit; action or proceedings to any such person or which may, with the consent of the contractor, be paid to compensate any claim by any such person.
6. All necessary personal safety equipment as considered adequate by the Engineer-in-Charge should be kept available for the use of the person 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.
7. An additional clause (viii)(i) of Central Public Works Department Safety Code (iv) the Contractor shall not employ women and men below the age of 18 on the work of painting with product containing lead in any form, wherever men above the age of 18 are

employed on the work of lead painting, the following principles must be observed for such use :

(i) White lead, sulphate of lead or product containing these pigment, shall not be used in painting operation except in the form of pastes or paint ready for use.

(ii) Measures shall be taken, wherever required in order to prevent danger arising from the application of a paint in the form of spray.

(iii) Measures shall be taken, wherever practicable, to prevent danger arising out of from dust caused by dry rubbing down and scraping.

(iv) Adequate facilities shall be provided to enable working painters to wash during and on cessation of work.

(v) Overall shall be worn by working painters during the whole of working period.

(vi) Suitable arrangement shall be made to prevent clothing put off during working hours being spoiled by painting materials.

(vii) Cases of lead poisoning and suspected lead poisoning shall be notified and shall be subsequently verified by medical man appointed by competent authority of C.P.W.D PWD(DA).

(viii) C.P.W.D./PWD (DA) may require, when necessary medical examination of workers.

(ix) Instructions with regard to special hygienic precautions to be taken in the painting trade shall be distributed to working painters.

8. Use of hoisting machines and tackle including their attachments, anchorage and supports shall conform to the standards laid down in the safety codes.

9. All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in safe condition and no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities should be provided at or near places of work.

10. These safety provisions should be brought to the notice of all concerned by display on a notice board at a prominent place at work spot. The person responsible for compliance of the safety code shall be named therein by the contractor.

11. 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 Labour Officer or Engineer-in-Charge of the IIT Indore or their representatives.

12. Notwithstanding the above clauses from (1) to (15), there is nothing in these to exempt the contractor from the operations of any other Act or Rule in force in the Republic of India.



# PROFORMA OF SCHEDULES

## **SCHEDULE 'A'**

Schedule of quantities (as per Part-II).

## **SCHEDULE 'B'**

Schedule of materials to be issued to the contractor. – Deleted.

## **SCHEDULE 'C'**

Tools and plants to be hired to the contractor – Deleted.

## **SCHEDULE 'D'**

Extra schedule for specific requirements/document for the work, if any. - To be intimated later if required.

## **SCHEDULE 'E'**

Reference to General Conditions of contract laid down in the tender document.

Name of Work: "Supply, Installation, Testing, Commissioning & Safety Certification of Passenger Lifts in Faculty Housing building at IIT Indore"

- i) Estimated cost of work: Rs. 99.5 Lakhs
- ii) Earnest money: Rs. 1.99 Lakhs (to be returned after receiving performance guarantee)
- iii) Tender processing fee: Rs. 2,000/-
- iv) Performance Guarantee: 5% of tendered value.
- v) Security Deposit: 2.5% of tendered value.

## **SCHEDULE 'F'**

GENERAL RULES : Officer inviting tender- The Project In Charge, IIT  
& DIRECTIONS Indore.

Maximum percentage for quantity of items of work to be executed beyond which rates are to be determined in accordance with Clauses 12.2 & 12.3.

See below

### **Definitions:**

2(v)	Engineer-in-Charge	Superintending Engineer
2(viii)	Accepting Authority	Director
2(x)	Percentage on cost of materials and labour to cover all overheads and profits.	15%

2(xi)	Standard Schedule of Rates	CPWD PAR 2012
2(xii)	IIT Indore	Project IIT Indore, IIT Indore.
9(ii)	Standard CPWD contract Form GCC 2014, CPWD Form 7/ 8 as modified & corrected.	Upto date.

**Clause 1**

- |      |  |         |
|------|--|---------|
| (i)  | Time allowed for submission of Performance Guarantee from the date of issue of letter of acceptance                                    | 10 Days |
| (ii) | Maximum allowable extension with late fee @ 0.1% per day of Performance Guarantee amount beyond the period provided in (i) above ..... | 10 days |

**Clause 2**

Authority for fixing compensation under clause 2.	Project In Charge/ Director, IIT Indore
---	--

**Clause 2A**

Whether Clause 2A shall be applicable	Yes
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**Clause 5**

Number of days from the date of issue of letter of acceptance for reckoning date of start	07 Days or date of work order whichever is earlier.
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**Mile stone(s) as per table given below: -**

Sl. No.	Description of Milestone (Physical)	Time Allowed in days (from date of start)	Amount to be withheld in case of non achievement of milestone
1	Submission of shop drawings for approval	10 Days	Rs. 5000/-
2	Supply of complete material at site in good condition after approval of shop drawings	45 Days	Rs. 50,000/-
3	Installation of the equipments and accessories at site in good condition	80 Days	Rs. 25,000/-
4	Completion of testing, commissioning	85 Days	Rs. 10,000/-
5	Submission of statutory approvals and handing over to the IIT Indore for beneficiary use	90 Days	Rs. 50,000/-

Time allowed for execution of work.

(90 Days) Three Months.

**Authority to decide:**

- (i) Extension of time – Project In Charge/Director, IIT Indore
- (ii) Rescheduling of mile stones- Project In Charge, IIT Indore
- (iii) Shifting of date of start in case of delay in handing over of site- Project In Charge, IIT Indore

**Clause 6, 6A**

Clause applicable - (6 or 6A)

6 A

**Clause 10B(ii)**

Whether Clause 10 B (ii) shall be applicable

Yes

**Clause 10CA – Deleted.**

**Clause 10CC – Deleted.**

**Clause 11**

Specifications to be followed

for execution of work :As mentioned in the tender document with upto date correction slips.

**12.2 & 12.3** Deviation Limit beyond which clauses  
12.2 & 12.3 shall apply for work

50%

**Clause 16**

Competent Authority for Deciding reduced rates. Director IIT Indore.

**Clause 25**

Constitution of Dispute Redressal Committee (DRC) – Committee constituted by Dean,  
Planning of IIT Indore.

**Clause 36 (i)**

Requirement of Technical Representative(s) and recovery rate

- Requirement of Technical Representative; One,
- Minimum Qualification of Technical Representative; Graduate Engineer /Diploma Engineer
- Discipline; Electrical/Mechanical
- Minimum Experience; Graduate Engineer with minimum 2 years/ Diploma Engineer with 5 year.
- Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of clause 36(i); Rs. 15,000/-

Assistant Engineers retired from Government services that are holding Diploma will be treated at par with Graduate Engineers.

Diploma holder with minimum 10 year relevant experience with a reputed construction co. can be treated at par with Graduate Engineers for the purpose of such deployment subject to the condition that such diploma holders should not exceed 50% of requirement of degree engineers

## **Form of Performance Security (Guarantee) Bank Guarantee Bond**

In consideration of the Director, IIT Indore(hereinafter called "The IIT Indore") having offered to accept the terms and conditions of the proposed agreement between.....and ..... (hereinafter called "the said Contractor(s)") for the work..... (hereinafter called "the said agreement") having agreed to production of an irrevocable Bank Guarantee for Rs. ....

(Rupees ..... only) as a security/guarantee from the contractor(s) for compliance of his obligations in accordance with the terms and conditions in the said agreement.

1. We, ..... (hereinafter referred to as "the Bank") hereby undertake to pay to the IIT Indore an amount not exceeding Rs. .... (Rupees.....

Only) on demand by the IIT Indore.

2. We, .....(indicate the name of the Bank) do hereby undertake to pay the amounts due and payable under this guarantee without any demure, merely on a demand from the IIT Indore stating that the amount claimed as required to meet the recoveries due or likely to be due from the said contractor(s). Any such demand made on the bank shall be conclusive as regards the amount due and payable by the bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. .... (Rupees .....only)

3. We, the said bank further undertake to pay the IIT Indore any money so demanded notwithstanding any dispute or disputes raised by the contractor(s) in any suit or proceeding pending before any court or Tribunal relating thereto, our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability for payment thereunder and the Contractor(s) shall have no claim against us for making such payment.

4. We, ..... (indicate the name of the Bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said agreement and that it shall continue to be enforceable till all the dues of the IIT Indore under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till Engineer-in- Charge on behalf of the

IIT Indore certified that the terms and conditions of the said agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharges this guarantee.

5. We, ..... (indicate the name of the Bank) further agree with the IIT

Indore that the IIT Indore shall have the fullest liberty without our consent and without affecting in any manner our obligation hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said Contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the IIT Indore against the said contractor(s) and to forbear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Contractor(s) or for any forbearance, act of omission on the part of the IIT Indore or any indulgence by the IIT Indore to the said Contractor(s) or by any such matter or thing

whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6. This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor(s).

7. We, ..... (indicate the name of the Bank) lastly undertake not to revoke this guarantee except with the previous consent of the IIT Indore in writing.

8. This guarantee shall be valid up to .....unless extended on demand by the IIT Indore. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to Rs. .... (Rupees .....) and unless a claim in writing is lodged with us within six months of the date of expiry or the extended date of expiry of this guarantee all our liabilities under this guarantee shall stand discharged.

Dated the .....day of .....for.....(indicate the name of the Bank).

# **AGREEMENT**

THIS AGREEMENT made at Indore on the \_\_\_\_\_ day of \_\_\_\_\_ 2017 between INDIAN INSTITUTE OF TECHNOLOGY Indore SIMROL, KHANDWA ROAD, INDORE 453 552 (hereinafter called "The IIT INDORE" which expression shall, unless repugnant to the context or meaning thereof, include its administrators, successors and assigns) of the one part

AND \_\_\_\_\_

\_\_\_ (herein after called "The Contractor" which expression shall, unless repugnant to the context or meaning thereof, include its successors and permitted assigns) of the other part.

## WHEREAS

The IIT INDORE is desirous of carrying out the work of

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ **at IIT Indore**

The Works are to be executed as per the scope of work, technical specifications, drawings etc. as is mentioned in the tender document.

The Contractor has agreed to execute the said works subject to the provisions hereinafter contained and subject also to General Conditions of Contract, Special conditions of contract, Safety Code, Model Rules for the protection of health and other arrangements for workers, Specifications, Preambles and Schedule of Quantities and erection & furnishing schedule (all of which are hereinafter collectively referred to as the „said tender conditions“) and strictly in accordance with the Scope of work annexed hereto at or for the respective rates set out in the Schedule of Quantities amounting to the sum as there under arrived at or such other sums as shall become payable there under (hereinafter referred to as the said tendered amount).

