

**NOTICE INVITING TENDER**  
**Through**  
**E-Procurement**  
**For**  
**Providing Electrification for Hostel, Tutorial and Dining Hall**  
**Blocks, IIIT Srikakulam, S.M.Puram, Srikakulam (Dist).**

Proprietary & Confidential



**RAJIV GANDHI UNIVERSITY OF KNOWLEDGE TECHNOLOGIES-AP**  
**IIIT SRIKAKULAM**

**Currently located at IIIT-Nuzvid**  
**NUZVID (M), Krishna Dist.**  
**Andhra Pradesh-521202.**



**RAJIV GANDHI UNIVERSITY OF KNOWLEDGE TECHNOLOGIES**  
**IIIT- Srikakulam, S. M. Puram (V), Etcherla (M), Srikakulam (Dist.),**  
**A.P – 532402**

Date: 25.05.2018

**Tender Notice(2<sup>nd</sup> Call)**

Online tenders are hereby invited from the Contractors/Contracting agencies for the following  
**IIIT SKLM/RGUKT-AP/E-Proc/E&WS Works/RRT10/2018:** Providing Electrification for  
Hostel, Tutorial and Dining Hall Blocks,, IIIT Srikakulam

Interested bidders can download and submit the bids online from 25.05.2018,  
to 01.06.2018 up to 05:00PM through <https://tender.apecurement.gov.in> (AP Portal).  
For further details please visit our website:  
[www.rgukt.in](http://www.rgukt.in) or <https://tender.apecurement.gov.in> (Andhra Pradesh Portal)

**Sd/-**  
**Administrative Officer (i/c)**

**NAME OF WORK:Providing Electrification for Hostel, Tutorial and Dining Hall Blocks, IIIT Srikakulam, S.M.Puram, Srikakulam (Dist).**

OFFICER INVITING TENDERS: Administrative Officer (i/c), IIIT-Srikakulam

1. Tenders are invited on the e-procurement platform for the above -mentioned work from the Contractors / Contracting firms. The details of Tender conditions and terms can be downloaded from the electronic procurement platform of Government of Andhra Pradesh i.e. [www.apecurement.gov.in](http://www.apecurement.gov.in)
2. Approximate Estimate Contract value of work : Rs.44841669/-
3. Contractors would be required to register on the e-Procurement Market place "www.apecurement. gov. in" and submit their bids online. The department will not accept any bid submitted in the paper form.
4. Non refundable Processing fee of Rs.25000/- to be paid by way of crossed demand draft drawn in favour of Director, RGUKT, IIIT-Srikakulam
5. a)E.M.D. to be paid for Rs.448410/-(i.e., 1.0% of ECV) drawn in favour of Director, RGUKT, IIIT Srikakulam along with bids and the balance EMD @ 1.5% of Estimate Contract Value / Tender Contract Value whichever is higher is to be paid at the time of concluding agreement.  
b) All the participating bidders should pay a Transaction fee of Rs.13450/- [(@0.03% of ECV (estimate contract value) with a cap of Rs.10,000/- + service tax @ 15.00%on transaction fee)] to the Managing Director, APTS, Hyderabad by using Credit cards (Any MASTER / VISA Card) issued by any bank or through net banking accounts with ICICI or HDFC Banks as per G.O.Ms.No.13/ IT&C Dept. Dt.07.05.06 with effect from 02.02.2007.

Scanned E.M.D.and Processing fee may be uploaded with the bids and originals must be submitted to the Administrative Officer, IIIT Srikakulam, Prefab Campus,IIIT NUZVID , Nuzvid, Pin code:521202 before 02.06.2018 5PM either personally or through courier or by post and the receipt of the same within the stipulated time shall be the responsibility of the tenderer. Failure to furnish the original DD towards EMD and DD for Processing fee before submission date 02.06.2018 5PM will entail rejection of bid and blacklisting.

6. Period of completion of work: 6 Months.
7. The tenderers can view/ down load the tender documents from the [https:// tender.apecurement.gov.in](https://tender.apecurement.gov.in).
8. Form of contract – Lump sum contract.

9. Class of Contractors eligible is as given below:

1) Prospect bidder should be registered in the relevant class of contractors.

The Contractor shall be a licensed 'A' grade Contractor, possessing a valid Electrical Contractor's license in the State, employing licensed supervisors and skilled workers having valid permits as per the Regulation of Indian Electricity Rules and Local Electrical Inspectors requirements. He should have similar type of experience in executing electrical works of the same magnitude earlier and should have qualified engineers to execute the work as per drawings and to supervise the works at site.

2) class –I (Electrical) registered with state government

**Time schedule of various tender related events**

Bid calling date	25 .05.2018
Bid Documents Downloading Start date	25 .05.2018
Bid Document Downloading End Date	01.06.2018 till 05:00 PM
Last date for uploading of online documents	01.06.2018 at 05:30 PM.
Last date for Hard Copies submission of EMD, Document Fee, Pre-qualification documents and other necessary documents. (scanned copies)	02.06.2018 at 05:00 PM
Pre-qualification & Technical Bid opening date/time	04.06.2018 at 10:00 AM.
Price Bid opening date/time	04.06.2018 at 10:30 AM
Contact person	Administrative Officer, IIIT Srikakulam
Reference No	Ref. No: IIIT SKLM/RGUKT-AP/E- Proc/E&WS Works/RRT10 /2018

Note: The dates stipulated above are firm and under no circumstances they will be relaxed unless otherwise extended by an official notification or happen to be Public Holidays.

**CLARIFICATIONS:**

- i. The addendum/corrigendum if any shall be published on RGUKT-AP website i.e. [www.rgukt.in](http://www.rgukt.in) as well as on e-procurement platform <https://tender.apeprocurement.gov.in>.
- ii. The Bidders are requested to submit the bids after issue of clarifications duly considering the changes made if any. Bidders are totally responsible for incorporating/complying the changes/ amendments made by IIIT Srikakulam, RGUKT-AP.

10. Procedure for submission of Tenders :

- a. Tenderers need to contact Administrative Officer, IIIT Srikakulam for information on e-Procurement.
- b. Tenderers need to register on the electronic procurement market place of Government of Andhra Pradesh i.e., “[www.eprocurement.gov.in](http://www.eprocurement.gov.in)”. On

registration on the e-Procurement market place, they will be provided with a user id and password by the system through which they can submit their tenders online.

- c. While registering on the e-procurement market Place, tenderers need to scan and upload the required documents as per the Tender requirements onto their profile.
- d. Such uploaded documents pertaining to Technical Bid need to be attached to the tender while submitting the tenders online. The original DD towards EMD and processing fee should be submitted to the Administrative Officer, IIIT Srikakulam, Prefab Campus, IIIT NUZVID , Nuzvid, Pin code:521202 before 02.06.2018 5PM.

11. Qualification Requirements: To qualify for consideration of award of the contract each tenderer should fulfill the following criteria;

- a. The details and certificates are to be furnished as per the Proforma available in the tender schedules.
- b. The contractor shall furnish a copy of valid GST registration with Commercial Tax department and latest Commercial Taxes Clearance Certificate.
- c. The contractor should furnish copy of permanent account number (PAN) and copy of latest Income Tax returns submitted along with proof of receipt etc.
- d. The Contractor should submit details of existing Commitments of works as per the Proforma available in the tender schedules.
- e. Availability of the key technical personal with adequate experience as per clause 6 of conditions of contract as per statement - I.
- f. Non refundable Processing fee of Rs.25,000/- to be paid by way of crossed demand draft drawn in favour of Director, RGU IIIT Srikakulam.
- g. Transaction fee of Rs.13450/- [(@0.03% of ECV (estimate contract value) with a cap of Rs.10,000/- + service tax @ 15.00% on transaction fee)] shall be payable to the Managing Director, APTS, Hyderabad in the manner mentioned at 5(b) above.
- h. EMD for Rs.448410/- in favour Director, RGUKT, IIIT Srikakulam to be valid for 6Months from the date of NIT.
- i. Information on Litigation history as per Statement – II, The tenderer should submit the particulars preferably in the format specified in the tender schedule along with necessary certificates.
- j. The tenderer is subjected to be black listed and the EMD forfeited, if he is found to have misled or furnished false information in the forms / statements / certificates submitted in proof of qualification requirements or record of performance such as abandoning of work not properly completed in earlier

contracts, inordinate delays in completion of the works, litigation history and / or financial failures and /or participated in the previous tendering for the same work and had quoted unreasonable high bid prices

- k. Even while execution of the work, if found that the contractor had produced false/fake certificates of experience he will be black listed and the contract will be terminated under clause 60 (a) of PS to APSS.
- l. The Tenderer should submit signed undertaking of tender online.

## 12. Procedure for Tender Submission

- a. The Tenderers who are desirous of participating in e-procurement shall submit their Technical bids, price bids etc., in the Standard formats prescribed in the Tender documents, displayed at e-market place. The tenderers should upload the scanned copies of documents in support of their Technical bids. The bidders shall sign on all the statements, documents, certificates, uploaded by them, owning responsibility for their correctness / authenticity.
- b. After uploading the Technical bid / Price bid, the original Demand Drafts in respect of Processing fee and EMD (except the Price bid / offer) are to be submitted by the tenderer to the Administrative Officer Prefab Campus, IIT NUZVID , Nuzvid, Pin code:521202 before 02.06.2018 5PM. The Institute shall not hold any risk on account of postal delay or non receipt.
- c. The Corporation will not hold any risk and responsibility for the loss in transit during uploading of the scanned document, for the invisibility of the scanned document online, and any other problem(s) encountered by the Tenderers while submitting his bids online.
- d. The tenderers shall authenticate the bid with his digital certificate for submitting the bid electronically on e-Procurement platform and the bids not authenticated by digital certificate of the bidder will not be accepted on the e-Procurement platform.

### 13. General Terms & Conditions

Officer inviting tenders: Administrative Officer, IIIT-Srikakulam

- a. **Tenders are invited on the e-procurement platform for the above mentioned work from the contractors / contract in firms eligible as class –I (Electrical) registered with state govt.,**
  - b. Approximate estimated contract value of work: Rs.44841669/-
  - c. a) Processing fee: A Demand Draft (non-refundable) for Rs.25,000/- in favour of Director, RGU IIIT, Srikakulam. The Processing fee once received will not be refunded under any circumstances nor adjusted for other works or subsequent calls or on any other account.  
b) All the participating tenderers should pay a Transaction fee of Rs.13450[(@0.03% of ECV (estimate contract value) with a cap of Rs.10,000/- + service tax @ 15.00%on transaction fee)] shall be payable to the Managing Director, APTS, Hyderabad in the manner mentioned at 5(b) above.
  - d. a) E.M.D. for Rs.448410/- (i.e. 1 % of ECV) drawn in favour of Director, RGU IIIT, Srikakulam Scanned Processing fee and E.M.D. may be uploaded with the tenders and originals must be submitted to the Administrative Officer, Prefab Campus, IIIT NUZVID, Nuzvid, Pin code: 521202 before 02.06.2018 5PM through Registered post / Courier, Failure to furnish the original DDs towards EMD and Processing fee before price bid opening date will entail rejection of bid and blacklisting.
  - e. Period of completion of work: 6 months
  - f. Tender Schedules: Tender schedules can be downloaded from the Web site “www.eprocurement.gov.in”
  - g. Form of Contract: Lump sum contract.
  - h. Class of contractor eligible :
- 3) The Contractor shall be a licensed 'A' grade Contractor, possessing a valid Electrical Contractor's license in the State, employing licensed supervisors and skilled workers having valid permits as per the Regulation of Indian Electricity Rules and Local Electrical Inspectors requirements. He should have similar type of experience in executing electrical works of the same magnitude earlier and should have qualified engineers to execute the work as per drawings and to supervise the works at site. List of Documents to be uploaded are given in Documents details with self-attestation )
- 4) class –I (Electrical) registered with state government

14. The technical bid evaluation of the tenderers will be done on the certificates /documents uploaded through online only towards qualification criteria furnished by them.
15. After uploading the Technical bid / Price bid, the original Demand Drafts in respect of Processing fee and EMD (except the Price bid / offer) are to be submitted by the bidder to the Administrative Officer, Prefab Campus,IIIT NUZVID , Nuzvid, Pin code:521202 before 02.06.2018 5PM
16. The tenderer is subject to be disqualified, if he is found to have misled or furnished false information in the forms / statements/ certificates submitted in proof of qualification requirements or record of performance such as abandoning completion of the works, litigation history and or financial failures and or participated in the previous tendering for the same work and has quoted unreasonable high bid price.
17. Even while execution of the work, if found that the contractor had produced false / fake certificates of experience, he will be black listed and the contract will be terminated as per clause 60(a) of PS to APDSS and his EMD will be forfeited.
18. Any other condition regarding receipt of tenders in conventional method appearing in the tender documents may please be treated as not applicable.
19. The contractors are requested to upload the information's in Zip format preferably.
20. Transaction fees: A transaction fee at 0.10% of the estimate contract value of the work towards service charges has to be paid by successful bidder at the time of concluding agreement in the form of Demand draft as follows in favour of :
  - 1) Managing Director, APTS, Rs.17900/- (@ 0.04% of estimate contract value with a cap of Rs.10,000/-)
  - 2) Director RGUKT, IIIT SrikakulamRs.26900/-,@ 0.06% of estimate contract value)

**IMPORTANT NOTE:-**

After uploading the Technical bid / Price bid, the original Demand Drafts in respect of Processing fee and EMD are to be submitted by the bidder to the Administrative Officer, Prefab Campus, IIIT NUZVID , Nuzvid, Pin code:521202 on or before 02.06.2018 5.00PM.

## INSTRUCTIONS TO TENDERERS

### A – GENERAL

**NAME OF WORK: Providing Electrification for Hostel, Tutorial and Dining Hall Blocks, IIIT Srikakulam, S.M.Puram, Srikakulam (Dist).**

Scope of work : Electrical WORKS

- a) ECV put to tender. : Rs.44841669/-
- b) Period of completion. : 6 Months
- c) SSR adopted : Common SSR of 2017-18
- d) Seigniorage Charges:As per Government Orders issued from time to time. (As per tender condition No.98)
- e) Goods and Services Tax (GST). 12% (As per tender condition No.99)

The Administrative Officer, RGUKT, IIIT Srikakulam invites tenders for the above works vide Tender Notice No.Ref. No: IIIT SKLM/RGUKT-AP/E- Proc/E&WS Works/RRT10/2018

- 1.1 After uploading the Technical bid / Price bid, the original Demand Drafts in respect of Processing fee, and EMD (except the Price bid / offer) are to be submitted by the tenderer to the Administrative Officer, so as to reach before 02.06.2018 5PM. The institution shall not hold any risk on account of postal delay. Similarly, if any of the certificates, documents, etc., furnished by the tenderer are found to be false / fabricated / bogus, the tenderer will be disqualified, blacklisted, action will be initiated as deemed fit and the EMD will be forfeited. The Corporation will not hold any risk and responsibility for the loss in transit during uploading of the scanned document, for the invisibility of the scanned document online, and any other problem(s) encountered by the Tenderers while submitting his bids online
- 1.2 The successful tenderer is expected to complete the work within the time period specified in the Tender Notice.
- 1.3 The successful (L1) Tenderer shall furnish the hard copies of the all the documents/Certificates/statements up loaded by him at the time of concluding agreement.
- 2. Firms Eligible to Tender:
  - 2.1 The Firms who

- i) Possess the valid registration in the class and category mentioned in the Tender Notice and satisfy all the conditions therein are the eligible tenderers.
- ii) Are not blacklisted or debarred or suspended by the Government for what ever the reason, prohibiting them not to continue in the contracting business are the eligible tenderers.
- iii) Have complied with the eligibility criteria specified in the Tender Notice are the eligible tenderers.

## 2.2 Firms Ineligible to Tender:

- i) A retired officer of the Govt. of AP or Govt. of India executing works is disqualified from tendering for a period of two years from the date of retirement without the prior permission of the Government.
- ii) The Tenderer who has employed any retired officer as mentioned above shall be considered as an ineligible tenderer.
- iii) The contractor himself or any of his employees is found to be Gazette Officer who retired from Government Service and had not obtained permission from the Government for accepting the contractor's employment within a period of 2 years from the date of his retirement.
- iv) The Contractor or any of his employees is found at any time after award of contract, to be such a person who had not obtained the permission of the Government as aforesaid before submission of the tender or engagement in the Contractor's service.
- v) Contractor shall not be eligible to tender for works in the division / circle where any of his near relatives are employed in the rank of Assistant Engineer or Assistant Executive Engineers and above on the Engineering side and Divisional Accounts Officer and above on the administrative side. The Contractor shall intimate the names of persons who are working with him in any capacity or are subsequently employed. He shall also furnish a list of Gazette /Non-Gazette, State Government Employees related to him. Failure to furnish such information tenderer is liable to be removed from the list of approved contractors and his contract is liable for cancellation.

Note: Near relatives include

- 1. Sons, step sons, daughters, and stepdaughters.
- 2. Son-in-law, and daughter-in-law.
- 3. Brother-in-law, and sister-in-law.
- 4. Brothers and Sisters.
- 5. Father and Mother.
- 6. Wife / Husband.
- 7. Father-in-law and Mother-in-law
- 8. Nephews, nieces, uncle and aunts
- 9. Cousins and
- 10. Any person residing with or dependent on the contractor.

## 3. Qualification data of the Tenderers

3.1 The tenderer shall furnish the following particulars in the formats enclosed, supported by documentary evidence as specified in the formats.

- a) Check slip to accompany the tender (in Annexure-I).

Attested copies of documents relating to the Registration of the firm, Registration as Civil Contractor, Partnership deed, Articles of Association, Commercial Tax Registration(GST), Permanent Account Number with latest IT returns submitted and proof of receipt etc.

**Note:**The Partnership firms, which are registered as Contractors shall intimate the change in partnership deed, if any as per G.O.Ms.No.58, I & CAD dated 23-04-2002 within one month of such change. Failure to notify the change to the registration authority in time will entail the firms to forfeit their registration and their tender will be rejected. The intimation of change of partners if any and the acceptance by the Registration authority may be enclosed.

- b) availability of key personnel for administration / site management and execution viz., technical personnel required for the work (Statement I);
- c) Information regarding any litigation, with Government during the last five years, in which the Tenderer is involved in (Statement II);

Note : The tenderer shall sign all the statements /documents and certificates up loaded by him owning the responsibility for their correctness/ authenticity.

3.2 a. Tenders from Joint Ventures are not accepted.

b. Contractors against whom Vigilance / disciplinary / blacklisting cases are pending in the Corporation are not entitled to participate in the tender for the above work.

### 3.3 QUALIFICATION CRITERIA FOR OPENING OF THE PRICE BID.

To qualify for opening the price Bid , each contractor / firm

- i. should have valid GST Registration with Commercial Tax department.(Govt.of AP Only)
- ii. should furnish copy of Permanent Account Number (PAN) card and copy of latest Income Tax returns submitted along with proof of receipt etc..
- iii. availability of the key technical personal with adequate experience as per clause 6.2 of conditions of contract in Statement - I.
- iv. Copy of Registration as mentioned in Tender Notice
- v. Information on Litigation history in which tenderer is involved if any.
- vi. All the participating bidders should pay a Transaction fee of Rs.13450/- [(@0.03% of ECV (estimate contract value) with a cap of Rs.10,000/- + service tax @ 15.00%on transaction fee)] shall be payable to the Managing Director, APTS, Hyderabad in the manner mentioned at 5(b) above.
- vii. EMD in the shape of DD for Rs.448410/-issued by any Nationalized Bank/scheduled bank in favour Director, RGUKT, IIIT Srikakulam ,from the date of NIT.
- viii. Signed undertaking of tender

The bidder should submit the particulars preferably in the format specified in the tender schedule along with necessary certificates.

Note 1 : *Tenders from joint ventures will not be accepted.*

Note 2 : Contractors against whom Vigilance / disciplinary / blacklisting cases are pending in the Corporation are not entitled to participate in the tender for the above work.

No relaxation will be given to any of the qualification criteria.

3.4 Even though the tenderers meet the above qualifying criteria, they are liable to be disqualified / debarred / suspended / blacklisted if they have

- Furnished false / fabricated particulars in the forms, statements and /annexure submitted in proof of the qualification requirements and/or

- Not turned up for entering into agreement, when called upon.
  - record of poor progress such as abandoning the work, not properly completing the contract, inordinate delays in completion, litigation history or financial failures etc. and/or
  - participated in the previous bidding for the same work and had quoted unreasonably high tender percentage and
  - even while execution of the work, if found that the work was awarded to the Contractor based on false / fake certificates of experience, the Contractor will be blacklisted and work will be taken over invoking clause 60(a) of PS to APSS.
  - The tender of the contractor will be disqualified along with the forfeiture of E.M.D. and the contractor will be debarred from future tendering for a further period of 2 years in the event of furnishing of false/fraudulent certificates along with the tender.
- 3.5 Tenders with an excess of above 5% of the estimated contract value shall summarily be rejected.
- 3.6 For tenders up to 15% less than the estimated contract value of work, no additional security deposit is required. But for tenders less than 15% of the estimated Contract Value of work, the difference between the tendered amount and 85% of the estimated contract value, shall be paid by the successful tenderer at the time of concluding agreement as an additional security to fulfill the contract through a Bank Guarantee or Demand Draft on a Nationalized Bank / Scheduled bank in the prescribed format valid till completion of the work in all respects
- 3.7
- a) If the percentage quoted by a tenderer is found to be either abnormally high or with in the permissible ceiling limits prescribed but under collusion or due to unethical practices adopted at the time of tendering process, such tenders shall be rejected.
  - b) A tenderer submitting a Tender which the tender accepting authority considers excessive and or indicative of insufficient knowledge of current prices or definite attempt of profiteering will render himself liable to be debarred permanently from tendering or for such period as the tender accepting authority may decide. The tenderer overall percentage should be based on the controlled prices for the materials, if any, fixed by the Government or the reasonable prices permissible for the tenderer to charge a private purchaser under the provisions of clause-6 of the hoarding and profiteering prevention ordinance of 1943 as amended from time to time and on similar principle in regard to labour supervision on the construction.
- 3.8 **CONDITIONAL TENDER**  
Conditional tenders are not accepted. Submission of tender would be construed as acceptance to all the terms and conditions of the tender which include conditions of contract, drawings and accompanying specifications.
4. One Tender per Tenderer:
- 4.1 Each Tenderer shall submit only one Tender for the work. A Tenderer who submits more than one Tender will cause disqualification of all the Tenders submitted by the Tenderer.

5. Cost of Tendering
- 5.1 The Tenderer shall bear all costs associated with the preparation and submission of his Tender and the tender inviting authority will in no case be responsible and liable for those costs.
6. Site Visit.
- 6.1 The Tenderer, at the Tenderer's own responsibility and risk is advised to visit and examine the Site of Work and its surroundings and obtain all information that may be necessary for preparing the Tender for entering into a contract, for construction of the work. The costs of visiting the site shall be at the Tenderer's own expense.

## **B. TENDER DOCUMENT**

7. Contents of Tender document.
- 7.1 One set of Tender document, comprises of the following:

### **Technical bid**

- 1) Notice Inviting Tenders (NIT)
- 2) Instruction to Tenderer
- 3) Forms of Tender and qualification information
- 4) Conditions of Contract.
- 5) Specifications.
- 6) Drawings.
- 7) Forms of Securities. i.e., EMD, Additional Security etc.

### **Price bid**

Bill of Quantities and Price bid.

8. Clarification on Tender Documents
- 8.1 A prospective Tenderer requiring any clarification on Tender documents may contact the Tender Inviting Officer at the address indicated in the NIT. The Tender Inviting Officer will also respond to any request for clarification, received through post.
9. Amendment to Tender Documents
- 9.1 Before the last date for submission of Tenders, the Tender Inviting Officer may modify any of the Contents of the Tender Notice, Tender documents by issuing amendment / Addendum.
- 9.2 Any addendum/amendments issued by the Tender Inviting Officer shall be part of the Tender Document and it shall be attached to the Tender Notice on web site (i.e) eprocurement.gov.in
- 9.3 To give prospective Tenderers reasonable time to take an addendum into account in preparing their bids, the Tender Inviting Officer may extend if necessary, the last date for submission of tenders.