NOW IT IS HEREBY AGREED AS FOLLOWS: -

1. In consideration of the said tendered amount to be paid by The IIT INDORE to the Contractor at the time and in the manner set forth in the said tender conditions and in accordance with the Schedule of Payments to execute and complete the work shown upon the said Drawings strictly in accordance with the specifications and Schedule of Quantities.
2. The said tender conditions, scope of work and the annexure hereto shall be read and considered as forming part of this contract and the parties hereto shall respectfully abide by to the said conditions and perform the agreement on their part respectively contained in the said conditions.

4. The approved drawings if any, notice inviting tenders technical specification etc. shall also form the basis of this contract.
5. This contract is neither a Lump sum Contract, nor a piece work contract, but is a contract on item rate basis to be carried out and to be paid for according to the Schedule of Payments at the rates contained in the Schedule of Quantities.
6. The contract herein contained shall comprise not only the works mentioned above but all subsidiary works connected therewith within the same site as may be ordered to be done from time to time by the said Engineer In charge for the time being, even if such work may not be shown on the said Drawings or described in the said Specifications and Schedule of Quantities.
7. The IIT INDORE reserves to themselves the right of altering the drawings and the nature of the work by adding to or omitting from the scope of work any item of work or portions of the same without prejudice to this contract.
8. Time shall be considered as the essence of this contract and the Contractor hereby agrees to commence the work immediately from the date of work order and shall complete the entire work within the specified period.
9. All payments by the IIT INDORE under this contract shall be made only at Indore.
10. All disputes arising out of or in any way connected with this contract shall be deemed to have arisen at Indore and courts in Indore only shall have jurisdiction to determine the same.
11. That the contract and several parts of this contract have been read by the contractor and fully understood by him. The contractor shall not be entitled for payment beyond tendered quantities unless ordered specifically by written instructions of authorized representative of IIT Indore.
12. This contract shall be signed in duplicate, the original whereof shall be kept in the custody of the IIT INDORE, and the duplicate with the Contractor.

IN WITNESS WHEREOF the IIT INDORE has set his hands hereunto and two duplicates hereof through his duly authorized official and the Contractor has caused these presents and two duplicates hereof under his common seal by his duly authorized representative at the place and on the date month and year first herein above written.

SIGNED, SEALED AND DELIVERED by IIT INDORE, by the hand of

Signature:

Name:

Designation:



IN THE PRESENCE OF

(1) Signature:

Name:

Address:

(2) Signature:

Name:

Address:

SIGNED, SEALED AND DELIVERED BY the Contractor M/s. \_\_\_\_\_  
\_\_\_\_\_.

Signature:

Name:

Designation:

IN THE PRESENCE OF

(1) Signature:

Name:

Address:

(2) Signature:

Name:

Address:

## **SCOPE AND TECHNICAL SPECIFICATION**

### **1.0 Scope and Key Particulars**

1.1 The scope of work shall include design, manufacture, supply, installation, testing, commissioning & Safety Certification of two nos. of 8 passenger and two nos. of 13 passenger Lifts. The Lifts shall be installed in Faculty Housing buildings of IIT Indore as detailed in item 1.3 below. The electric lift shall comprise of the following equipment and auxiliaries, but not be limited to:

- 1.1.1. Permanent magnet motor.
- 1.1.2. Microprocessor based, simplex/duplex, selective collective control with ACVVVF drive with remote monitoring facility & closed loop control using speed encoder on the motor.
- 1.1.3. Traction sheave.
- 1.1.4. Suspension ropes/flat PU belts and their fixtures, as per manufacturer's standard.
- 1.1.5. Counterweight and counterweight frame, guides, guide shoes, fixtures.
- 1.1.6. Lift car complete with car frames, enclosure, platform guide shoes, fixtures, car operating panel, flooring and Mirror (size and location) as per institute requirement.
- 1.1.7. Car guides and fixtures.
- 1.1.8. Car doors.
- 1.1.9. Landing doors with locking device.
- 1.1.10. Car buttons in landing.
- 1.1.11. Safety gears.
- 1.1.12. Governors.
- 1.1.13. Spring Buffers.
- 1.1.14. Electric control panels.
- 1.1.15. Car operating and indicating equipment's.
- 1.1.16. Electric interlock devices for landing & car doors.
- 1.1.17. Terminal stopping & final limit switches.
- 1.1.18. Wiring.
- 1.1.19. Anchor bolts, base plates, nuts, inserts, sleeves, clips, clamps, rails, miscellaneous joints, screws etc.
- 1.1.20. Car lights.
- 1.1.21. Car fans
- 1.1.22. Built in emergency light & alarm unit.
- 1.1.23. Intercom (Hands free type)
- 1.1.24. Car trailing cables
- 1.1.25. Any other parts or components necessary for efficient operation of the lift
- 1.1.26. Transportation of equipment to site.
- 1.1.27. Site erection, testing & commissioning.
- 1.1.28. All other work except bring power cable and main earthing leads and terminating in a suitable SFU/board provide by lift contractor.
- 1.1.29. Safety certification from necessary authorities (Statutory requirements)

- 1.2 The scope shall include all civil, structural, steel works including installation of girders, beams, plates etc. electrical work required for installation of the lifts in the available size, finish of the machine room, shaft & lift well of the building.

**1.3 Quantity and Key Particulars**

Quantity and key particulars of the passenger lifts are furnished below :

S.NO	Items	Requirement as per Tender
	Type & Location	Traction Passenger
1	Capacity :	
	a) No. of Passengers	13
2	Speed	1.0 mps
3	Floor Designation	Ground + 6 floors
4	No. of stops	7
5	No. of openings	7
6	Opening position	All openings on same side
7	Lift Shaft Available	2000 mm wide x 2500 mm deep
8	Car	
9	Floor to Floor Height	3300 mm
10	Car size	As per Manufacturer's design
	a) Available Entrance size	2000 mm wide
12	Pit depth Available	1800 mm
13	Pit Positions	Ground Floor
14	Over Head room above last landing	4500 mm (Approx.)
15	Machine room	Machine Room Less
16	Operation	Collective selective Automatic control (Simplex)
17	Position of counter weight	To be furnished by the Tenderer
18	Three way communication between car and security desk/ BMS Room	YES- to be provided
19	INTERFACE WITH FIRE ALARM SYSTEM TO STOP ELEVATOR AT THE NEAREST FLOOR AND "OPEN DOORS & KEEP THEM OPEN"	YES- to be provided
20	AUTO RESCUE DEVICE	YES- to be provided

S.NO	Items	Requirement as per Tender
	Type & Location	Traction Passenger
1	Capacity :	
	a) No. of Passengers	8
2	Speed	1.5 mps
3	Floor Designation	Ground + 6 floors
4	No. of stops	7

5	No. of openings	7
6	Opening position	All openings on same side
7	Lift Shaft Available	2000 mm wide x 2500 mm deep
8	Car	
9	Floor to Floor Height	3300 mm
10	Car size	As per Manufacturer's design
	a) Available Entrance size	2000 mm wide
12	Pit depth Available	1800 mm
13	Pit Positions	Ground Floor
14	Over Head room above last landing	4500 mm (Approx.)
15	Machine room	Machine Room Less
16	Operation	Collective selective Automatic control (Simplex)
17	Position of counter weight	To be furnished by the Tenderer
18	Three way communication between car and security desk/ BMS Room	YES- to be provided
19	INTERFACE WITH FIRE ALARM SYSTEM TO STOP ELEVATOR AT THE NEAREST FLOOR AND "OPEN DOORS & KEEP THEM OPEN"	YES- to be provided
20	AUTO RESCUE DEVICE	YES- to be provided

- 1.4 The scope of work shall also include providing of comprehensive annual maintenance service for 3 (three) years, which will be effective from the completion of the defect liability period of 1 (one) year. The bidder shall quote for the rates of such AMC as per the format given in the BOQ.

**1.5 Completeness of the work :**

The scope of work considered in this tender shall include all associated civil, structural, electrical & finishing works required for successful installation and commissioning of the lifts. Shaft, well and the machine rooms of some buildings are ready while some are expected to ready shortly for installation of the lifts. The tenderers are therefore requested to inspect the buildings before quoting the rates. Any item(s) which may not have been specifically mentioned in the tender, but required for successful installation of the lifts in respect to their safe & efficient performance and compatibility to the available, size & finish of the spaces provided, shall be included in the scope of work. The tenderer may quote for such item(s) separately in the price bid while furnishing the technical particulars (without price) in the techno-commercial bid. If no such items are quoted in the tender and if during execution necessity of any item(s) not included in the original scope arises, the tenderer (successful) will have to execute all such items of supply / works free of cost.

## **2.0 Following specifications shall apply to all lifts required for the buildings**

### **A) TECHNICAL DESIGN AND SPECIFICATIONS FOR TRACTION LIFTS:**

#### **1.0 GENERAL:**

These specifications are intended to cover the complete installation of the elevator plant in the first class work men like manner and include all work and material as specified. The supply and installation of lift is on turnkey basis. Any item not mentioned in the detailed specifications but required to be provided stands included in the contract amount and nothing extra shall be payable for that.

The elevators shall be suitable for 24 hour round the clock operation.

Safe access for maintenance and removal of all mechanical and electrical parts shall be ensured, without additional scaffolding.

All parts requiring replacement or inspection or lubrication shall be easily accessible without the need for dismantling of other parts/equipment. All electrical cables shall be so laid that they are not liable to damage and can be easily inspected and maintained.

#### **2.0 STANDARDS:**

The standards shall be as indicated in clause for governing codes & permit.

#### **3.0 DRIVING MECHANISM:**

##### **3.1 Elevator Machine:**

The elevator machine shall be suitable for 415 volts, 3 phase, 50 Hz AC supply with a voltage variation of +10% and -20% and shall be placed directly above the hoist way on steel beams resting on machine room floor slab or as per technical parameters.

The elevator machine shall have high efficiency and low power consumption and shall be designed to withstand peak currents in elevator duties. Resilient anti-vibration mountings of suitable design shall be provided to minimize vibration transmission to the building structure.