## **C. PREPARATION OF TENDERS**

10. Language of the Tender.
- 10.1 All documents relating to the tender shall be in the English Language only.
11. Documents comprising of the Tender.
- 11.1 The bidders who are desirous of participating in e-procurement shall submit their technical bids, price bids etc., in the standard prescribed format in the tender documents, displayed at e market place. The bidders should upload the scanned copies of all the relevant certificates, documents etc., in the e market place in support of their technical bids. The bidders shall sign on all

- the statements, documents, certificates, uploaded by him, owning responsibility for their correctness/authenticity.
- 11.2 After uploading the technical/price bid, the original DDs towards EMD and processing fee are to be submitted by the tenderer to the Administrative Officer so as to reach before 02.06.2018 5.00 PM
  - 11.3 The technical bids will be opened online by the Administrative officer or his authorized representative at the time and date as specified in the tender documents. All the statements, documents, certificates, DD etc., uploaded by the tenderers will be downloaded for technical evaluation. The clarifications, particulars if any required from the bidders will be obtained in the conventional method by addressing the bidders. The technical bids will be evaluated against the specified parameters/ criteria, same as in the case of conventional tenders and the technically qualified bidders will be identified. The result of technical bid evaluation will be displayed on the e market place, which can be seen by all the bidders who participated in the tenders. The bidder who fulfilled the technical criteria will allow to financial bid opening.
  - 11.4 Furnishing of hard copies by the tenderers before opening of the Price bid is dispensed with.
  - 11.5 The tenderer shall invariably furnish the original DD towards EMD to the tender inviting authority before opening Price bids either personally or through courier or by post and the receipt of the same within the stipulated time shall be the responsibility of the tenderer. Department will not take any responsibility for any delay or non receipt. Failure to furnish the original DD towards EMD before Price bid opening will entail rejection of bid.
  - 11.6 The bidder shall mandatorily pay the transaction fee to MD, APTS, Hyderabad., through the electronic payment gateway.
  - 11.7 The successful tenderer shall furnish the original hard copies of all the documents / certificates / statements uploaded by him before concluding agreement.
  - 11.8 If any tenderer fails to submit the Original DD for EMD, hard copies of uploaded documents within the stipulated time, the tenderer will be suspended /disqualified from participating in the tenders on e-procurement platform for a period of 12 months from the date of bid submission. The suspension of tenderer shall be automatically enforced by the e-procurement system.
  - 11.9 The tenderers shall furnish a declaration in online stating that the soft copies uploaded by them are genuine. Any incorrectness/deviation noticed will be viewed seriously and apart from canceling the work duly forfeiting the EMD, criminal action will be initiated including suspension of business.
  - 11.10 The Bidder shall authenticate the bid with his digital certificate for submitting the bid electronically on e-Procurement Platform and the bids not authenticated by Digital certificate of the bidder will not be accepted on the e-Procurement platform.

## 12. Bid Offer:

- 12.1 Bill of Quantities called Schedule "A" and the bid offer accompanies the tender document as Volume - II. It shall be explicitly understood that the Tender Inviting Officer does not accept any responsibility for the correctness or completeness of this schedule 'A' and this schedule 'A' is liable to alterations by omissions, deductions or additions at the discretion of the Administrative Officer or as set forth in the conditions of the contract. The tenderers will have to state clearly their willingness to execute the work at certain specific percentage of excess or less or at par of the ECV indicated at the space provided therein in Schedule 'A'. The tenderer should however quote his lump sum tender based on this schedule of quantities. He should

quote his offer as a overall tender percentage. The over all tender percentage should be written both in words and figures. The bid offers i.e., percentage shall be quoted both in figures and words.

- 12.2 The Schedule –A (or Price-bid) contains not only the quantities but also the rates worked out by the Department and the amount for each item and total value of the estimated contract. The tenderer should workout his own rates keeping in view the work, site conditions and quote his overall tender percentage with which he intends to execute the work.
- 12.3 The bid offer shall be for the whole work and not for individual items / part of the work.
- 12.4 All duties, taxes, and other levies payable by the contractor as per State / Central Government rules, shall be included in the tender percentage quoted by the tenderer.
- 12.5 The tendered contract amount as computed based on overall tender percentage is subject to variation during the performance of the Contract in accordance with variation in quantities etc.
- 12.6 A Transaction fee at 0.10% of the estimate contract value of the work towards service charges has to be paid by successful bidder at the time of concluding agreement in the form of Demand draft as follows in favour of :
  - 1) Managing Director, APTS, Hyderabad for Rs.17900/- (@ 0.04% of estimate contract value with a cap of Rs.10,000/-)
  - 2) Managing Director, APMSIDC, Hyderabad for Rs.26900/- @ 0.06% of estimate contract value)

### 13. Validity of Tenders:

- 13.1 Tenders shall remain valid for a period of not less than three months from the last date for receipt of Tender specified in NIT.
- 13.2 During the above mentioned period no plea by the tenderer for any sort of modification of the tender based upon or arising out of any alleged misunderstanding of misconceptions or mistake or for any reason will be entertained.
- 13.3 In exceptional circumstances, prior to expiry of the original time limit, the Tender Inviting Officer may request the bidders to extend the period of validity for a specified additional period. Such request to the Tenderers shall be made in writing. A Tenderer may refuse the request without forfeiting his E.M.D. A Tenderer agreeing to the request will not be permitted to modify his Tender, but will be required to extend the validity of his E.M.D. for a period of the extension.

### 14. Processing fee :

- a) The Tenderer shall furnish, Processing fee of Rs.25,000/- in the form of crossed DD in favour of Director, RGUKT, IIIT Srikakulam.
- b) All the participating bidders should pay a transaction fee of Rs.13450/- [(@0.03% of ECV (estimate contract value) with a cap of Rs.10,000/- + service tax @ 15.00%on transaction fee)] shall be payable to the Managing Director, APTS, Hyderabad in the manner mentioned at 5(b) above.

### Earnest Money Deposit

- 14.1. The Tenderer shall furnish, Earnest Money Deposit equivalent to 1% of ECV along with hard copies of Tender documents. The DD shall be from a

- Nationalized Bank/Scheduled Bank in favour of Director, RGU IIT, Srikakulam valid for a period of 6 Months. Xerox copy of the DD is to be scanned and uploaded along with the Bid and the original DD shall be sent to the Administrative Officer, IIT Srikakulam so as to reach before 5.00 PM on the specified date. Failure to furnish the original DD before 3.00PM on the date of opening of price bid will entail rejection of bid and blacklisting.
- 14.2. The successful tenderer should however pay the E.M.D. at 2½% on Estimated Contract Value / Tender Contract Value whichever is higher plus the additional EMD for tenders less than 15% of the Estimate Contract Value in accordance with Clause 3.6 at the time of signing the agreement in the shape of crossed Demand Draft on any Nationalized Bank./Scheduled Bank .
- 14.3. Demand Drafts furnished towards EMD shall be valid for a period of six months from the date of tender notice.
15. Return of E.M.D. to unsuccessful tenderer: The earnest money deposit will be refunded to the unsuccessful tenderer by registered post at the expiry of the period of validity of tender or the entrustment of the work to the successful tenderer whichever is earlier.
16. Return of EMD to successful tenderer  
The EMD paid by the successful tenderer at the time of tendering will be discharged when the tenderer has signed the agreement and furnished the required EMD pursuant to Clause 14.2
17. The earnest money deposited by the successful tenderer will not carry any interest and it will be dealt with as provided in the conditions stipulated in the tender.
- 17.1. The E.M.D. shall be forfeited.  
(a) if the Tenderer withdraws the Tender during the validity period of Tender.  
(b) in the case of a successful Tenderer, if he fails to sign the Agreement for whatever the reason.
- 17.2. In consideration of the Administrative Officer, IIT-Srikakulam undertaking to investigate and to take into account each tender and in consideration of the work thereby involved, all earnest monies deposited by the tenderer will be forfeited to the Corporation in the event of such tenderer either modifying or with-drawing his tender at his instance within the said validity period of three months.

#### **D. SUBMISSION OF TENDERS.**

18. Submission of Tenders:
- 18.1. The Tenderers who are desirous of participating in e-procurement shall submit their Technical bids, price bids etc., in the Standard formats prescribed in the Tender documents, displayed at e-market place. The Tenderers should upload the scanned copies in support of their Technical bids. The documents are to be uploaded in ZIP format only. The bidders shall sign on all the statements, documents, certificates, uploaded by him, owning responsibility for their correctness / authenticity. The documents uploaded online will only be considered for evaluation.

After uploading the Technical / Price bid, the original Demand Drafts in respect of processing fee, and EMD (except the Price bid / offer) are to be submitted by the bidder to the Administrative Officer, IIT, Srikakulam, so as to reach before 02.06.2018 5PM.

- 18.2. The IIIT-Srikakulam will not hold any risk and responsibility for the loss in transit during uploading of the scanned document, for the invisibility of the scanned document online, and any other problem(s) encountered by the Tenderers while submitting his bids online.
- 18.3. Related certificates, documents etc., duly self attested are to be scanned and uploaded on to the e-procurement platform at [www.eprocurement.gov.in](http://www.eprocurement.gov.in) in support of items mentioned in clause 3.
- 18.4. Any other condition regarding receipt of tenders in conventional method appearing in Tender document may be treated as Non-applicable.
19. Last date / time for Submission of the Tenders.
- a) Tenders must be submitted online not later than the date and time specified in the Tender Notice / Tender Document. The Administrative Officer, IIIT-Srikakulam or his nominee may extend the dates for issue and receipt of Tenders by issuing an amendment in which case all rights and obligations of the Administrative Officer, IIIT-Srikakulam and the Tenderers will remain same as previously. Late Tenders. Tenders will not be received after the last date / time prescribed in NIT / Tender Document.
  - b) Modification to the Tender. Tenderers can modify their Tender online before the last date/time prescribed in Tender Notice / Tender Document and amendments issued, if any. No tender shall be modified after the last date /time of submission of Tenders.
  - c) Submission of Tenders: The tenderer shall invariably ensure that the following are uploaded online
    - a) Check slip
    - b) Copy of contractors registration certificate under appropriate class with Government of Andhra Pradesh
    - c) Copy of permanent account number (PAN) card and copy of latest Income Tax returns submitted along with proof of receipt..
    - d) Copy of GST Registration Certificate from Commercial Tax Department and latest valid Commercial Tax clearance certificate.
    - e) The availability of Key personnel in Statement I
    - f) The information on litigation history in Statement II
    - g) DDs for processing fee and EMD.
    - h) Signed under taking of tender.

Note:- Any incorrectness / deviation noticed in the soft copies will be viewed seriously and apart from canceling the tender duly forfeiting the EMD, criminal action will be initiated including suspension of business.

## **E. TENDER OPENING AND EVALUATION**

### **20. Tender opening**

- 20.1. The Technical bids will be opened online by the Administrative Officer or his nominee at the time and date as specified in the Notice Inviting Tender. All the Statements, documents, certificates, Demand Draft etc., uploaded by the Tenderers will be downloaded for technical evaluation. The technical bids will be evaluated against the specified parameters / criteria same as in the case of conventional tenders and the technically qualified bidders will be identified. The result of Technical bids evaluation will be displayed on the e-market place, which can be seen by all the tenderers who participated in the Tenders.

### **21. Clarification on the Technical Bid**

- 21.1. The tender opening authority may call upon any tenderer for clarification on the statements, documentary proof relating to the technical bid. The request for clarification and response thereto shall be in writing and it shall be only on the qualification information uploaded online by the tenderer. The clarification called for from the tenderers shall be furnished within the stipulated time, which shall not be more than a week.
- 21.2. The tenderer if so desirous, shall agree in writing to furnish the clarification called for within the stipulated time and, for disqualification and rejection of his tender in the event of failure to do so.

### **22. Examination of technical Bids and Determination of Responsiveness**

- 22.1. The Administrative Officer, IIIT-Srikakulam or his nominee will evaluate whether each Tenderer is satisfying the eligibility criteria prescribed in the tender document and declares them as a qualified Tenderer if he satisfies the eligibility criteria.
- 22.2. If any alteration is made by the tenderer in the tender documents, the conditions of the contract, the drawings, specifications or statements / formats or quantities the tender will be rejected.