The elevator machine shall be gearless type and shall consist of a motor, electromechanical brake, sheave shaft and sheaves. Roller bearings shall be provided for the sheave shaft to ensure alignment and long bearing life. The hard alloy cast iron or steel sheave shall have rope grooves to ensure proper traction and minimum rope wears.

Adequate means of lubrication shall be provided for all bearings.

Means of manual operation of the elevator car shall be made by providing winding wheel suitably marked to indicate the direction of the movement to enable to elevator car to be brought to the nearest landing. There shall be a warning display for switching off electrical supply before the manual operations.

### **3.2 Brake:**

The electromagnetic brake shall be spring applied and electrically released. It shall come into action after the elevator has come to a complete halt to hold the car in position. The brake shall operate automatically with the safety devices and failure of the mains. It shall be released electrically. It shall be possible to release the brake manually – such release requiring the action of manual force to move the elevator in short stops.

### **4.0 CONTROL:**

The elevators shall have state of art microprocessor based AC variable voltage variable frequency (ACVVVF) drive. Two/ Three/ Four elevators adjacent to each other in one location shall be provided with Directional Collective Control for two/ three/ four cars with Group Supervisory Control as stipulated in para 8.2.8 of IS 14665 (Part – II/Section – I) : 2000 also called Duplex/ Triplex/ Multiplex Full Collective Control respectively. The control system shall regulate dispatching of individual cars and shall provide service to all floors as different traffic conditions arise minimizing unproductive factors. The system shall respond automatically to UP and DOWN peak, balanced or light traffic etc. Complete detail of these features shall be furnished along with the tender. Some of the technical parameters required are innumerate below. Tenderers shall categorically confirm their compliance or otherwise in the tender.

- a) Starting Current - 1.2 – 1.5 time full load running current
- b) Power saving - 50 – 55%
- c) Leveling accuracy - } 3 mm
- d) Acceptable Voltage Fluctuation - + 10 to -20%
- e) Rate of acceleration/deceleration (M/S<sup>2</sup>) - 0.6 – 1.5 (Adjustable at site)
- f) Maximum jerk (M/S<sup>3</sup>) - 0.7 – 1.5 (Adjustable at site)
- g) Maximum vibration in car horizontal/vertical - 20/18 dBA
- h) Maximum noise level in car during travel - 48 dBA
- i) Maximum noise level in machine room at 1 mtr from machine - 62 dBA
- j) Maximum door noise level while closing and opening at a distance of 1 mtr from car door - 52 dBA

The controller shall be wall/floor mounted, vertical, totally enclosed cubicle type with hinged doors on the front and the rear to provide easy access to all components in the controller. The cubicle shall be well ventilated such that the temperature inside never exceeds the safe limits of the components at ambient room conditions in the machine room.

The controller shall operate within the supply voltage variation of plus 10% to minus 20% of the nominal voltage. An inbuilt voltage stabilizer shall be provided in the controller for the purpose.

The controller shall be complete with relay protection against the following:

- a) Over current
- b) Under voltage
- c) Single phasing
- d) Phase reversal
- e) Earth leakage
- f) Over voltage

The controller shall be designed to cut off the power supply, apply the brake and bring the car to a rest in the event of any of the above failures occurring. The tenderer shall state clearly the form of protection provided for each equipment. If any devices of the electro mechanical type are used the same shall be equipped with arc chutes to prolong the life of contacts. Tenderers shall stipulate the type of devices used and the material of the contacts. Tenderer shall support their offers with complete details of experience, number of elevators installed and operational in India, collaboration for equipment design and manufacture etc.

**a. CAR ENCLOSURE:**

The car shall be enclosed on all sides by means of car body and door. The sides of the car shall be lined with heavy gauge stainless steel sheet plate properly braced and reinforced. The enclosure shall be flush on the inside and securely fastened to the platform.

Side panel of the enclosures shall be constructed out of stainless steel grade 304 scratch resistant Flooring shall be stainless steel chequered plate with all welded seams for liquid tightness. Elevators shall have provision of 20 – 30 mm recess in floor for fixing of granite/floor as per owners choice. (The weight of flooring and Granite should not have any adverse effect on the passenger/load carrying capacity of the lift. In other words, it should not be considered as the weight being carried by the lift and it is in addition to the capacity).

The top flooring shall be of steel with decorative false ceiling/ Acrylic ceiling as per owner's choice. LED on the same shall be warm white or white (as per institute choice).

A selector switch and a set of push buttons shall be provided on the top above the ceiling of the car to operate the elevator locally for inspection and maintenance. The selector switch when set to position "Inspection" shall exclude control from other places and movement of the car in the desired direction shall be effected by the push buttons. A three pin plug socket with a switch for hand lamp shall be fitted on the top of the car for use during maintenance. The roof shall be strong enough to support atleast two persons. Provision for slow speed (1/2 of rated speed) operation from car top in up and down directions in independent mode shall be made to facilitate maintenance of devices in the hoist way. Necessary fittings shall be provided for this purpose.

The light & fan fittings shall have automatic sleep provision. Necessary provisions shall be made for adequate ventilation of the car.

SS Hand railings shall be provided on the three sides of the car. Also the mirror on one of the wall from top to minimum 3 feet from FFL shall be provided.

All finishing materials shall be fireproof or fire resistant conforming to applicable codes.

Car enclosure shall withstand a thrust of 35Kg applied at normally at any points without permanent deformation.

Floor announcement system and back ground music facility shall be provided inside the car (Voice annunciator with suitable music shall be provided in lift car).

**6.0 DOORS:**

### **6.1 Car Door:**

The car entrances for elevators shall be protected by minimum 1000 mm W x 2100 mm (H) automatic power operated, center opening, power doors with stainless steel hairline finish with emergency key opening at all landings as per standard manufacture of respective manufactures (details to be furnished along with the tender). Vision panel shall be provided if required by the owner.

### **6.2 Hoist way Landing Doors:**

The hoist way landings for elevators shall be protected by minimum 1000 mm W x 2100 mm (H) automatic power operated, center opening power door with stainless steel brushed finish with emergency key opening at all landings as per standard manufacture of respective manufacturers (details to be furnished along with the tender). Vision panel shall be provided if required by the owner.

### **6.3 Car & Hoist way Door Protection:**

A full door curtain of rays by multiple infra red cell electronic door detector shall be provided to regulate the closing motion of the doors for entry of the passengers. When a person is entering the car while the doors are closing the detector shall sense the same and hold the doors to permit entry. There shall be no zone in the entire opening that is not monitored by the device.

### **6.4 Car & Hoist way Door Operation:**

The equipment shall be complete with electric door operator for opening and closing of Car & Hoist way landing door. The equipment shall consist of a motor on the elevator car to operate the door when the car is stopping at a landing. The car & hoist way doors shall be mechanically connected such that both move simultaneously for opening and closing. The hoist way landing door shall be provided with an interlock such that.

- a) It shall not be possible for the car to be started or kept in motion until all the landing doors and the car door are locked in the closed position.
- b) It shall not be possible to open the landing door from the landing unless the elevator car is within the particular landing zone.
- c) The car doors & hoist way landing doors open automatically as the car is stopping at a landing. The closing of the car and landing door must occur before the car is set in motion.

### **6.5 Door Hangers and Tracks:**

The car and the landing doors shall be provided with two-point suspension sheave type hangers complete with tracks. Sheaves and rollers shall be steel with moulded nylon collar and shall include shielded ball bearings. Tracks shall be of suitable steel section with smooth surface. The landing doors shall be complete with headers, sills, frames etc. as required.

### **6.6 Car Frame:**

The car frame shall be in accordance with clause-4 of IS 14665 (Part 4-Sec 3) : 2001 made of stainless steel of rigid construction to withstand without permanent deformation the operation of safety gear. The car shall be so mounted on the frame that vibration and noise transmitted to the passengers inside is minimized.



## **7.0 CABIN FAN:**

A Noiseless 400mm sweep pressure fan or blower shall be provided in the elevator cabin with supply grill matching with the interior of the car.

## **8.0 EMERGENCY LIGHTS:**

In addition to normal lighting (LED only) an emergency light unit using sealed Nickel/ Cadmium Maintenance free battery power pack with charger and fluorescent lamp to operate automatically and to illuminate the car for minimum 30 minutes in case of power failure shall be provided in each elevator care.

### **a. AUTOMATIC RESCUE DEVICE & EMERGENCY CRANKING**

Each elevator shall be provided with an electronic state of art Emergency Rescue Drive along with complete accessories including necessary batteries for automatically rescuing trap passengers from the elevator during power failure. The rescue device shall automatically bring the elevator car to the nearest landing and open the door so that the trapped persons can walk out of the elevators. The elevators shall resume normal operation on restoration of power supply.

The hoisting machines shall be provided with a set of special tools including a hand crank to allow release of hoist brake and provide for manual movement of the car in case of emergency. These tools shall be hung up on a tool board fitted to a wall in overhead area, with instructions for their use clearly written on the board both in English and the local language. The elevator system supplier shall qualify his bid with respect to manual cranking. An automatic switch shall be provided to interrupt power to the elevator mains. Upon withdrawal of crank and manual resetting of power monitor switch, power shall be restored.

## **10.0 OPERATION BUTTONS AND INDICATIONS:**

The following operation buttons and indications shall be provided:

### **10.1 In each Elevator Car:**

Full height car operating panel in Stainless steel mirror finish flush mounted shall be provided on one side of the door having:

- a) Led illuminated Push buttons of micro pressure type with Braille markings.
- b) Door open and door close button.
- c) Emergency stop button.
- d) Emergency alarm button.
- e) Two position key operated switch for 'with attendant' and 'without attendant' operation.
- f) Ventilation fan & lights ON/OFF switch with auto OFF facility when there is no call after 120 seconds.
- g) Built in intercom of the hands free type as well as space for providing EPABX telephone instrument and 5 pair telephone trailing cable to communicate from car to machine room receiver and car to Central Monitoring Station (at remote location) and vice-versa.
- h) Digital Display of position and level indication display in the built into COP (Dynamic car direction display).
- i) Audio/Visual overload warning indicator.

### **10.2 At Landings:**

Combined hall buttons at both the entry of lobby with digital display and led illuminated Push buttons with Braille markings.

Hoist way panel to have multiplex collective control (in case of multiple lifts) with ACVVVF drive according to the no. of cars.

Car Position and direction indicator, Floor arrival light and ding indicator. The Threshold at the door landing should be in SS. Floor announcement system and back ground light music facility shall be provided inside the car.

#### **11.0 SAFETY DEVICES:**

All safety devices statutorily required by all prevailing byelaws and Rules/Codes/ Elevator Inspector, including but not restricted to the following shall be provided:

##### **11.1 Terminal and Final Limits:**

Terminal limit switches shall be provided to slow down and stop the car automatically at the terminal landings, and final limit switches shall be furnished to automatically cut off power should the car travel beyond the terminal landings.

##### **11.2 Interlocking:**

Adequate interlocking is to be provided so that the car shall not move if the landing doors are even partially open and also the elevator is overloaded.

##### **11.3 Car Safety and Governor:**

The car shall be provided with over speed governor to stop the car whenever excessive descending speed is attained and safety gears shall be applied automatically if necessary.

##### **11.4 Emergency Stop Switches:**

An emergency stop switch for use by maintenance personal shall be provided in each elevator car and lift pit.

##### **11.5 Self Leveling:**

The elevators shall be provided with automatic self-leveling features of + / - 3mm accuracy.

#### **12.0 FIREMAN SWITCH:**

Each Elevator shall have a Fireman switch with glass from for access by the Fireman. The operation of this switch shall cancel all calls to this elevator and will stop at the next earest landing if traveling upwards. The doors will not open at this landing and the elevator will return to the ground floor. In case the elevator is traveling downwards when the fireman's switch is operated it will go straight to the ground floor bypassing all calls enroute. The emergency stop button inside the car shall be rendered inoperative.

#### **13.0 SAFETY ITEMS:**

Following safety items shall be provided in BY Contractor to cover the cost of these items in his quoted rates, nothing extra shall be paid on this account.

First Aid Box

Fire buckets

Danger Plates

Fire extinguisher in car

Any other safety item that may be required by authorities.

**14.0 GUIDE RAILS:**

The car rails should be 'TEE' section, duly machined, tongued and grooved. Counter weight rails shall be 'TEE' section, duly machined, tongued and grooved. The guide rails shall have sections, the properties of which shall comply with the requirement of the relevant IS code. The guides shall be capable of withstanding forces resulting from the application of the car or counter weight safety devices.

**15.0 BUFFERS:**

The suitable heavy-duty spring buffers shall be placed below the car and counter weight but in the pit & arranged to sustain any shock, should the lift over travel past the terminal limits. Buffers shall be mounted on RCC foundation blocks. Dowels for the purpose shall be left while casting the pit floor alternatively floor reinforcement could be exposed by chipping for welding additional reinforcement for dowels.

**16.0 ROPES & SHEAVES**

These will be self lubricated; round standard steel wire ropes manufactured from high grade steel and special flexible material and shall conform to the relevant Indian Standards. The number and size of the hoist way ropes shall be so selected that it have the combined breaking strength calculated with a minimum factor of safety of 12 times the combined weight of car with full load and also have adequate traction for the elevator. The governor ropes shall also be wire ropes. Sheaves shall be machined, balanced and shall maintain cable/sheave ratio well within requirements. Lubrication points shall be extended to a location that is easily accessible.

**17.0 SILLS:**

The sills to be provided should be aluminium grooved, with self-supporting sill M.S. angle of adequate size.

**18.0 AC MOTOR:**

The make, type and capacity of hoisting motors should be mentioned. The motor should be suitable for elevator service (S 4 duty) with high starting torque & low starting current. Thermistor shall be embedded in starter windings to indicate the temperature rise in the motor.

**19.0 ELECTRIC POWER:**

The available system of electric supply is 415 Volts +10% -10% between phases and 240 Volts between phase and neutral – 3 phases, 4 wires AC 50 Hz system. In addition, for illumination and control, power at 240 volts AC single phase 50 Hz shall also be available. Any equipment/ component operating at other than the above mentioned power supply should be provided with necessary transformers/voltage stabilizers. The amount of power required for elevators shall be indicated in the tender. All subsequent electrical systems shall be the responsibility of the tenderer.

**20.0 ALARM BELL:**

A butterfly operated emergency alarm bell, including wiring to be provided and connected to a properly marked push button in the car-operating panel. The alarm bell shall be located at the ground floor, at the floor landing outside and adjacent to hoist way or as desired by Project Manager.

The alarm unit shall be solid-state siren type, operated by Nickel/Cadmium maintenance free batteries to give a warning siren when the alarm button in the car is pressed momentarily.

**21.0 HOIST WAY GATE INTERLOCKS:**

Each Hoist way gate shall be provided with an approved interlock and which shall prevent the movement of the car away from the landing unless all gates are closed and locked.

The interlock shall also prevent opening of gate except at the landing where the car is stopping or has stopped.

**22.0 COUNTER WEIGHT:**

The counter weight shall be made of cast iron and consist of structural steel frame which shall travel between rigid guides and also shall be capable of withstanding buffer impacts. The counter weight shall have weight equal to that of the complete elevator car and approximately 50% of the contact load. Suitable metallic counter weight guard of required length shall be provided at the bottom of the hoist way. Compensating chain shall be provided.

**23.0 HITCHES PLATES:**

Self-aligning hitches plates of better roping shall be provided.

**24.0 TRAVELING CABLES:**

Fireproof compound coated traveling cable shall be used and shall conform to IS: 4289 - 1967 with latest amendment. The firm can also use flat traveling cables (imported only) with the approval of the consultant.

**25.0 GUIDE RAILS SHOES:**

To prevent car shaking automatic adjustable guide rails shoes should be used. The firm should use Teflon guide ribs on lubricated guide rails.

**26.0 REVERSE PHASE RELAY:**

Reverse phase relays should be provided on the controller, which should be designed to protect the lift equipment against phase reversal and single phasing and phase failure.

**27.0 CONTROLLER:**

Single automatic push button control shall be used. The design of the controller should be such that it can be mounted on a wall and is dust protected, providing sufficient protection against lizards, rodents etc.

**28.0 TECHNICAL PARAMETERS:**

The technical parameters give requirement of various parameters of passenger elevators. Tenderers shall fill in their item wise confirmation/comments in the column provided for the purpose in this annexure. Deviations, if any, from tender requirements shall be clearly brought out in this annexure, failing which it shall be presumed that the offer conforms to the tender requirements fully. Tenders in

whom these technical parameters are not duly filled in by the tenderer are liable to be summarily rejected.

### **29.0 ELEVATOR PIT AND SHAFT :**

Adequate lighting in lift pit lift & shaft and ladder in lift pit shall be provided.

### **30.0 MACHINE ROOM**

Adequate lighting & ventilation of machine room shall be ensured. Necessary & adequate arrangement shall be provided for handling of elevator machinery in the machine room shall be provided.

### **31.0 AUTOMATIC ELEVATOR RETRIEVAL SYSTEM (FIRE PHASE- I)**

All elevators shall be equipped with automatic elevator retrieval system which shall, upon signal from the central fire alarm system or manually operated key switch, cause all elevators to be dispatched automatically to the ground floor. Elevators shall, open their doors and remain at the ground floor. All floor and car buttons shall be rendered ineffective until the system is manually reset. A smoke detector shall be placed in close proximity to each elevator bank on the ground floor. If this device senses smoke, system shall land elevators at a pre-selected, alternate, landing floor. A key operated switch shall be provided at the ground floor to activate and reset the retrieval system manually.

- a. Emergency operation shall return the elevator/s to a designated floor, most commonly, the Lobby, by means of a signal from the automatic fire alarm system.
- b. On initiation from the fire alarm system, all elevators travelling away from the lobby floors shall stop and reverse without opening their doors indicating fire mode-operation to passengers, ignoring all car and hall calls and express to the lobby or assigned floor.
- c. Cars travelling toward lobby shall express to lobby ignoring all car and hall calls. Cars parked on intermediate floors shall close their doors and express to lobby. Cars parked at lobby shall open their doors ignoring car and hall calls. All hall and car buttons shall extinguish and shall accept no further hall or car registration.
- d. All elevators shall, in addition and where allowed by code, be provided with a key operated switch where designated by the Architect, for use by in-house fire brigade.
- e. The elevator contractor shall coordinate and cooperate with the fire detection & alarm system supplier / installer for his system interfacing responsibilities.

### **Fireman Emergency – Phase - II**

Actuation of fire mode shall put all car functions as described here under fireman control by means of a key switch.

- a. Hall button giving car call indication shall cause the doors to close.
- b. Applying constant pressure to the door open button shall cause door to begin to open. Releasing the button before door is fully open shall cause the door to close.
- c. Hall buttons shall be rendered inoperative.
- d. Car position indicator shall indicate floor when car is within door operating range, and if in motion it shall indicate nearest floor by flashing. When a car is within operating zone, the position indicator shall light uninterrupted.
- e. All electrical door safety locks shall remain effective.

- f. Car position, direction of travel and floor conditions shall be displayed on the car position monitor in the lobby, and at elevator system monitor in engineering room.
- g. Returning the car to the designated landing floor, deactivating the lobby switch shall render the car to original pre fire mode condition.
- h. Resetting the Fire Alarm contacts in the car monitoring panel shall restore the system to normal condition.

## **32.0 OPERATION**

### **32.01 One Car Simplex (Passenger or Service)**

- a. Operation shall be automatic by means of the car and landing buttons. Stops registered by the momentary actuation of the car or landing buttons shall be made in order in which the landings are reached in each direction of travel after the buttons have been actuated. All stops shall be subject to the respective car or landing button being actuated sufficiently in advance of the arrival of the car at that landing to enable the stop to be made. The direction of travel for an idle car shall be established by the first car or hall button actuated.
- b. "UP" landing calls shall be answered while the car is travelling in the up direction and "DOWN" landing calls shall be answered while the car is travelling down. The car shall reverse after the uppermost or lowermost car or landing call has been answered, and proceed to answer calls and landing calls registered in the opposite direction
- c. If a car without registered car calls arrive at a floor where both up and down hall calls have registered, it shall initially respond to the hall call in the direction that the car was travelling. If no car call or hall call is registered for further travel in that direction, the car shall close its doors and immediately reopen them in response to the hall call in the opposite direction . Direction lanterns shall indicate the changed direction and initiate gong when the doors reopen.