### **23. Price Bid Opening**

- 23.1. At the specified date and time, the price bids of all the technically qualified bidders will be opened online by the Administrative Officer, IIIT-Srikakulam or his nominee and the result will be displayed on the e-market place which can be seen by all the bidders who participated in the Tenders.
- 23.2. The Price Bid of the Unqualified Tenderers will not be opened.
  - 23.2.1. Tenders shall be scrutinized in accordance with the conditions stipulated in the Tender document. In case of any discrepancy of non-adherence to conditions, the Tender accepting authority shall communicate the same which will be binding both on the tender Opening authority and the Tenderer. In case of any ambiguity or dispute, the decision taken by the Tender Accepting Authority on tenders shall be final.

### **24. Evaluation and Comparison of Price Bids**

- 24.1. The Administrative Officer, IIIT-Srikakulam or his nominee will evaluate and compare the price bids of all the qualified Tenderers.

- 24.2. Negotiations at any level are strictly prohibited. However, good gesture rebate, if offered by the lowest tenderer prior to finalization of tenders may be accepted by the tender accepting authority.
- 24.3. Selection of Tenderer among the lowest & equally quoted tenderers will be in the following orders:
  - a) The tenderer whose bid capacity is higher will be selected.
  - b) In case the bid capacity is also same the tenderer whose annual turnover is more will be preferred.
  - c) Even if the criteria incidentally become the same, the turnover on similar works and thereafter machinery available for the work and then the clean track record will be considered for selection.

#### 25. Discrepancy in Tender percentage quoted

- 25.1. In case of any discrepancy between the overall tender percentage quoted in words and figures, the percentage quoted in words shall prevail. In case the tenderer has quoted overall tender percentage only in words and not in figures or vice versa, such tender shall be treated as incomplete and rejected.

#### 26. Process to be Confidential

- 26.1. Information relating to the examination, clarification, evaluation and comparison of Tenders and recommendations for the award of a contract shall not be disclosed to Tenderers or any other persons not officially concerned with such process until the award to the successful Tenderer has been announced by the tender accepting authority. Any effort by a Tenderer to influence the processing of Tenders or award decisions may result in the rejection of his Tender.
- 26.2. No Tenderer shall contact the Administrative Officer, IIIT-Srikakulam or any authority concerned with finalization of tenders on any matter relating to its Tender from the time of the Tender opening to the time the Contract is awarded. If the Tenderer wishes to bring additional information to the notice of the Administrative Office, IIIT-Srikakulam, it should do so in writing.
- 26.3. Before recommending / accepting the tender, the tender recommending / accepting authority shall verify the correctness of certificates submitted to meet the eligibility criteria and specifically experience. The authenticated agreements of previous works executed by the lowest tenderer shall be called for.
- 26.4. Tender will be finalized by the Administrative Officer, IIIT-Srikakulam in accordance with the conditions stipulated in the tender document and in case any discrepancy of non-adherence to the conditions, the same shall be communicated which will be binding both on the tender concluding authority and contractor. In case of any ambiguity the decision take by the Administrative Officer, IIIT-Srikakulam on tender shall be final.

### 8.. AWARD OF CONTRACT

#### 27. Award Criteria

- 27.1. The Administrative Officer, IIIT-Srikakulam or his nominee will award the contract on approval of the tender by Competent authority.
- 27.2. The tender accepting authority reserves the right to accept or reject any Tender or all tenders and to cancel the Tendering process, at any time prior

to the award of Contract, without thereby incurring any liability to the affected Tenderer or Tenderers or any obligation to inform the affected Tenderer or Tenderers of the reasons for such action.

## 28. Notification of Award and Signing of Agreement.

- 28.1. The Tenderer whose Tender has been accepted will be notified of the award of the work prior to expiration of the Tender validity period by registered letter. This letter (hereinafter and in the Conditions of Contract called "Letter of Acceptance") will indicate the sum that the IIIT-Srikakulam will pay the Contractor in consideration of the execution, completion, and maintenance of the Works by the Contractor as prescribed by the Contract (hereinafter and in the Contract called the "Contract Amount").
- 28.2. When a tender is accepted, the concerned tenderer shall attend the office of the Administrative Officer, IIIT-Srikakulam on the date fixed in the Letter of acceptance. Upon intimation being given by the Administrative Officer, IIIT-Srikakulam, of acceptance of his tender, the tenderers shall make payment of the E.M.D., and additional security deposit wherever needed by way of Demand Draft or unconditional and irrevocable Bank Guarantee obtained from a Nationalized / Scheduled Bank with a validity period of duration of Contract period plus defects liability period of 2 years and sign an agreement in the form prescribed by the department for the due fulfillment of the contract. Failure to attend the Administrative Officer, IIIT-Srikakulam office on the date fixed, in the written intimation, to enter into the required agreement shall entail forfeiture of the Earnest Money deposited. The written agreement to be entered into between the contractor and the Administrative Officer, IIIT-Srikakulam shall be the foundation of the rights and obligations of both the parties and the contract shall not be deemed to be completed until the agreement has first been signed by the contractor and then by the proper officer authorized to enter into contract.
- 28.3. The successful tenderer has to sign an agreement within a period of 15 days from the date of receipt of communication of acceptance of his tender. On failure to do so his tender will be cancelled duly forfeiting the E.M.D., paid by him without issuing any further notice and action will be initiated for black listing the tenderer.

## 29. Corrupt or Fraudulent Practices

- 29.1. The IIIT-Srikakulam requires that the bidders / suppliers / contractors under Government financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the IIIT-Srikakulam
- (a) define for the purposes of the provision, the terms set forth below as follows:
- (i) "corrupt practices" means the offering, giving, receiving or soliciting of any thing of value to influence the action of a IIIT-Srikakulam official in procurement process or in contract execution: and
  - (ii) "fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the IIIT-Srikakulam and includes collusive practice among Tenderers (prior to or after Tender submission) designed to establish in

Tender prices at artificial non-competitive levels and to deprive the IIIT-Srikakulam of the benefits of free and open competition.

- (b) Will reject a proposal for award if it determines that the Tenderer recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question.
- (c) Will blacklist / or debar a firm, either indefinitely or for a stated period of time, if at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing a IIIT-Srikakulam Contract.
- (d) Further more, Tenderers shall be aware of the provisions stated in the General Conditions of Contract.

### 30. Rights of the Corporation

- 30.1. The Administrative Officer, IIIT-Srikakulam reserves the right to reject any or all of the tenders, without assigning any reason whatsoever.
- 30.2. In the event of any dispute regarding any of the tender conditions, the decision of the IIIT-Srikakulam shall be final.

**FORMS OF TENDER  
QUALIFICATION INFORMATION  
AND  
UNDER TAKING OF TENDERER**

**QUALIFICATION INFORMATION**  
**CHECKLIST TO ACOMPANY THE TENDER**  
Documents to be submitted by tenderer on the  
e-procurement platform on line

Sl.No	Document to be uploaded to profile	Description to be given	Scanned documents to be uploaded	Page No. (see Note below)
1	(a) Contractors valid registration under appropriate class and category with Government of Andhra Pradesh (Electrical category) (b) Partnership deed in case of firms & article of association in case of companies (c) class – I (Electrical) registered with state government (d) licensed 'A' grade Contractor, possessing a valid Electrical Contractor's license in the State	Electrical Registration	Yes / No	
2	EMD Paid by way of Online / Challan Generation as per GO MS No. 8 dt. 08.05.2016 to the Account of The Director, RGU IIIT Srikakulam, and copy of Bank slip should be scanned will be attached to Uploaded documents.	EMD	Yes / No	
3	Transaction fee through electronic gateway payment	Transaction Fee	Yes / No	
4	Scanned copy of Bid processing fee by way of DD / Net Banking as per GO MS No. 8 dt. 08.05.2016 to the Account of Director, RGU IIIT SRIKAKULAM,	Bid processing Fee	Yes / No	
5	Copy of PAN card & proof of submission of latest income tax returns along with proof for the F.Y year 2016-17.	Income Tax Documents	Yes / No	
6	Copies of GST registration	GST Documents	Yes / No	
7	Details of Similar nature of works completed as prime contractor (in the same name) during the last Five financial Years for any one financial year with supporting certificates duly issued by the EEs and countersigned by the SE/Higher authorities.	Similar Works	Yes / No	
8	Quantities of work executed as prime contractor (in the same name) in the last five financial years for any one financial year. Similar nature of works with supporting certificates duly issued by the EEs and countersigned by the SE/Higher authorities.	Executed Quantities	Yes / No	
9	Availability of key & critical equipment with countersigned by E.E/S.E	Critical Equipment	Yes / No	
10	Declaration on critical equipment on non-judicial stamp paper worth of Rs.100/-	Declaration on critical equipment	Yes / No	

11	Availability of key personnel along with qualification certificates	Technical Agents	Yes / No	
12	Statement of existing commitments in ongoing Govt. works along with supporting experience certificates	Existing commitments	Yes / No	
13	Statement of works for which tenders are submitted and likely to be awarded	Works awarded/likely to be awarded	Yes / No	
14	Information on litigation history	Litigation history	Yes / No	
15	Declaration in online stating that the soft copies uploaded by them are genuine	Undertaking	Yes / No	
16	Self declaration by the bidder in proof of going through all bid conditions (see format below check list)	Declaration	Yes / No	
17	Any other certificates required as per NIT	Any other certificates	Yes / No	
18	List of certificates enclosed	List of certificates enclosed	Yes / No	

- Note: 1. Please upload documents in ZIP format with suitable description as defined above.
2. The scanned documents shall be legible failing which they will not be considered.
  3. Shall sign on all statements, documents, certificates uploaded owning responsibility for their correctness / authenticity.
  4. All the statements copies of the certificates, documents etc., enclosed to the Technical bid shall be given page numbers on the right corner of each certificate, which shall be indicated in column (5) against each item.

STATEMENT – I

Availability of Key Personnel

Qualification and experience of Key Personnel proposed to be deployed for execution of the Contract.

Sl. No	Name	Designation	Qualification	Total Experience	Working with the Tenderer since.
1	2	3	4	5	6

Signature of the Tenderer

STATEMENT – II

Information on litigation history in which Tenderer is the Petitioner.

S. No	Case No. / Year	Court where filed.	Subject Matter / Prayer in the case.	Respondents i.e., SE / CE	Present Stage.
1	2	3	4	5	6

Signature of the Tenderer

## UNDERTAKING OF TENDERER

Date: .....

To

The Administrative Officer,  
IIIT-Srikakulam.

Sir,

**I/We, \_\_\_\_\_do hereby tender and if this tender be accepted, under take to execute the following work Providing Electrification for Hostel, Tutorial and Dining Hall Blocks, IIIT Srikakulam, S.M.Puram, Srikakulam (Dist),as shown in the drawings and described in the specifications available on online and also in the office of the Administrative Officer, IIIT-Srikakulam with such variations by way of alterations or additions to, and omissions from the said works and method of payment as provided for in the “conditions of the contract” for the sum as quoted online or such other sum as may be arrived under the clause of the standard preliminary specifications relating to “Payment on lump-sum basis or by final measurement at unit rates”**

I/WE have also quoted percentage excess or less on E.C.V., in Schedule 'A', annexed (in words and figures) for which I/We agree to execute the work when the lump sum payment under the terms of the agreement is varied by payment on measurement quantities.

I/WE have quoted Percentage excess or less on E.C.V., in Schedule 'A' both in words & figures. In case of any discrepancy between the Percentage excess or less on E.C.V., in words and figures, the rates quoted words only shall prevail.

I/WE agreed to keep the offer in this tender valid a period of Nine month(s) mentioned in the tender notice and not to modify the whole or any part of it for any reason within above period. If the tender is withdrawn by me/us for any reasons whatsoever, the earnest money paid by me/us will be forfeited to IIIT-Srikakulam.