### **32.02 Group Control for Passenger Elevators**

- a. The building shall be divided into three (3) zones with one car assigned to the "Lower" zone and the other car assigned to the top zone. Each car shall park in its assigned zone when there are no unanswered calls.
- b. The lower zone shall include the lobby, lower levels, and adjacent floors immediately above the lobby. The remainder of the floors shall be divided between the top zone and the middle zone. Either car may answer calls in the middle zone, but neither car shall park in that zone.
- c. The first car entering a parking zone without hall or car calls shall be assigned to that zone. The car in the lobby zone shall park at the lobby or other predesignated floor. The car entering the top zone with no calls registered shall stop at the lowest floor in that zone.
- d. Optimized response to hall calls shall be achieved by computing a relative system response (RSR) time for each registered hall call. The computation of each car's RSR time to a call shall be based on, but not limited to, such relevant factors as distance, service to previously assigned car and hall calls, car load, direction, door and car motion status, and coincidence of car and hall calls. The car with the least RSR shall have such a call assigned to it.
- e. RSR computations for each hall call shall be repeated several times a second and the hall call assignment might be changed if a more suitable car is found available.

- f. A car arriving at a floor to park shall not open its doors. Cars shall open their doors only when stopping in response to a car or hall call.
- g. If for any reason the doors are prevented from closing and the car is unable to respond to a call, it shall lose its zone assignment and the call shall be transferred to the other car.
- h. When a car is filled to a predetermined load setting, it shall no longer stop for hall calls. Any registered hall call shall remain registered for the next elevator to respond.
- i. When the independent service switch in the car operation station is actuated, that elevator shall be disconnected from the hall button riser/s and operate independently from car buttons only.

### **33.0 Electrical Details**

#### **General**

The scope of work of the tenderer shall include design, manufacture, shop testing, supply, erection, testing and commissioning of all electrical equipment severally and integrated with the lift operation. The electrical scope of work shall commence from the Purchaser's power supply points in machine room and shall include but not limited to the following: -

All cables ( power , control & signal) , motor, brakes, motor control panel (lift panel)including VVVF control(digital) for AC drives, limit switches, digital indicators, illumination system inside the elevator, flexible cables required for the system, combined luminous buttons with luminous digital hall position indications at all floors, digital car position indicators inside elevator car, battery operated alarm bell, emergency light, cabin fan, ventilation fan, overload warning indicator inside the car, fireman's switch, rescue device etc. to make the system complete in all respect for efficient operation of the elevator.

415 V +/- 10%/, 50 Hz +/- 5% , 3 phase, 4 wire power supply shall be taken from the power supply feeder of the Power Distribution Board. One no suitably rated isolator shall be considered in the lift machine room. One no 15 Amp. 240 V socket outlet for hand lamp shall be provided on top of car by tenderer. Control supply shall be 110V A.C, 50Hz.

The tenderer shall indicate the make of all equipment, components used for the electrics of the elevator car in their offer.

The equipment offered shall be suitable for trouble free and efficient service in the tropical humid climate with an ambient temperature of 50°C and maximum relative humidity of 90%. The maximum temperature of 50°C and maximum humidity of 90%, however, may not occur simultaneously.

The electrical equipment shall comply with the latest revision of relevant Indian Standards and wherever such Indian Standard is not available, it shall comply with the generally accepted International codes and practices. The equipment shall be dust and waterproof. All Electrical equipment shall conform to latest Indian Electricity Rules and regulations and the statutory requirement of Government of India and the Govt. of the **State** regards to safety requirement, earthing and other essential provisions specified therein.

The materials used and the equipment supplied shall be new, reliable and of the class most suitable for the purpose for which they are intended. The equipment

design and installation shall allow easy access to facilitate inspection, maintenance and repair. Test certificates of all equipment shall be submitted before inspection of the same.

## **Design Construction and Performance Requirement**

### **A. Low voltage squirrel cage induction motor**

The design and performance of motors shall conform to IS: 325 -1978

#### **1) Constructional Features**

- Frame sizes and rating as per IS: 1231-1974, IS: 2223-1983, and IS: 2254-1985.
- Motor shall be with cast steel body.
- Motor feet shall be integral with motor body.
- Degree of protection for motor, bearings and the terminal box shall be IP 55.
- The shaft ends shall be cylindrical.
- The bearings/fan shall be suitable for running the motor in either direction.
- Two numbers earthing studs shall be provided on the motor body.
- The motors shall be painted with paint of shade no. 632 as per IS: 5-1991

#### **Electrical Design**

- Motors shall be cage induction motor suitable for DOL starting/VVVF control. Motors shall be suitable for 415V+10% /-10%, 50HZ+5% /-5% supply. Motor shall be suitable for frequent start/stop operation.
- Rating of the motor selected shall be based on the class of duty and the load imposed by the equipment. The accelerating characteristics of the motor shall be matched with those of the coupled machine so that smooth acceleration is obtained without over heating the motor.
- Motors shall be capable of starting and running up with normal load and 85% of rated voltage at its terminals. The pull out torque of the motor shall not be less than 275 % of the full load torque.
- Motor shall be suitable for heavy duty, reversible, frequent starting, elevator service.
- The motor KW shall be de-rated for 50OC ambient and heating due to VVVF control.
- The class of insulation shall be 'F'. Under normal running conditions the temperature rise shall be limited to class B as measured by resistance method.

#### **Terminal Box**

- The terminal box shall be amply dimensioned to receive PVC insulated and armoured cables with aluminium conductors.
- The terminal box shall normally be provided on the top.
- A suitable earthing stud shall be provided inside the terminal box.
- It shall be possible to rotate the terminal box by 90 degrees.

#### **Cooling**

- Motors shall be of TEFC design.
- Cooling shall be effective in either direction of rotation.

#### **Quality of Operation**

- Motors shall be dynamically balanced with full key in the shaft and the fan.
- The vibration levels shall be as per IS:12075-1987.



- Continuous noise level shall not exceed 85 db at a distance of 1(one) m from the motor body.

**Additional requirements for LT VVVF duty Motors:**

<b>Parameters</b>	<b>Description</b>
Type	- AC Squirrel cage induction motor. - Inverter Duty
Standard	- IPSS 1-03-001/ IS 325 - NEMA Standard MG1-1993 Part 31, or the latest revision in so far as it is applicable.
<b>Constructional Features</b>	
Frame size & rating	- As per IS 325 - 10:1 constant torque speed range motors may exceed frame standard by one frame rating.
Motor body	Grey iron casting as per IS:210-1978
Motor Feet	Integrally cast with the stator
Body Design	- Prevent breakage or other failures due to vibrations normally encountered in heavy industries . - Motors shall be of weather proof construction. - Designed to operate in the humid air stream .
Protection for Motor & Bearing	IP - 55 (with canopy for motor)
Motor Shaft	Shall be provided with an external recessed slinger at the drive end of the motor to provide additional (minimum IP-54) protection from moisture and foreign material.
Shaft ends & Extension	Cylindrical as per requirement Shaft shall be extended for encoder / tacho.mounting, accordingly suitable hole shall be drilled and tapped .
Internal Encoder	Motors with speed variation of 1000:1 at constant torque shall have internal built in encoder for speed feedback
Bearing	Roller type bearing upto 5 kW . Ball Bearing at NDE end for above 5 kW All motors shall have fully re-greasable, antifricition bearings. All motors shall have cast iron inner bearing caps. Bearings shall be oversized . All motors shall have a charged lubrication system to inhibit moisture condensation.

Hazardous Area safety design	Standard motors shall have extended grease fittings on the opposite drive-end to facilitate re-lubrication. Grease ports shall be located on the periphery of the motor endshield.
<b>Terminal box</b>	Motor shall be fitted with a shaft slinger or Vring seal on the drive end for a minimum of IP-54 protection (to help protection of bearing from ingress of dust , dirt or fluids) .
Location	NA
Suitability	RHS viewed from DE / On top
	4 Core Aluminium Cable
	The terminal box shall be oversize as compared to NEMA requirements.
Rotation	4 X 90 deg
Earthing stud	Inside Terminal Block
Miscellaneous	Shall be gasketed between the terminal box halves. The conduit box shall be field convertible to cast iron.
	External screws and bolts shall be grade five, hex heads and be plated to resist corrosion.
<b>Cooling</b>	TEFC, Effective bi-directional
	Motor with 1000:1 speed range and constant torque shall have external fan .
	External fan motor shall be 3 phase , 415 V AC
<b>Quality of operation</b>	
Vibration intensity	Shall be limited as per IS 12075-1986.
	Shall not exceed .08 inches / second velocity.
Noise level	As per IS: 12065-1987
<b>Electrical design</b>	
Power Supply	415 V +- 10%, 3-phase, 50 Hz
	+5% & -5%,
	4-wire AC, 50 kA for 1 second, solidly earthed.
Starting	VVVF Drive
Service factor	1.0 for VFD power .
	1.15 for sine wave power .
Peak transient voltage	1600 V
Minimum rise time	0.1 microsecond
Starting Torque	200 % rated torque for 1 minute below base speed
Constant horsepower operation	1.5 times base speed .
<input type="checkbox"/> <input type="checkbox"/> Duty	S1 / Suitable for operating with Elevator duty motor
<input type="checkbox"/> <input type="checkbox"/> Max speed permissible	150 % rated for 2 minutes
<input type="checkbox"/> <input type="checkbox"/> Derating for VVVF	As per above mentioned standard
<input type="checkbox"/> <input type="checkbox"/> Insulation	Minimum Class F or better insulation materials with additional phase insulating material, extra

- |   |  |
|---|--|
| <input type="checkbox"/> Torque Type<br><input type="checkbox"/> Space Heater<br><br><input type="checkbox"/> Temperature Rise<br><br><input type="checkbox"/> No. of Poles | end-turn bracing and Class H spike resistant wire.<br>Normal / High / High slip type / Stall Torque type<br>Out door motors above 45 kW<br>Indoor Motor above 110 kW<br>By resistance, shall be 80 degrees C or less when measured at rated load on sine wave power, on inverter power ratings shall be 105 degrees C or less.<br>4/As per the tenderer recommendation |
|---|--|

### 8.0 Operating Characteristics

Operation with variation in the voltage or the frequency Motor shall able to start and accelerate with 85% of rated voltage.

Motors shall operate successfully under running conditions at rated load with variation in the voltage or the frequency not exceeding the following conditions: +/-10% rated voltage at rated constant V/f ratio except for specific torque boost situations. Motors shall operate successfully under running conditions at rated load and V/f ratio when the voltage unbalance at the motor terminals does not exceed one percent.