I/WE hereby distinctly and expressly, declare and acknowledge that, before the submission of my/our tender I/We have carefully followed the instructions in the tender notice and have read the A.P.S.S. and the preliminary specifications therein and the A.P.S.S. addenda volume and that I/We have made such examination of the contract documents and the plans, specifications and quantities and of the location where the said work is to be done, and such investigation of the work required to be done, and in regard to the material required to be furnished as to enable me/us to thoroughly understand the intention of same and the requirements, covenants, agreements, stipulations and restrictions contained in the contract, and in the said plans and specifications and distinctly agree that I/We will not hereafter make any claim or demand upon the IIIT-Srikakulam based upon or arising out of any alleged misunderstanding or misconception /or mistake on my/or our part of the said requirement, covenants, agreements, stipulations, restrictions and conditions.

I/WE enclosed to my/our tender a crossed Demand Draft towards Earnest Money Deposit not to bear any interest.

I/WE enclosed to my/our tender a crossed Demand Draft towards Processing fee which is non-refundable.

I/WE shall not assign the contract or sublet any portion of the same. In case if it becomes necessary such subletting with the permission of the Administrative Officer, IIIT-Srikakulam shall be limited to (1) Labour contract (2) Material contract (3) Transport contract (4) Engaging specialists for special items of work enjoined in A.P.S.S.

IF MY/OUR tender is not accepted the sum shall be returned to me/us on application when intimation is sent to me/us of rejection or at the expiration of three months from last date of receipt of this tender, whichever is earlier. If my/our tender is accepted the earnest money shall be retained by the IIIT-Srikakulam as security for the due fulfillment of this contract. If upon written intimation to me/us by the Administrative Officer, IIIT-Srikakulam Office, I/We fail to attend the said office on the date herein fixed or if upon intimation being given to me/us by the Administrative Officer, IIIT-Srikakulam or acceptance of my/our tender, and if I/We fail to make the additional security deposit or to enter into the required agreement as defined in condition- 14.2 of the tender conditions, then I/We agree the forfeiture of the earnest money. Any notice required to be served on me/us here under shall be sufficiently served on me/us if delivered to me/us personally or forwarded to me/us by post to (registered or ordinary) or left at my/our address given herein. Such notice shall if sent by post be deemed to have been served on me/us at the time wherein due course of post it would be delivered at the address to which it is sent.

I/WE fully understand that the written agreement to be entered into between me/us and Corporation shall be the foundation of the rights of the both the parties and the contract shall not be deemed to be complete until the agreement has first been signed by me/us and then by the proper officer authorized to enter into contract on behalf of Government.

I/WE agree to pay the Transaction fee at 0.04% or as amended from time to time on Estimated contract value of the work through a Demand Draft drawn in favour of M/s A.P.T.S. Hyderabad at the time of conclusion of Agreement.

I/WE agree to pay the Service charges at 0.06% or as amended from time to time on Estimated Contract Value of the work through a Demand Draft drawn in favour of Director, RGU IIIT-Srikakulam at the time of conclusion of Agreement.

I AM/WE ARE professionally qualified an my/our qualifications are given below:

Name	Qualified

I/WE will employ the following technical staff for supervising the work and will see that one of them is always at site during working hours, personally checking all items of works and pay extra attention to such works as required special attention (eg) Reinforced cement concrete work.

Name of technical staff proposed to be employed	Qualification.

I / WE declare that I/WE agree to recover the salaries of the technical staff actually engaged on the work by the IIT-Srikakulam, from the work bills, if I/We fail to employ technical staff as per the tender condition.

#### TENDERERS / CONTRACTOR'S CERTIFICATE

- (1) I/WE hereby declare that I/We have perused in detail and examined closely the Andhra Pradesh Standard Specifications, all clauses of the preliminary specifications with all amendments and have either examined all the standards specifications or will examine all the standard specifications for items for which I/We tender, before I/We submit such tender and agree to be bound and comply with all such specifications for this agreement which I/We execute in the Corporation.
- (2) I/WE certify that I/We have inspected the site of the work before quoting my Percentage excess or less on ECV, I /We have satisfied about the quality, availability and transport facilities for all the materials.
- (3) I/WE am/are prepared to furnish detailed data in support of all my quoted rates, if and when called upon to do so without any reservations.
- (4) I/WE hereby declare that I/We will pay an additional security deposit in terms of conditions, the difference between 85% of ECV and my/our tender amount, in case if my / our offer is less than 15% as per clause 3.6
- (5) I/WE hereby declare that I am/we are accepting to reject my tender in terms of condition, if my /our offer is more than 5% of ECV as per clause 3.5.
- (6) I/WE hereby declare that I am/We are accepting for the defect liability period as 24 months instead of 12 Months under clause 28 of APSS.
- (7)
  - a) I/WE declare that I/WE will procure the required construction materials including earth and use for the work after approval of the Engineer-in-Charge. The responsibility for arranging and obtaining the land for borrowing or exploitation in any other way shall rest with me/us for the materials for construction, I/WE shall ensure smooth and un-interrupted supply of materials.
  - b) I/WE declare that the responsibility for arranging and obtaining the land for disposal of spoil/soil not useful for construction purposes shall rest with me/us.
  - c) I/WE declare that I/WE shall not claim any compensation or any payment for the land so arranged for disposal of soil and the land for borrow area. My/our quoted percentage excess or less on ECV., are inclusive of the land so arranged and I/We will hand over the land so arranged for disposal of soil to the Corporation after completion of work.
- (8) I/WE declare that I/WE will execute the work as per the mile stone programme, and if I/WE fail to complete the work as per the mile stone programme I abide by the condition to recover liquidated damages as per the tender conditions.
- (9) I/WE declare that I/WE will abide for settlement of disputes as per the tender conditions.

#### DECLARATION OF THE TENDERER

- 1) I \_\_\_\_\_/WE have not been black listed in any department / Corporation of State / Central Govt due to any reasons.
- 2) I/WE have not been demoted to the next lower category for not filing the tenders after buying the tender schedules in a whole year and my/our registration has not been cancelled for a similar default in two consecutive years.
- 3) I/WE agree to disqualify me/us for any wrong declaration in respect of the above and to summarily reject my/our tender.

I/We have gone through carefully all the Tender conditions and solemnly declare that I / we will abide by any penal action such as disqualification or black listing or determination of contract or any other action deemed fit, taken by, the IIT-Srikakulam against us, if it is found that the statements, documents, certificates produced by us are false / fabricated.

Address of the Tenderer :

Phone No.:

Fax No.:

Signature of the tenderer

Note: If the tender is made by an individual, it shall be signed with his full name and his address shall be given. If it is made by a firm, it shall be signed with the co-partnership name by a member of the firm, who shall also sign his own name, and the name and address of each member of the firm shall be given, if the tender is made by a corporation it shall be signed by a duly authorized officer who shall produce with his tender satisfactory evidence of his authorization. Such tendering corporation may be required before the contract is executed, to furnish evidence of its corporate existence. Tenders signed on behalf of G.P.A. holder will be rejected

## CONDITIONS OF CONTRACT

### A. GENERAL

1. Interpretation
  - 1.1 In interpreting these Conditions of Contract, singular also means plural, male also means female, and vice-versa. Headings have no significance. Works have their normal meaning under the language of the contract unless specifically defined. The Administrative Officer, IIIT-Srikakulam will provide instructions clarifying queries about the conditions of Contract.
  - 1.2 The documents forming the Contract shall be interpreted in the following order of priority:
    - 1) Agreement
    - 2) Letter of Acceptance, notice to proceed with the works
    - 3) Contractor's Tender (Technical bid)
    - 4) Conditions of contract
    - 5) Specifications
    - 6) Drawings
    - 7) Bill of quantities (Price-bid)
    - 8) Any other document listed as forming part of the Contract.
2. Engineer-in-Charge's Decisions
  - 2.1. Except where otherwise specifically stated, the Administrative Officer, IIIT-Srikakulam will decide the contractual matters between the Department and the Contractor in the role representing the Department.
3. Delegation
  - 3.1. The Administrative Officer, IIIT-Srikakulam may delegate any of his duties and responsibilities to other officers and may cancel any delegation by an official order issued.
4. Communications
  - 4.1. Communications between parties, which are referred to in the conditions, are effective only when in writing. A notice shall be effective only when it is delivered (in terms of Indian Contract Act)
5. Other Contractors
  - 5.1. The Contractor shall cooperate and share the Site with other contractors, Public authorities, utilities, and the Department. The Contractor shall also provide facilities and services for them as directed by the Administrative Officer, IIIT-Srikakulam
6. Personnel
  - 6.1. The Contractor shall employ the required Key Personnel named in the Schedule of Key Personnel to carry out the functions stated in the Schedule or other personnel approved by the Administrative Officer, IIIT-Srikakulam. The Administrative Officer will approve any proposed replacement of Key Personnel only if their qualifications, abilities, and relevant experience are substantially equal to or better than those of the personnel listed in the Schedule.
  - 6.2. Schedule of Key Personnel:

The successful tenderer shall have to employ the following technical staff on full time basis to be available at site.

Cost of work (Technical sanction amount)	Qualification of Technical Staff
1	2
From Rs.34,300/- to Rs.1 Lakh	One I.T.I. candidate
Above Rs.1.00 lakh up to Rs.15.00 lakhs	One diploma holder
Above Rs.15.00 lakh up to Rs.50.00 lakhs	One Graduate Engineer
Above Rs.50.00 lakh upto Rs.100.00 lakhs	One Graduate Engineer and One Diploma holder
Above Rs. 100.00 Lakhs	Two Graduate Engineers

6.3 Employment of technical personnel shall be with reference to the estimate cost of work put to tender.

6.4 In case the contractor himself is a Diploma holder / Graduate Engineer no agent need to be appointed to supervise works costing upto Rs.5.00 lakhs. Even if the contractor is himself a technically qualified person, he shall employ technical staff on the scale prescribed for supervising works when more than one work is undertaken and if they are beyond a radius of 5 Kms. One or more works within a radius of say 5 Km. shall be treated as a single work for the purpose of employment of technical staff.

6.5 The appointment of technical staff shall be on full time basis for which they shall be reimbursed staff wages as below:

I.T.I Candidate - Rs. 5400/- per month. Diploma Engineer - Rs. 6300/- per month. Graduate Engineer - Rs. 9000/- per month. The Technical staff shall be available at work site for supervising the work including quality checking of all items from time to time. Failure to employ the required technical personnel by the contractor the amounts will be recovered at the above rates from the contractor.

6.6 The Engineer-in-charge is the sole judge (a) to decide whether qualified technical staff is actually supervising the work and (b) to decide the actual period of absence of such staff which requires the above recovery to be enforced and his decision is final and binding on the contractor.

6.7 The technical agents appointed by the contractor shall have to maintain properly all the records required by the department under safe custody at site, like checklists, calibration registers/records, Quality Test Registers, Test reports file, site order book, etc. and make signatures at appropriate places towards proof of verifications, conduction of tests, compliance to instructions etc.

6.8 The technical personnel should be on full time and available at site whenever required by Engineer in Charge to take instructions.

6.9 The names of the technical personnel to be employed by the contractor should be furnished in the statement enclosed separately.

6.10 In case the contractor is already having more than one work on hand and has undertaken more than one work at the same time, he should employ separate technical personnel on each work.

6.11 If the contractor fails to employ technical personnel the work will be suspended or department will engage a technical personnel and recover the cost at penal rate of two times thereof from the contractor.

6.12 If the Engineer-in-charge asks the Contractor to remove a person who is a member of Contractor's staff or his work force stating the reasons the Contractor shall ensure that the person leaves the site forthwith and has no further connection with the work in the contract

7. Contractor's Risks

7.1. All risks of loss of or damage to physical property and of personnel injury and death, which arise during and in consequence of the performance of the Contract are the responsibility of the Contractor.

8. Insurance:

8.1. The Contractor shall provide, in the name of the Department, insurance cover from the Start Date to the end of the Defects Liability Period i.e., 24 months after completion for the following events which are due to the Contractor's risks.

- a) loss of or damage to the Works, Plant and Materials;
- b) loss of or damage to the Equipment;
- c) loss of or damage of property in connection with the Contract; and
- d) personal injury or death of persons employed for construction.

8.2. Policies and certificates of insurance shall be delivered by the Contractor to the Administrative Officer, IIIT-Srikakulam at the time of concluding agreement of the work. All such insurance shall provide for compensation to be payable to rectify the loss or damage incurred.

- i) The contractor shall furnish insurance policy in force in accordance with proposal furnished in the Tender and approved by the Department for concluding the agreement.
- ii) The contractor shall also pay regularly the subsequent insurance premium and produce necessary receipt to the Engineer-in-Charge, well in advance.
- iii) In case of failure to act in the above said manner the department will pay the premium and the same will be recovered from the Contractors payments.

8.3. Alterations to the terms of insurance shall not be made without the approval of the Engineer-in-Charge.

9. Deleted .

10. Provident Fund Registration:

The Contractor must register with concerned provident fund authority within 2 (two) months from the date of signing the agreement, if not done earlier.

## 11. Site Inspections

- 11.1 The contractor should inspect the site and also proposed quarries of choice for materials source of water and quote his percentage including quarrying, conveyance and all other charges etc.
- 11.2 The responsibility for arranging the land for borrow area rests with the Contractor and no separate payment will be made for procurement or otherwise. The contractor's quoted percentage will be inclusive of land cost.

## 12. Contractor to Construct the Works

- 12.1 The Contractor shall construct and Commission the Work in accordance with the specifications and Drawings.

## 13. Diversion of streams / Vagus / Drains.

- 13.1 The contractor shall at all times carry out construction of cross drainage works in a manner creating least interference to the natural flow of water while consistent with the satisfactory execution of work. A temporary diversion shall be formed by the contractor at his cost where necessary. No extra payment shall be made for this work.
- 13.2 No separate payment for bailing out of sub-soils, water drainage or locked up rain water for diversion , shoring , foundations , bailing of pumping water either from excavation soils from foundations or such other incidental will be paid. The percentage to be quoted by the contractor are for the finished item of work in situ and including all the incidental charges. The borrow pits are also to be dewatered by the contractor himself at his expense , if that should be found necessary.
- 13.3 The work of diversion arrangements should be carefully planned and prepared by the contractor and forwarded to the Executive Engineer technically substantiating the proposals and approval of the Executive Engineer obtained for execution.
- 13.4 The contractor has to arrange for bailing out water, protection to the work in progress and the portion of works already completed and safety measures for men and materials and all necessary arrangements to complete the work.
- 13.5 All the arrangements so required should be carried out and maintained at the cost of the contractor and no separate or additional payments is admissible..
- 13.6 Cofferdams.  
Necessary Cofferdams and ring bunds have to be constructed at the cost of contractor and same are to be removed after the completion of the work. The contractor has to quote his percentage keeping the above in view.

## 14. Power Supply

- 14.1 The contractor shall make his own arrangements for obtaining power from the Electricity dept., at his own cost. The contractor will pay the bills of Electricity Department for the cost of power consumed by him.
- 14.2 If the power supplied by the IIIT-Srikakulam, the contractor will pay the bills to IIIT-Srikakulam for the cost of power consumed by him.
- 14.3 The contractor shall satisfy all the conditions and rules required as per Indian Electricity Act 1910 and under Rule-45(I) of the Indian Electricity Rules, 1956 as amended from time to time and other pertinent rules.
- 14.4 The power shall be used for bonfire departmental work only.
- 14.5 The contractor shall at all times during the currency of the contract, comply fully with all existing Acts, regulations and bylaws including all statutory amendments and reenactment's of state or central govt., and other local

authorities and any other enactment's, notification and acts that may be passed in future either by the state or the central government or local authority including Indian workmen's compensation Act- 1923, Control labour (Regulation and Abolition) Act- 1970, The child labour prohibition and regulation Act-1986 and equal remuneration Act- 1976, Factories Act, minimum wage Act- 1948, provident fund regulations, Employees provident fund Act- 1952 schedules made under the same Act. The buildings and other construction workers (Regulation of employment and condition of service ) Act- 1996, The Cess Act- 1996 and also applicable labour regulations, health and sanitary arrangement for workmen, insurance and other benefit and shall keep department indemnified in case any action is commenced by competent authorities for contravention by the contractor.

- 14.6 The electrical contractor has to keep his license in currency till the work is completed. If the license is suspended during the period in which the work is in progress the contract will be terminated and awarded to some other agency recovering the extra cost if any.
- 14.7 The materials used in the work should be as per the list of materials enclosed. The department reserves the right to insist upon using any of the materials from this list of approved materials.
- 14.8 The work shall be carried out strictly in conformity with (i)code of practice for Electrical wiring and fittings in Government Buildings, (ii) The Indian standard specification (iii) The Department specification. If the work carried out does not comply with the code of practice and the Departmental specifications and if the workmanship is unsatisfactory it will be binding on the contractor to redo the job without any extra cost and pay penalty as decided by the Department towards inconvenience caused if any.
- 14.9 The work should be carried out under the direct supervision of persons holding a certificate of competency for the type of work involved.
- 14.10 After completion of work a plan of building installation should be prepared and furnished indicating the location of various main and sub boards and also the fittings together with a circuit diagram duly numbered (in the diagram). The final bill will not be paid till the above plan and the diagram is submitted and approved after verification. Such completion drawings shall be signed by the licensed electrical contractor through whom the work is executed.
- 14.11 Lugs should be provided for all earth connections.
- 14.12 The contractor himself should arrange for the transportation of men and materials to the work spot.
- 14.13 Concreting to the pole and providing independent earthing should be done in presence of Departmental staff.
- 14.14 On completion of the Electrical Installation a certificate shall be furnished by the Contractor countersigned by a licensed supervisor, that under direct supervision the installation was carried out. This certificate shall be in the prescribed form as required by the local supply authority. The contractor shall be responsible for getting the Electrical Installation inspected and approved by the local authority concerned.
- 14.15 The contractor shall pay for any inspection fees and for permits required for the installation of the work wherever necessary. The IIIT-Srikakulam shall arrange only for payment of service connection charges and any other security deposit for getting electrical supply. On completion of the work, the contractor shall obtain and deliver to the IIIT-Srikakulam, certificates of final inspection and approval by the local Electric Authority as may require. The IIIT-Srikakulam shall have full powers to require the materials or work to be tested by an independent agency at the Electrical contractor's expense in order to prove their soundness and adequacy.
- 14.16 Contractor shall provide everything necessary for the proper execution of works according to the intent and meaning of the drawings, specifications,

schedule of quantities. Any discrepancy in the documents shall be brought to the notice of the IIIT-Srikakulam and got clarified prior to taking up the installation.

14.17 Materials and Workmanship:

All materials and workmanship shall conform to the specifications, relevant IS standards and code of practice and comply with APSEB/CEIG requirements as the case may be. Any work that is not up to the standards shall be dismantled and reconstructed by the contractor to the satisfaction of the IIIT-Srikakulam authorities.

14.18 Liaison Work:

The Contractor shall be responsible for all liaison work with Electricity Board/CEIG

14.19 "The Civil Contractor shall get all the electrical works done only through the licensed electrical contractors / permit holders as registered with or licensed by A.P.S. Electrical licensing Board. A copy of such valid license / permit should be furnished by successful Civil Contractor, at the time of concluding agreement, for each work separately. The commencement and completion certificate and drawings for each work issued by the electrical licensed Contractor / Permit holder should be furnished by Civil Contractor, for releasing payment of electrical work".

15. Ramps:

Ramps required during execution may be formed wherever necessary and same are to be removed after completion of the work. No separate payment will be made for this purpose.

16. Monsoon Damages:

Damages due to rain or flood either in cutting or in banks shall have to be made good by the contractor till the work is handed over to the Department. The responsibility of de-silting and making good the damages due to rain or flood rests with the contractor. No extra payment is payable for such operations and the contractor shall therefore, have to take all necessary precautions to protect the work done during the construction period.

17. The works to be Completed by the Intended Completion Date

17.1 The Contractor may commence execution of the Works on the Start Date and shall carry out the Works in accordance with the programme submitted by the Contractor, as updated with the approval of the Engineer-in-Charge, and complete the work by the Intended Completion Date.

18. Safety

18.1 The Contractor shall be responsible for the safety of all activities on the Site.

19. Discoveries

19.1 Anything of historical or other interest or of significant value unexpectedly discovered on the Site is the property of the IIIT-Srikakulam. The Contractor is to notify the Engineer-in-charge of such discoveries and carry out the Engineer-in-Charge's instructions for dealing with them.

20. Possession of the Site

20.1 The IIIT-Srikakulam shall give possession of the site to the Contractor. If possession of a part site is given, the IIIT-Srikakulam will ensure that the part site so handed over is amenable to carryout the work at site by the Contractor.

## 21. Access to the Site

21.1 The Contractor shall provide the Engineer-in-Charge and any person authorized by the Engineer-in-Charge, access to the site and to any place where the work, in connection with the Contract, is being carried out or is intended to be carried out.

## 22. Instructions

22.1 The Contractor shall carry out all instructions of the Engineer-in-charge and comply with all the applicable local laws where the Site is located.

## 23. Settlement of disputes

23.1 If any dispute or difference of any kind whatsoever arises between the IIIT-Srikakulam and the Contractor in connection with, or arising out of the Contract, whether during the progress of the works or after their completion and whether before or after the termination, abandonment or breach of the Contract, it shall in the first place, be referred to and settled by the Engineer-in-charge who shall, within a period of thirty days after being requested by the Contractor to do so, give written notice of his decision to the Contractor. Upon receipt of the written notice of the decision of the Engineer-in-Charge the Contractor shall promptly proceed without delay to comply with such notice of decision.

23.2 If the Engineer-in-Charge fails to give notice of his decision in writing within a period of thirty days after being requested or if the Contractor is dissatisfied with the notice of the decision of the Engineer-in-Charge, the Contractor may within thirty days after receiving the notice of decision appeal to the IIIT-Srikakulam which shall offer an opportunity to the contractor to be heard and to offer evidence in support of his appeal, the IIIT-Srikakulam shall give notice of his decision within a period of thirty days after the Contractor has given the said evidence in support of his appeal, subject to arbitration, as hereinafter provided. Such decision of the Corporation in respect of every matter so referred shall be final and binding upon the Contractor and shall forthwith be given effect to by the Contractor, who shall proceed with the execution of the works with all due diligence whether he requires arbitration as hereinafter provided, or not. If the IIIT-Srikakulam has given written notice of his decision to the Contractor and no claim to arbitration has been communicated to him by the Contractor within a period of thirty days from receipt of such notice, the said decision shall remain final and binding upon the Contractor. If the IIIT-Srikakulam fail to give notice of his decision, as aforesaid within a period of thirty days after being requested as aforesaid, or if the Contractor be dissatisfied with any such decision, then and in any such case the contractor within thirty days after the expiration of the first named period of thirty days as the case may be, require that the matter or matters in dispute be referred to arbitration as detailed below:-

### 23.3 SETTLEMENT OF CLAIMS:

Settlement of claims for Rs.50,000/- and below by Arbitration.

All disputes or difference arising of or relating to the Contract shall be referred to the adjudication as follows:

Claims up to a value of Rupees 10,000/-.

- Director, RGUKT, IIIT-Srikakulam

Claims above Rs.10, 000/- and up to Rupees 50,000/-.

- Director, RGUKT IIIT-Srikakulam

The arbitration shall be conducted in accordance with the provisions of Indian Arbitration and Conciliation Act 1996 or any statutory modification thereof.

The arbitrator shall state his reasons in passing the award.

Claims above Rs.50,000/-.

All claims of above Rs.50,000/- are to be settled by a Civil Court of competent jurisdiction by way of civil suit and not by arbitration.

The contractor shall make a reference for adjudication under this clause within six months from the date of intimating the contractor of the preparation of final bill or his having accepted payment whichever is earlier.