Torques

Motors shall meet or exceed the minimum locked rotor (starting) and breakdown torques specified in NEMA Standard MG1 Part 12 for Design B for the rating specified when on sine wave power.

Locked rotor (starting) currents

Shall not exceed NEMA Design B values for the specified rating on 5:1 constant torque or less and variable torque motors. NEMA Design A values are allowed for 6:1 constant torque or higher value constant torque rated motors.

Motors shall be capable of a 20 second stall at six times full load current without injurious heating to motor components.

### B. BRAKES

- Brakes shall be DC electromagnetic type .
- Brake power supply 220V DC obtained through individual transformer rectifier set.
- Brakes shall be of heavy duty type suitable for elevator operation having long mechanical life.
- Brakes shall be self-aligning and quick acting type.
- Brakes shall be electrically released and spring applied for fail safe operation.
- Brakes shall have facility for torque adjustment.
- The coil connection shall be brought out to a suitable terminal box.
- The necessary rectifier and brake control panel shall be supplied along with the brake.

### C. LIMIT SWITCHES

- Limit switches shall be of robust construction capable of withstanding repetitive operations.
- Limit switches shall be heavy duty type either lever or rotating cam operated.

- The limit switch contacts shall be rated at least for 10A at 110 V AC.
- The limit switches shall be housed in robust metallic oil and dust tight enclosure conforming to IP:65.
- At least 2 NO and 2 NC contacts shall be provided for each limit switch.

## **D. L.T. MOTOR CONTROL PANEL**

### **1. Basic Design Parameters**

- Power Supply system - 415 V+10%/-10% 3 phase and neutral 50 HZ +5%/- 5%
- System Neutral
- Earthed
- Insulation level - 2.5 kV for 1 minute
- System short circuit level - 50 kA for 1 second.

### **2. Constructional Features**

- Floor mounting, free standing with base channel for fixing on the inserts in the floor.
- Single front, totally enclosed.
- Enclosure conforming to IP:52 as per IS:2147-1962.
- Suitable for cable entry from bottom with detachable gland plate
- Rear access through removable rear cover.
- Minimum operating height of devices on panel to be 400mm and maximum operating height to be 1900 mm.
- Clear legible identification labels shall be provided for all compartment panels and control devices.
- To ensure good earth continuity, all bolted joints shall be provided with tooth spring washers.
- Two separate earthing terminals shall be provided for earthing.
- The motor control panel of the elevator shall be provided with base channel of 75 mm (ISMC 75).
- Painting shall be shade no. 631 as per IS:5-1978
- Pilot devices operable from the front.
- Components and devices accessible from the front.
- Protection against accidental contact with live parts while maintaining a compartment and keeping others in services.
- Compartment door interlocked with main power isolating devices.
- Bus bar sizes to be selected in accordance with the nominal current rating of incoming load break switch and for full short circuit power.

### **E. Incomers and Isolators**

- The motor control panel shall have one incomer switch of AC 23 duty
- The incomers shall be provided with voltmeter and ammeters complete with fuse, selector switches and CTs.
- All switches shall be double break type.
- All fuses shall be HRC fuses and shall not be of bolted type in switch fuse units.

### **F. Contactors**

- All contactors shall be AC4 duty as applicable with min. 25A rating.
- Shall have at least 2 NO + 2 NC auxiliary contacts with minimum rating of 16A at 110 V AC.
- For reversible drives mechanically interlocked, contactors shall be used.
- All coils shall be suitable for 110 V, AC with no economy resistor.

- Insulation of coils shall be class 'E' or better. Shall pick up positively at voltage between 85% and 110% of the rated value.

### **G. Thermal Overload Relay**

- Bimetallic Triple Pole, ambient temperature compensated
- inverse time lag, and reset type.
- Shall conform to IEC - 292-1.
- Shall have built in single-phase protection.
- Atleast one make and one break auxiliary contacts shall be provided.
- Manual reset push button shall be located on the compartment door.

### **H. Auxiliary Relays**

- Coil voltage 110V AC
- 4 NO + 2 NC contacts rated for 10A

### **I. Timers**

- Coil voltage 110V AC
- ON/OFF relay as required
- 2 NO + 2 NC contacts

### **J. Control Transformer**

- Control transformer shall be double wound dry type conforming to IS: 2026-1977 with tapping at +/- 2.5% and +/- 5% on the primary side.

### **K. Switches & Fuses**

- Isolating switches shall be triple pole/ double pole, air break, heavy duty type(MCCB), capable of safely breaking the full load current of the associated feeder.
- All MCCB shall be suitable for rated system fault level.
- Control circuit shall be protected by individual control MCB's with min. short ckt. rating 9kA and rating 16A.

### **L. Cables**

All power cables for fixed wiring inside the premises shall be 1100 V grade, Copper Conductor, PVC insulated and sheath conforming to IS:1554 (Part1)- 1988 armored or unarmored depending on application.

- All flexible cable shall be EPR insulated and CSP sheathed or better.
- Control cable shall be 1100 V grade, copper conductor PVC insulation and sheath conforming to IS:1554 (Part1)-1988.cable shall be armored or unarmored depending upon application.
- The motor for the elevator shall be squirrel cage induction motor with speed resistance control/VVVF control for controlling the speed during starting and stopping at landings

### **M. Earthing**

All structure electrical equipment conduit/ Tray etc. shall be effectively grounded in accordance with Indian Electricity rules. Earthing conductors are to be connected with earthing grid of the building. Earthing on the car including interconnection with main grid) shall be under the tenderer's scope. Required number of Earthing pit will be provided by IIT Indore. But the material and connection from Earth pit to necessary points of lift will be done by Contractor at no extra cost.

## **N. Wiring**

All wiring shall be accessible from the front and shall be done by 1.1 KV grade PVC insulated flexible copper wires.

Not more than two connections shall be done at any one terminal.

Interlocked type identification ferrules shall be provided.

Auxiliary wiring shall be properly marked as per IS:5578 -1984

20% spare terminals with a minimum of 6 nos shall be provided.

All power terminals shall be stud type. All control terminals shall be Elmex type rated at least for 10A and suitable for terminating 2 nos 2.5 sq. mm copper conductors.

All hoist way and car wiring shall be done with armored cable as per IS:1554 (Part 1) - 1988 and IS:5571-1979 and flexible cable as applicable.

The cables used in the elevator installation shall conform to latest revision of IS:4289-1984.

A trailing cable, which incorporates conductors for the control circuit, shall be separate and distinct from that which incorporates lighting and signaling circuits. All control and signaling cables shall have stranded copper conductor of minimum size 2.5-sq mm copper. 20% spare cores shall be provided in each control/ signaling cable.

## **O. VVVF DRIVE**

### **1. Basic Design Particulars**

Rating as per class IV of IEC 146 viz., 100% continuous, 125% for two hours, 200% for 10 seconds

The protection class shall be class I as per IEEE- 444 - Direct voltage capability

Shall be able to maintain rated DC bus voltage at rated DC current at 94% rated AC voltage.

The converter shall safely perform inverter duty at 90% rated voltage and rated DC voltage

The drive shall be designed suitable for the following Input parameter variations:

- Input AC voltage: +/- 10%

- Frequency : + 5% / - 5%

- Combined variation : +/- 9%

Control and regulation equipment shall be designed suitable for the following parameters variations:

Voltage : +/- 10%

Frequency : +3% / - 6 %

### **2. VVVF assembly**

The drive shall be Thyristor/Transistor/IGBT based Three phase out put supply as per requirement. The Inverter shall be suitably rated to take the load of total system for a duration of app. 10 minutes.

The suitability of rating, control & indication for the battery, battery charger & Inverter shall be checked during approval of drawing for the above system.

The Inverter shall be designed as per relevant IS & IEC standard.

## **P. Battery, Battery Charger**

### **1. Battery unit.**

Battery unit shall be maintenance free Nickel Cadmium type. The capacity of the battery shall be selected based on minimum site ambient temperature and shall be suitable to supply for short time rating of approx. 10 minutes to automatic rescue device control circuit, alarm bell & emergency lighting. The capacity of battery shall be supported with battery calculation and shall be checked at the time of approval of drawing.

### **2. Battery Charger**

The charger shall have 3 phase full wave controlled rectifier bridge with their protective device. Input voltage shall be 415 V  $\pm 10\%$  &  $-10\%$ , 50 Hz  $\pm 5\%$  &  $-5\%$ . Charger shall be suitable for float charge and boost charging.

## **TESTING**

Testing at manufacturers works of the various equipments and components as required by Indian Standards shall be done by the successful tenderer and shall furnish a certificate to this effect. IIT - INDORE wishes to participate in the testing of the equipment and the manufacturer will intimate IIT - INDORE well in advance before carrying out such tests.

Various tests required to be done as per Indian Standards at site of the installations shall be done in the presence of the IITI representative.

The supplier shall be fully responsible for carrying out all the tests including following as listed below in addition to the relevant Indian Standards.

- a) Leveling tests
- b) Safety gear test
- c) Contract speed
- d) Lift balance.
- e) Car and landing doors locks.
- f) Controller.
- g) Normal terminal stopping switches.
- h) Final terminal stopping switches.
- i) Insulation resistance
- j) Earthing
- k) Ropes
- l) Buffers
- m) Service temperature rise test.
- n) Over load test.

## **PERMISSION TO INSTALL THE LIFTS AND LICENCE TO RUN THE LIFTS FROM RELEVANT AUTHORITIES**

It will be the responsibility of the successful tenderer to obtain the necessary permission to Install the lifts from the relevant local authorities and subsequently get the installation inspected by the relevant local authorities and arrange to obtain the license to run the lifts. All relevant papers connected to obtaining the permission and final inspection will be signed by the IIT - INDORE and requisite fees for this purpose shall be paid by the Contractor.

The Contractor shall submit required applications, drawings, etc., to the corporation, lift inspector, electrical inspector, factory inspector and/or any other statutory authority and obtain their approval, licenses and/or sanctions.

Obtaining approval from Lift inspector and NOC from M.P. Fire Service for satisfactory installation of the lift system as also for clearance to put the lift into regular use.

Obtaining any other statutory permission/clearance/approval from concerned authority as required.

Pay any licensing fee/submission fee/inspection fee payable to statutory authorities for obtaining above approvals.

Final completion certificate shall be obtained by the Contractor from all statutory authorities to enable the lifts to be commissioned for utilization.