## **B. TIME FOR COMPLETION**

### **24. Program:**

- 24.1 The total period of completion is 6Months from the date of entering with agreement to proceed including rainy season.
- 24.2 The attention of the tenderer is directed to the contract requirement at the time of beginning of the work, the rate of progress and the dates for the whole work and its several parts as per milestones. Time is the essence of the contract. The following rate of progress and proportionate value of work done from time to time as will be indicated by the Engineer-in-charge's Certificate for the value of work done and completion of mile-stones will be required.
- 24.3 The following rate of progress will be required to be maintained by the contractor as a minimum. The start date of this work is the date of signing the agreement but not the date of handing over the site. Contractor may give a separate time schedule for the completion of the whole work and the consideration will be given for accelerated programme. It is imperative that the work progress shall be ahead of the rate of progress given below.  
Milestone dates :  
Mile stone- 1            Completion of the Work
- 24.4 Detailed programme in terms of collection of necessary materials and labour and in terms of finished items of work, to confirmation of the above rate of progress shall be prepared by the contractor and got approved by the Engineer-in-charge concerned and which shall be strictly adhered to. This programme of work shall be given based on PERT /CPM charts for works, where ECV exceeds Rs.100 lakhs, in the approved format.
- 24.5 After signing the agreement, the contractor shall forthwith begin the work, shall regularly and continuously proceed with them. Work programme of achieving of milestones (statement) should be submitted from time to time.
- 24.6 The contractor shall commence the works on site as specified under condition 24.1 to 24.3 above after the receipt by him of a written order to this effect from the Administrative Officer, IIIT-Srikakulam and shall proceed with the same with due expedition and without delay, except as may be expressly sanctioned or ordered by the Superintending Engineer or his nominee, or be wholly beyond the contractor's control.
- 24.7 Save in so far as the contractor may prescribe, the extent of portions of the site of which the contractor is to be given possession from time to time and the order in which such portions shall be made available to him and, Subject to any requirement in the contract as to the order in which the works shall be executed, the Administrative Officer, IIIT-Srikakulam or his nominee will, with

the Engineer-in-charge's written order to commence the works, give to the contractor possession of so much of the site as may be required to enable the contractor to commence proceed with the execution of the works in accordance with the programme if any, and otherwise in accordance with such reasonable proposals of the contractor as he shall by written notice to the Administrative Officer, IIIT-Srikakulam or his nominee, may and will from time to time as the works proceed, give to the contractor possession of such further portions of the site as may be required to enable the contractor to proceed with the execution of the works with due dispatch in accordance with the said programme or proposals as the case maybe ; if the contractor suffers delay or incurs cost from failure on the part of the Administrative Officer, IIIT-Srikakulam or his nominee to give possession in accordance with the terms of this clause, the Administrative Officer, IIIT-Srikakulam or his nominee shall grant an extension of time for the completion of works.

- 24.8 The contractor shall bear all costs and charges for special or temporary way leases required by him in connection with access to the site. The contractor shall also provide at his own cost any additional accommodation outside the site required by him for the purposes of the work.
- 24.9 Subject to any requirement in the contract as to completion of any section of the works before completion of the whole of the works shall be completed, in accordance with provisions of clauses in the Schedule within the time stated in the contract calculated from the last day of the period named in the statement to the tender as that within which the works are to be commenced or such extended time as may be allowed.

24.10 Delays and extension of time:

No claim for compensation on account of delays or hindrances to the work from any cause whatever shall lie, except as hereafter defined. Reasonable extension of time will be allowed by the Engineer-in-charge or by the office competent to sanction the extension, for unavoidable delays, such as may result from causes, which in the opinion of the Engineer-in-charge, are undoubtedly beyond the control of the contractor. The Engineer-in-charge shall assess the period of delay or hindrance caused by any written instructions issued by him, at twenty five per cent in excess or the actual working period so lost.

In the event of the Engineer-in-charge failing to issue necessary instructions and thereby causing delay and hindrance to the contractor, the latter shall have the right to claim an assessment of such delay by the Administrative Officer, IIIT-Srikakulam whose decision will be final and binding. The contractor shall lodge in writing with the Engineer-in-charge, a statement of claim for any delay or hindrance referred to above, within fourteen days from its commencement, otherwise no extension of time will be allowed.

Whenever authorized alterations or additions made during the progress of the work are of such a nature in the opinion of the Engineer-in-charge as to justify an extension of time in consequence thereof, such extension will be granted in writing by the Engineer-in-charge or other competent authority when ordering such alterations or additions.

## 25. Construction Programme

- 25.1 The Contractor shall furnish within 6 Months of the order of the work a programme showing the sequence in which he proposed to carry out the work, monthly progress expected to be achieved, also indicating date of procurement of materials plant and machinery. The schedule should be such that it is practicable to achieve completion of the whole work within the time

limit fixed and in keeping with the Mile stone programme specified and shall obtain the approval of the Engineer-in-charge. Further rate of the progress as in the program shall be kept up to date. In case it is subsequently found necessary to alter this program, the contractor shall submit sufficiently in advance the revised program incorporating necessary modifications and get the same approved by the Engineer-in-charge. No revised program shall be operative without approval of Engineer-in-charge.

25.2 The Administrative Officer, IIIT-Srikakulam shall have all times the right, without any way violating this contract, or forming grounds for any claim, to alter the order of progress of the works or any part thereof and the contractor shall after receiving such directions proceed in the order directed. The contractor shall also report the progress to the Administrative Officer, IIIT-Srikakulam within 7 days of the Engineer-in-charge's direction to alter the order of progress of works.\

25.3 The Contractor shall give written notice to the Engineer-in-Charge whenever planning or progress of the works is likely to be delayed or disrupted unless any further drawings or order including a direction, instruction or approval is issued by the Engineer-in-Charge within a reasonable time. The notice shall include details of the drawing or order required and of why and by when it is required and of any delay or disruption likely to be suffered if it is late.

## 26. Speed of Work:

26.1 The Contractor shall at all times maintain the progress of work to conform to the latest operative progress schedule approved by the Engineer-in-Charge. The contractor should furnish progress report indicating the programme and progress once in a month. The Engineer-in-Charge may at any time in writing direct the contractor to slow down any part or whole of the work for any reason (which shall not be questioned) whatsoever, and the contractor shall comply with such orders of the Engineer-in-Charge. The compliance of such orders shall not entitle the contractor to any claim of compensation. Such orders of the Engineer-in-Charge for slowing down the work will however be duly taken into account while granting extension of time if asked by the contractor for which no extra payment will be entertained.

26.2 Delays in Commencement or progress or neglect of work and forfeiture of earnest money, Security deposit and withheld amounts:

If, at any time, the Engineer-in-Charge shall be of the opinion that the Contractor is delaying Commencement of the work or violating any of the provisions, the Contractor is neglecting or delaying the progress of the work as defined by the. "Rate of progress" in the Articles of Agreement, he shall so advise the Contractors in writing and at the same time demand compliance in accordance with conditions of Tender notice. If the Contractor neglects to comply with such demand within seven days after receipt of such notice, it shall then or at any time there after, be lawful for the Engineer-in-Charge to take suitable action in accordance with Clause.60 of APSS.

## 27. Suspension of works by the Contractor

27.1 If the Contractor shall suspend the works, or sublet the work without sanction of the Administrative Officer, RGUKT-Srikakulam, or in the opinion of the Administrative Officer, RGUKT-Srikakulam shall neglect or fail to proceed with due diligence in the performance of his part of the Contract as laid down in the Schedule rate of progress, or if he shall continue to default or repeat such default in the respects mentioned in clause 27 of the APSS, the

Administrative Officer, RGUKT-Srikakulam shall take action in accordance with Clause 61 of APSS.

27.2 If the Contractor stops work for 28 days and the Stoppage has not been authorized by the Administrative Officer, RGUKT-Srikakulam the Contract will be terminated under Clause 61 of APSS.

27.3 If the Contractor has delayed the completion of works the Contract will be terminated under Clause 61 of APSS.

#### 28. Extension of the Intended Completion Date:

28.1 The Administrative Officer, RGUKT-Srikakulam shall extend or recommend for extension, in accordance with the delegation of powers in force, the Intended Completion Date if a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date.

28.2 The Administrative Officer, RGUKT-Srikakulam shall decide whether and by how much to extend the Intended Completion Date within 21 days of the Contractor asking the Engineer for a decision upon the effect of a Variation and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.

#### 29. Delays Ordered by the Engineer-in-Charge

29.1 The Administrative Officer, RGUKT-Srikakulam may instruct the Contractor to delay the start or progress of any activity within the Work.

#### 30. Early Warning

30.1 The contractor is to warn the Administrative Officer, RGUKT-Srikakulam at the earliest opportunity of specific likely future events or circumstances that may adversely affect the Execution of Works.

30.2 The Contractor shall co-operate with the Engineer-in-Charge in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Engineer-in-Charge

#### 31. Management Meetings

31.1 The Engineer-in-Charge may require the Contractor to attend a management meeting. The business of a management meeting shall be to review the programme for remaining work and to deal with matters raised in accordance with the early warning procedure.

### **Quality Control**

#### 31 A) Quality Control

i) Establishment of Quality Control Laboratory: The contractor shall establish a quality control laboratory, at the site of work, equipped with calibrated equipment (as per list given below) to perform field tests, batch wise, for various materials, then and there itself, as per quality plan and standards.

ii) Calibration of Equipment: All the equipment maintained by the contractor at site shall be calibrated from time to time according to the calibration frequency mentioned hereunder, with calibrations traceable to National Standards. Records

for proof of such calibrations done for each instrument, with instrument number shall be maintained by the contractor and shall be made available for verification / counter signature by the Engineer-in-charge. Proper storage, handling and use of these instruments shall be ensured so that their calibration does not get disturbed due to weather factors etc., Frequency of the calibration shall be as decided by the Engineer-in-charge.

**iii) Minimum Equipment required at Site:-**

<b>Multi meter, 500/1000/2500/5000 V Megger, Earth duly calibrated Resistance Meter and certified by third party agency.</b>	<b>: 1 No. Each,</b>
<b>H.V. Tester of 5KV</b>	<b>: 1 No.</b>
<b>Tool kit containing, Double end spanners, Ring Technician.Spanners, Screw Drivers, Hammers, chisels etc.</b>	<b>:1 Set for each</b>
<b>5 Mtr. Steel tapes each skilled Technician</b>	<b>: 1 No. for.</b>
<b>30/100 M steel tape for recording measurements</b>	<b>:1 No.</b>
<b>Spirit level 450 mm long metal body</b>	<b>: 1 No. (Per Batch)</b>
<b>Hand Grinder</b>	<b>: 1 No. (Per Batch)</b>
<b>Hand drilling machine 1/2" HSS/Masonry</b>	<b>: 1 No. (Per Batch)</b>
<b>Pedestal drilling machine 5/8" Vices fixed to Tables as required.</b>	<b>:1 No.</b>
<b>H.S.S / Masonry (mm) drill bits upto 16 mm</b>	<b>:1Set(per Building)</b>
<b>Hydraulic cable crimping device</b>	<b>:Size / Quantity (As required)</b>
<b>Any other testing equipment as required</b>	<b>:1 Set. Each.</b>
<b>First Aid approved kits quantities as required.</b>	<b>:1 Set per Building &amp; additional</b>

**iv) MINIMUM REQUIREMENT OF TECHNICAL STAFF:- (AT SITE)**

One qualified, and competent experienced Engineer - Minimum 5 - 10 years experience in executing similar installations acceptable to the Client/Consultant.

Diploma Holders with at least 5 years site experience.

Experienced Wireman. - Detail manpower loading chart to be furnished.

- v) Quality plan for Raw Materials: The contractor shall collect various raw materials well in advance before its use and shall get them tested as per the quality plan supplied by the Engineer-in-charge based on Quality Management System of ISO: 9001-2000 He shall ensure that no raw material is used unless it passes all the checks / tests as per the acceptance criteria given and a record of all checks / tests/ verifications shall be maintained at site. Tests which are required to be conducted at outside labs shall be done at those labs which have availability of required instruments traceable to national standards and which are approved by the Engineer-in-charge. Reports obtained from such labs should indicate the calibration status and traceability to national standards of their equipments for accepting the results.

- vi) If the Administrative Officer, RGUKT-Srikakulam instructs the contractor to carry out a test not specified in the specification to check whether any work has a defect, the contractor shall conduct the test at his own cost.
- vii) Quality control inspections: In addition to the normal inspection by the regular in charge of the construction, the work will also be inspected by the staff of Quality Control Wings or by the State or District level Vigilance Cell Unit and any authorized external agency and if any sub-standard work or excess payments are noticed with reference to measurement books etc., during inspection, recovery will be ordered based on their observations and these will be effected by the Engineer-in-charge of the execution of the work.