The work shall not be deemed to have been completed until the above approval, certificates, etc., have been obtained by the Contractor.

No extra amount shall be paid for this.

## **DEVIATIONS**

Contractor shall stipulate the deviations, if any, from these Technical Specifications, and reason thereof

## **Drawings & data:**

After award of work, the bidder shall furnish the following drawings and data for scrutiny. All the comments on drawings shall be incorporated without financial burden to department.

- Control cabinet general arrangement drawing showing plan, front view, foundation details, inside view, terminal block location etc.
- Schematic wiring diagram of the control cabinet.
- Bill of material listing, equipment designation, makes type rating etc of the various equipments mounted on the control cabinet.
- Interior of the Car.

## **BMS Integration:**

Input / Output deliverables to BMS will be required:

- Lift Location Monitoring
- Lift Push button Alarm
- Lift Fault Alarm

## **STRUCTURAL REQUIREMENTS**

Shaft and pit shall be provided by the Civil contractor already engaged. Other preparation work and all items of supply and installation in the hoistway shall be the responsibility of the lift contractor.



## **EXCLUSIONS**

Any items excluded from the offer, but functionally required, shall be clearly defined and listed by the tenderers, giving description of the items, quantity and estimated cost and the reason for excluding the items.

## **TOOLS AND TACKLES**

All tools, tackles, supports, scaffolding and staging etc. required for erection and assembly of the equipment and installation covered by the contract shall be provided by the Contractor himself. A list of such tools & Tackles shall be furnished. In addition, all other materials such as foundation bolts, nuts etc. required for the installation of the equipment shall also be provided by the contractor at his cost.

## **Electric Supply:**

The available system of electric supply is 415 volts between phases and 230 volts between phase and neutral - 3 phase 4 wire AC 50 Hz system. The amount of power required for elevators and equipment shall be indicated in the tender in the relevant format. Power shall be provided at one point in machine Room at a point to be indicated by the tenderer/bidder. Beyond this supply point, all subsequent electrical systems shall be the responsibility of the tenderer/ bidder.

## **TESTING AND HANDING OVER**

- i. The Contractor shall carry out test run of the installation in the presence of representatives of the Owner, to establish satisfactory functioning of the installation.
- ii. The Installations shall be handed over to the Owner's site representative after satisfactory testing along with six sets of completion documents each consisting of :
  - a. Detailed equipments data and catalogues.
  - b. Manufacturer's maintenance chart including check chart and Lubrication chart.
  - c. Set of "AS INSTALLED DRAWINGS" showing layouts, equipments details, electrical power & control wiring diagrams etc.
  - d. Test Certificates for major equipments.
  - e. Certificates of approval from Statutory and/or Local Authorities for the operating and maintenance of the installation and equipment, wherever such approval or certification is required. (Lift inspector's certificate/ license).
  - f. Certificate from the Engineer that the contractor has cleared the site of all debris and litter caused by him during the Construction.
- iii. Submission of the above documents shall form a precondition for the final acceptance of the installation and final payment.
- iv. Upon handing over, the Owner's site representative shall issue to the contractor the necessary certificate of acceptance.

**Power and Light:** Power /light shall be provided by lift contractor:-

Lighting of the lift shaft (Bulk head at every floor level, power point (16 A) at every floor and in the lift pit.

## **MISCELLANEOUS**

The following shall be in the scope of the successful lift contractor and it shall be his responsibility to arrange the items in order to complete the installation.

- i) Scaffolding
- ii) All minor builder works such as chipping of surfaces, cutting and finishing of walls/floors/partitions & foundation for machine etc shall be responsibility of elevator contractor.
- iii) All steel items included.
- iv) Stainless Steel Jamb Panel & sill Angles.

## **QUALITY ASSURANCE PROGRAM & TEST PROCEDURE FOR ACCEPTANCE**

Following test procedures shall be carried out prior to acceptance of elevator system.

- a. Test to determine that the insulation resistance between power and control lines and earth is as per specified IS codes.
- b. Test to determine that the earthing of all conduit, switch, casings and similar metal works is continuous and of low resistance.
- c. Test to determine that the motor, brake, control equipment and door locking devices and limit switches function correctly.
- d. Load test with 100% and 110% of rated load as per clause no.8.1.6 of IS 14665 (Part 2/Sec 1): 2000.
- e. Brake to be tested to check whether it can sustained a car at rest with 25% of contract load.
- f. Test to determine that the lift car achieves the specified speed.
- g. Test to determine that the safety gear stops the car with the rated load.
- h. Test for rated power against actual power consumption under full load.
- i. Check for current drawn by each elevator during starting and full load operation.
- j. Sound level check for motors.
- k. Visual inspection for all components.
- l. The contractor shall guarantee the smooth and noiseless performance of the elevators System as per IS-1860 --1980 & IS- 6620-1972 (Reaffirmed 1991).
- m. Any other test felt necessary by Purchaser and supplier to ensure proper functioning and installation of the lift.

Test load & other equipment (stop watch etc ) shall be arranged by the contractor.

Besides the above, contractor shall submit his standard quality assurance programme and test acceptance procedures to Owner / Consultant.

The scope of works includes on job technical training of four persons at site. Nothing extra shall be payable on this account.

## **ALL INCLUSIVE MAINTENANCE CONTRACT**

- a. Routine Preventive Maintenance Schedule to be submitted
  - i. Schedule to cover manufacturer's recommendation and/or common engineering practice (for all plant and machinery under contract).
  - ii. Plant and machinery history card giving full details of equipment and frequency of checks and overhaul.
  - iii. Monthly status report.
  - iv. Performance guarantee parameters.
- b. Uptime during maintenance contract
  - i. 98% uptime of all systems under contract.

- ii. Up time shall be assessed every month and in case of shortfall during any month the contract shall be extended by a month.
- iii. There shall be no reimbursement for the extended period.
- iv. Break-downs shall be attended to within two hours of reporting.
- c. Manpower
  - i. Adequate number of persons to the satisfaction of the Owner's site representative shall be provided including relievers.
  - ii. Statutory requirements of EPF, ESIC and other applicable labour legislations to be complied with; and monthly certification to that effect to be submitted.
  - iii. Duty allocation and Roaster control shall be contractor's responsibility.
  - iv. No overtime shall be payable by Owner for any reason whatsoever.
- d. Shut Downs
  - i. Routine shut downs shall be permitted only with prior permission.
  - ii. Contractor shall be at liberty to carry out routine maintenance as and when required but with prior permission of the Owner.

**INSTRUCTIONS TO BE DISPLAYED IN HINDI/ ENGLISH IN THE LIFT CAR AND LIFT LANDINGS (PASSENGER LIFT)**

S.N	Inside the Car	S.N	Outside the Car
1.	Lift Number.....	1.	Lift Number.....
2.	Capacity ... passenger (..... Kg).	2.	Capacity ....passenger (..... Kg).
3.	No Smoking	3.	Please stand in „Q“.
4.	Operator push buttons/ switches correctly	4.	Smoking not permitted inside the Car.
5.	Do not lean against lift door.	5.	Please keep the lift neat and clean.
6.	Watch before stepping door.	6.	Does not force open the landing doors.
7.	Do not panic in the event of break down. Press alarm button and follow instruction of authorized staff.	7.	Watch before you step into and out of the lift car.
		8.	Heavy articles / luggage not allowed.
		9.	Avoid use of lift during fire.
		10.	Complaints if any may be sent to.....

## LIST OF INDIAN STANDARDS

1	IS : 14665 (Part-1)-2000	Electric Traction Lifts – Guide line for outline dimension of Passenger, Goods, Service and Hospital Lifts.
2	IS : 14665 (Part-2)-2000	Electric Traction Lifts – Code of practice for Installation.
3	IS : 14665 (Part-3)-2000	Electric Traction Lifts – Safety Rules.
4	IS : 14665 (Part-4/ Sec 1 to 9)-2001	Electric Traction Lifts – Components.
5	IS : 4666:1968	Specification for electric passenger and good lifts.
6	IS : 1860:1980	Code of Practice for installation, operation and maintenance of electric passenger and good lift.
7	IS : 3534	Outline dimension for electrical lifts.
8	IS : 2365	Specification for steel wire suspension ropes for lifts and hoists.
9	IS : 1173	Hot rolled and slit steels tee bars.
10	IS : 4289	Specification for lift cables.
11	IS : 732 : 1963	Code of practice for electric wiring installations
12	IS : 325	Three phase induction motors.
13	IS : 4029	Guide for testing of three phase induction motors.
14	IS : 4722	Specification for rotating electric machines
15	IS : 6362	Designation of method of cooling for rotating electrical machines.
16	IS : 800	Code of practice for use of structural steel in general welding construction.
17	IS : 814	Covered electrodes for metal arc welding for mild steel.
18	IS : 816	Code of practice for the use of metal arc welding for general construction in mild steel.
19	IS : 817	Code of practice for training testing of metal and welding.

## LIST OF ACT / BYE LAWS

The lift installations shall also be governed by the following Acts/Bye-laws/Codes as amended up to date in addition to the codes specified in the tender:

1. Local Fire Prevention and Fire Safety Rule
2. Local Lift Act
3. Building Bye-Laws
4. National Building Code of India – 2005
5. Indian Electricity Act – 1910
6. Indian Electricity Rule - 1956

## **SAFETY ASPECTS & PROCEDURES**

1. Since lift installation consists of a number of electrical and mechanical components having linear / rotary motions, utmost caution should be exercised while working and all safety precautions shall be rigorously followed.
2. Only authorized persons shall be allowed to work on lift installations and officer (s) empowered for such authorization shall keep proper record thereof during the tests; inspection and maintenance except where necessary.
3. If during erection any safety or protection device is inoperative, special care must be taken to avoid accidents on this account
4. Supply at main incoming circuit breaker shall be switched off before examining any part of the equipment. Whether during periodical inspection, or while carrying out any work on the equipments (including using the winding handle at times of mains failures) unless power is particularly required for particular operation or tests on the lifts, the breaker shall be locked in OFF position.
5. Whenever the car needs to be moved by use of winding handle in the lift machine;
  - a. Power at incoming shall be switched off before applying the handle.
  - b. Power shall be restored only after this handle is removed from winding shaft and brakes are applied.
6. The landing and car buttons shall be kept out of circuit by switching on the 'Maintenance Switch' located on the top of the lift car during maintenance operators. Whenever maintenance switch is not provided emergency stop switch inside car and or attendant control switch should be used.
7. Before carrying out any repair work it shall be ensured that none of the electro-mechanical door locks are short circuited either from the controller or at the landings.
8. As a general precaution, fascia plate between the door header and the corresponding upper landing sill on each floor must be provided.

## **Specifications for Comprehensive Maintenance Contract (CMC)**

The contractor, whose tender for Design, manufacture, Supply, installation, testing, commissioning and Maintenance of 08 Passenger capacity Lifts for New Lecture Theater at IIT Indore is accepted, shall maintain the lift comprehensively for a period of 5 years from the date of expiry of "defects liability period" of one year.

### **Scope of work:**

1. The AMC is for a period of Five years from date of expiry of "defects liability period" of one year and subject to extension at the sole discretion of IIT Indore.
2. Contract may be terminated by IIT Indore at its discretion by giving 30 days notice to the service provider in case of failure to maintain the AMC services at the satisfaction of the IIT Indore and the agreement with IITI in that case will be treated as cancelled before expiry date of notice and the contract.
3. Regular servicing & inspection of the elevators/Lifts should be carried out at least once in a month by the service provider.
4. The service provider shall regularly examine elevator equipments and provide Gear oil, Lubricate, Grease, Mobil, Break Shoe Gibbs, Push Buttons Car and Landings etc. for maintenance if required.
5. Responsive time for maintenance of items covered under AMC will be 24 hours.
6. In the event of service provider unable to attend call or provide service within the stipulated time period, you are liable for the penalty as per contract.
7. Tenderer shall not engage any sub-agent or sub-contractor whatsoever for running the AMC Service.
8. The contract for running the AMC Service shall be commercial contract and between IITI & contractor. There shall be no employer-employees relationship between IITI and the contractor and/his personnel.
9. The AMC is of Comprehensive type. Any replacement of spares should be with new and of equivalent type or higher of same make.
10. Monthly routine maintenance and check up of the machine, controls, ropes, breaks, control cables and other mechanical and electrical parts and appliances.
11. Repair and/or replacement of the worn out parts at his own cost for ensuring smooth service.
12. All the replaced parts shall conform to relevant I.S. codes or Bombay Lifts Act and Rules made there under:
13. Check thoroughly each component part of the Lift at the end of each year and

carry out such repair, maintenance and replacement as may be considered necessary as a result of annual inspection.

14. Get the lifts inspected by any local authority or Govt. agency if required under rules, and get the deficiencies, pointed out, removed.

**TERM AND PRICE:**

- 2.1 This contract shall be automatically renewed for subsequent one (1) year terms after the expiration of the initial or subsequent term unless otherwise terminated pursuant to the provisions of specified Section of this Agreement.
- 2.2 The IIT Indore shall pay the Contractor the specified amount on quarterly basis after end of each quarter for the work performed during that period on presentation of an approved invoice by the Contractor. No advance payment will be made in any case. Taxes will be deducted from the bill as applicable.
- 2.3 The contractor shall submit an irrevocable performance guarantee of 5% of the Tendered amount for CMC within 15 days of this letter. This guarantee in the form of government securities or fixed deposit receipts or guarantee bonds of any scheduled bank or state bank of India in the specified format. The performance guarantee shall be initially valid up to stipulated date of completion plus 60days beyond .This bank guarantee kept valid till the recording of the completion for the work by competent authority.

**TERMINATION OF AGREEMENT:**

- 3.1 Either party may terminate this Agreement at the end of the five (5) year term or subsequent term by giving the other party not less than sixty (60) days written notice.
- 3.2 The IIT Indore may also terminate this Agreement at any time upon thirty (30) days written notice to the Contractor due to the following reasons:
  - Unacceptable performance by the Contractor, which shall be determined by IIT Indore sole and absolute discretion.
  - Contractor's failure to comply with all of its duties and obligations under this Contract, If the IIT Indore chooses to modernize vertical transportation equipment, during any term of this Agreement, provided the modernization work is a major modernization as defined by *Codes for Elevators and Escalators*, latest edition
  - Permanent removal of equipment from service.

Contractor shall fully guarantee all work performed during the Term of the Contract and for a period of ninety (90) days after the termination date.

**CONTRACTOR TO COMPLY WITH LAWS:**

In the performance of this Contract, the Contractor shall abide by all existing laws, codes, rules and regulations set forth by all governmental units and authorities having

competent jurisdiction over Contractor and/or the work performed by Contractor hereunder. Contractor shall also procure and pay any necessary permits or licenses pertaining to the work performed by Contractor pursuant to this Contract.

All repair, parts replacement or adjustments called for hereunder shall be performed in full compliance with specified laws, standards and codes set by the government with latest edition, including amendments thereto, and with applicable regulations of the state, city and/or local authorities. In case of conflict, the more stringent regulations will apply.

#### **WARRANTY:**

Contractor warrants that the elevator/escalator maintenance services will be provided to the IITI in accordance with the terms of this Contract and with prevailing industry standards for elevator/escalator maintenance services. Contractor shall use its best efforts under the circumstances to remedy any delays, interruptions, omissions, mistakes, accidents or errors in such services and restore any service to compliance with the terms of this Contract.

#### **Contractor to comply with laws:**

In the performance of this Contract, the Contractor shall abide by all existing laws, codes, rules and regulations set forth by all governmental units and authorities having competent jurisdiction over Contractor and /or the work performed by Contractor hereunder. Contractor shall also procure and pay any necessary permits or licenses pertaining to the work performed by Contractor pursuant to this Contract.

#### **Certificate of safety**

The contractor shall submit a safety certificate of lifts within 10 days of the last day of the annual inspection of the lifts.

#### **Availability of Authorized Representative**

The contractor shall ensure availability of his authorized representative at Indore to receive emergency calls and take remedial actions. The representative should attend the call immediately to ensure the restoration of the services promptly. If shutdown of any lift continues for more than one days a penalty of Rs. 1000/ per day per lift for delay beyond one days shall be imposed and the amount of penalty shall be recovered from the quarterly bills, Security Deposit or any other sum due to the contractor.

#### **Responsibility of Accident and Hazards:**

The contractor shall be responsible for any accident or hazard that take place during the maintenance period of 5 years. He shall also be responsible for payment of compensation and penalties payable to effected parties as a result of legal action. He shall also be responsible for repairs and replacement of damaged parts of the lift and restore services within 7 days failing which penalty @ Rs. 1000/ per day per lift shall be imposed and recovered from bills / deposit or any other sum due to the contractor.



### **Special Conditions of Contract for CMC;**

- A. Details of schedule maintenance/break down shall be entered in the register/service slip & jointly signed by the firm's representative and IIT Indore representative and shall be carried out in the presence of IITI representative.
- B. Contractor will have to make 12 visits (01 visit per month) during the AMC period. Beside this, any number of breakdown calls will have to be attended. The response time for such breakdown calls shall not exceeds 24 hours. Beyond this penalty shall be imposed as per penalty clause.
- C. Contractor's mechanic shall reach to the site within 24 hour after lodging a complaint. Delay in reporting period shall be recorded and penalty shall be imposed as per the following slab.  
Above 24 hrs, penalty will be at the rate of Rs. 1000/- per day.
- D. Contractor will have to take necessary care and precaution to keep the elevator safe for use and in good working condition. Trained technical staff shall carry out maintenance work.
- E. Contractor will have
- F. to carry out all customary annual safety tests to examine all safety devices.
- G. As it is comprehensive in nature, no payment will be made as an extra for replacement of spare parts etc.
- H. No parts or components of the lifts being maintained by contractor shall be removed without prior approval and knowledge of IITI. Any part to be removed from the lift for repair shall be done after approval of the nominated supervisor.
- I. Any damage to IITI property while carrying out periodical maintenance and attending break down will be contractors' responsibility.
- J. Thorough cleaning of machine room control panel machine unit & hoist way with lift car and pit shall be done once in a month. Which IITI representative shall certify.
- K. All the lifts shall be jointly inspected once in three months or before submission of quarterly bill. Bill shall be forwarded along with the joint inspection report. Items need replacement shall be complied during the next schedule due.
- L. The contractor shall fulfill statutory requirement of annual inspection of lift by Inspector of Government. The inspection fees of lift inspector of state Government shall be paid by the contractor.
- M. Contractor shall not only attend the failure but also rectify the cause of failure after investigation.
- N. Penalty imposed for late reporting, late replacement of defective parts of lift shall be deducted from quarterly bill of the firm.
- O. CMC bill shall be paid after every quarter. No advance payment will be paid.

# **INDIAN INSTITUTE OF TECHNOLOGY INDORE**

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**IITI/ES/NIT/E/FH07/L/2017-18/01**

## **TENDER DOCUMENT**

### **PART – II**

### **Price Bid [Envelop -2]**

**Name of work:**

**SUPPLY, INSTALLATION, TESTING, COMMISSIONING &  
SAFETY CERTIFICATION OF PASSENGER LIFTS IN FACULTY  
HOUSING BUILDINGS AT IIT INDORE.**

**INDIAN INSTITUTE OF TECHNOLOGY INDORE**  
**BILL OF QUANTITY**

Sr. No.	Item Description	Unit	Qty	Rate in figure	Rate in words	Amount
1	Design, Manufacture, Supply, Installation, Testing, Commissioning & Safety Certification of Passenger Lifts of below given persons capacity, having system as per specification covered under Part – I (Technical) of the Tender (Rates shall include all Taxes and Duties)					
a	8 passenger	Nos.	2			
b	13 passenger	Nos.	2			
	TOTAL (Part 1)					
2	Comprehensive maintenance of above lift which Include routine, preventive & breakdown maintenance for period of Three years including repair/replacement of worn out items with minimum downtime and warranty & guarantee of repaired/replaced items after completion of One Year guarantee period. (Quoted rates shall be include all Taxes and Duties but excluding of Service Tax)					
a	1st Year (Guarantee period) (in Rs.)	Job	1	FREE	FREE	FREE
b	2nd Year (in Rs.)	Job	1			
c	3rd Year (in Rs.)	Job	1			

d	4th Year (in Rs.)	Job	1			
	TOTAL (Part 2)					
	Discount @ _____ % (if any)					
	Grand Total (in figures) (Part 1 + 2)					
	Grand Total (in Words) (Part 1 + 2)					