In addition, the Administrative Officer, RGUKT-Srikakulam may engage external agencies for conducting quality audit in which case the following methodology would be adopted:

- a) The external agency shall conduct quality control tests as per the standard procedures in the presence of Construction and Quality Control Engineers and the Contractor who is executing the work.
- b) The observations of the external agencies on the quality of work should be recorded then and there and signatures of all the concerned obtained as a token of acceptance of the observations.

The recovery for any sub-standard work or excess payments noticed if any on account of the external quality also audit would be made as mentioned in the Para above.

The final bill will be released after a certificate furnished by the Engineer-in-charge that the work has been executed as per the standard specifications and then only the final bill can be released by Administrative Officer, RGUKT-Srikakulam.

Records to be maintained at site :

- viii) Drawings: One copy of the drawings furnished to the contractor shall be kept by the contractor on the site and same shall be available for inspection and use by the Departmental officers.
- ix) Variations by way of modification, omissions or additions:  
For all modifications omissions from or additions to the drawings and specifications, the Engineer-in-charge will issue revised plans, or written instructions, or both and modification, omission or additions shall be made unless authorized and directed by the Engineer-in-charge in writing.
- x) The Engineer-in-charge shall have the privilege of ordering modifications, omission or additions at any time before the completion of the work and such orders shall not operate to annul those portions of the specifications with which said changes do not conflict.
- xi) Site Order Book: The site order book shall be maintained by the contractors at the site of the work. As far as possible all orders regarding the work are to be entered in this book. All entries shall be signed and dated by the Departmental Officer who issues such orders and signed by the contractor or by his representative towards compliance. The order book shall not be removed from the work spot except with the written permission of the Engineer-in-charge.
- xii) Quality Test Register (QTR): The contractor shall maintain the QTR at the site in the format specified and record therein the results of all the tests conducted by him. The relevant reports of the tests conducted shall be maintained in a separate file.
- xiii) Other Documents: Other prescribed documents like register on calibration of equipments maintained at site and other checklists shall be maintained at site and produced for verification of inspecting officers.

- xiv) Return of site documents: All the site records / documents mentioned therein must be returned to the engineer-in-charge in full shape after the satisfactory completion of work

### 32. Identifying Defects:

The Engineer-in-Charge shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Engineer-in-Charge may instruct the Contractor to verify the Defect and to uncover and test any work that the Engineer considers may be a Defect.

### 33. Tests:

If the Engineer-in-Charge instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and the Contractor shall pay for the test and any samples.

### 33 Correction of Defects

33.1 The Engineer-in-Charge shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins on Completion. The defect liability period shall be extended for as long as defects remain to be corrected by the Contractor.

33.2 Every time notice of a Defect is given, the Contractor shall correct the notified defect within the length of time specified by the Engineer-in-Charge's notice.

### 34 Uncorrected Defects

34.1 If the contractor has not corrected the defect within the time specified in the Engineer-in-Charge's notice, the Engineer-in-Charge will assess the cost of having the defect corrected and the contractor will pay this amount.

34.2 The Engineer-in-Charge shall introduce O.K. cards and prescribed the formats there of. O.K. cards shall relate to all major components of the work. The contractor / his authorized representative shall be required to initiate and fill in and present the O.K. card to the construction staff who would check the respective items and send to the quality control staff for final check and clearance / O.K. Any defects pointed out by the construction supervision staff or by the Quality Control staff shall promptly be attended to by the contractors and the fact of doing so be duly recorded on the back of O.K. card.

34.3 The Engineer-in-Charge may also introduce checklists, which shall be kept in Bound registers by the construction supervision staff. The contractor may be required to fill up these lists in the first instance and shall be subsequently checked by the Construction / Quality Control engineers.

### 35 Deleted

## C. COST CONTROL

### 36 Bill of Quantities

36.1 The Bill of Quantities shall contain items for the construction work to be done by the Contractor.

36.2 The Contractor is paid for the quantity of the work done at the estimate rate in the Bill of Quantities for each item plus or minus Tender percentage.

37 Supplemental items :

37.1 The contractor is bound to execute all supplemental works that are found essential, incidental and inevitable during execution of main work.

37.2 The payment of rates for such supplemental items of work will be regulated as under;

Supplemental items directly deducible from similar items in the original agreement.

37.2.1 The rates shall be derived by adding to or subtracting from the agreement rate of such similar item the cost of the difference in the quantity of materials labour between the new items and similar items in the agreement worked out with reference to the Standard Schedule of Rates adopted in the sanctioned estimate with which the tenders are accepted plus or minus over all tender percentage.

37.2.2 (a) Similar items but the rates of which cannot be directly deduced from the original agreement.

(b) Purely new items which do not correspond to any item in the agreement.

37.2.3 The rates of all such items shall be Estimated Rates plus or minus overall Tender premium.

38 Extra Items

38.1 Extra items of work shall not vitiate the contract. The contractor shall be bound to execute extra items of work as directed by the Engineer-in-Charge. The rates for extra items shall be worked out by the Engineer-in-Charge as per the conditions of the Contract and the same are binding on the Contractor.

38.2 The contractor shall before the 15<sup>th</sup> day of each month, submit in writing to the Engineer-in-charge a statement of extra items if any that they have executed during the preceding month failing which the contractor shall not be entitled to claim any.

38.3 Entrustment of additional items

38.3.1 Where ever additional items not contingent on the main work and outside the scope of original agreement are to be entrusted to the original contractor dispensing with bids and if the value of such items exceeds the limits upto which the officer is empowered to entrust works initially to contractor without calling for tenders, approval of competent authority shall be obtained. Entrustment of such items on nomination shall be the estimated rates or agreement rates (-) Tender Percentage whichever is less.

38.3.2 Entrustment of the additional items contingent on the main work will be authorized by the officers upto the monetary limits upto which they themselves are competent to accept items in the original agreement so long as the rates for such items shall be worked out in accordance with the procedure - For all items of work in excess of the quantities shown in the Bill of Quantities of the Tenders, the rate payable for such items shall be estimate rates for the items (+) or (-) over all tender percentage accepted by the competent authority.

38.3.3 Entrustment of either the additional or supplemental items shall be subject to the provisions of the agreement entered into by a Competent Authority after the tender is accepted. The Administrative Officer, RGUKT-Srikakulam who entered into the agreement approves the rate for the items / variation in

quantity in the current agreement. The items shall not be ordered by an officer on his own responsibility if the revised estimate or deviation statement providing for the same requires the sanction of competent authority.

38.3.4 Note: It may be noted that the term Estimate Rate used above means the rate in the sanctioned estimate with which the tenders are accepted, or if no such rates is available in the estimate, the rate derived will be with reference to the Standard Schedule of Rates adopted in the sanctioned estimate with which tenders are accepted.

#### 39 Cash flow forecasts

When the program is updated, the contractor is to provide the Engineer-in-charge with an updated cash flow forecast.

#### 40 Payment Certificates

40.1 The Contractor shall submit to the Engineer-in-charge monthly statements of the estimated value of the work completed less the cumulative amount certified previously.

40.2 The Engineer-in-charge shall check the Contractor's monthly statement within 14 days.

40.3 The value of work executed shall be determined by the Engineer-in-charge.

40.4 The value of work executed shall comprise the value of the quantities of the items in the Bill of Quantities completed.

40.5 The Engineer-in-charge may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

#### 41 Payments

41.1 Payment for the work done by the contractor will be made for the finished work based on the measurements recorded in measurement books by concerned officer of the RGUKT-Srikakulam not lower in rank than a Assistant Engineer and check measured by concerned officer not lower in rank than a Deputy Executive Engineer. The measurement shall be recorded at various stages of the work done and also after work is completed. The contractor shall be present at the time of recording of each set of measurement and their check measurement and accept them then and there so as to avoid disputes at a later stage. If the contractor is not available at the work spot at the time of recording measurements or check measurements, the particulars of measurements shall be signed by the authorized agent of contractor based on which the contractor shall accept the set of measurements without any further dispute. If for any reason the contractor's authorized agent is also not available at site when the department decides to suspend the work recording of measurements in the absence of the contractor or his authorized representative, the department shall not entertain any claim from the contractor for any loss incurred by him on this account. The Contractor shall however note that the RGUKT-Srikakulam cannot indefinitely wait for recording the measurement due to the absence of the Contractor and his authorized agent and check measure them even in the absence of the contractor.

#### 41.2 Payments and Certificates

41.2.1 Payments shall be adjusted for recovery of advance payments, liquidated damages in terms of tender conditions and security deposit for the due

fulfillment of the contract. Payment will be made to the Contractor under the certificate to be issued at reasonably frequent intervals by the Engineer-in-Charge, and intermediate payment will be the sum equal to 92.5% of the value of work done as so certified and balance of 7.5% will be withheld and retained as security for the due fulfillment of the contract under the certificate to be issued by the Engineer-in-Charge. On completion of the entire works the contractor will receive the final payment of all the moneys due or payable to him under or by virtue of the contract except earnest money deposit retained as security and a sum equal to 2 ½ percent of the total value of the work done. The amount withheld from the final bill will be retained under deposits and paid to the contractor together with the earnest money deposit retained as security after a period of 24 months as all defects shall have been made good according to the true intent and meaning there of.

- 41.2.2 In case of over payments or wrong payment if any made to the contractor due to wrong interpretation of the provisions of the contract, APSS or Contract conditions etc., such unauthorized payment will be deducted in the subsequent bills or final bill for the work or from the running bills or at any time thereafter from the deposits available with the RGUKT-Srikakulam.
- 41.2.3 Any recovery or recoveries advised by the Government Department either state or central, due to non-fulfillment of any contract entered into with them by the contractor shall be recovered from any bill or deposits of the contractor.
- 41.2.4 No claim shall be entertained, if the same is not represented in writing to the Engineer-in-Charge within 15 days of its occurrence.
- 41.2.5 The contractor is not eligible for any compensation for inevitable delay in handing over the site or for any other reason. In such case, suitable extensions of time will be granted after considering the merits of the case.

#### 41.3 Intermediate Payments

- 41.3.1 For intermediate Stage of work, only part rates as fixed by the Engineer-in-Charge will be paid.
- 41.3.2 Part rates shall be worked out for the work done portion based on the actual operations involved keeping in view the value of the balance work to be done, to avoid unintended benefit to the Contractor in initial Stage.
- 41.3.3 Full rate shall be paid when the work is completed to the full profile as noted in the drawings.
- 41.3.4 Where payment is intended for aggregates by Bill of Quantities item based on stack measurements, 10% of the quantity measured will be withheld. No payment or advance will be made for unfixed materials when the rates are for finished work in site
- 41.3.5 The contractor shall supply as built drawings drawn to scale in 5 sets along with original tracings within 28 days of the issue of certificate of completion of work failing which an amount of Rs.25000/- will be withheld from the amounts due to the contractor.

**42. A LIST OF PAYMENTS AND DEDUCTIONS FROM BILLS**

Nature of contract (1)	Class of bill (2)	Amount of payment (3)	Nature of Deduction (4)	Refund or deduction (5)
Piece work contract          -do-	Intermediate Bill          Final Bill	(i) Total value of work done, if it is less than 20 times earnest money. (ii) Total value of work done less amount if any withheld for proper maintenance (L.S.) Contract.	Nil  5% of value of work in excess of 20 times earnest money to be held as security. To be credited to deposit only for the withheld amount excess Rs. 500/-. A suitable amount at the discretion of the Engineer for the proper maintenance.	Nil  To be refunded after final bill or deposit as stated in, otherwise to be refund in the final bill itself.  To be refunded after expiry of the maintenance period of three months.
L.S. contract (supply of materials only) -do-	Intermediate Bill Final Bill	90% of the value of work  Total value of work done	10% of value towards security.  Nil	Nil  The 10% value withheld towards security to be refunded after expiry of Guarantee period.
L.S. contract (Supply materials and constructions) -do-	Intermediate Bill Final Bill	92.5% of value or work done.  92.5% of value of work done less amount if any with held for proper maintenance/rectifications.	7.5% of value towards security.  7.5% of value towards security.	Nil 1) 5% out of 7.5% so far collected from bills to be refunded in final bill. 2) Balance 2.5% to be refunded on expiry of defects liability period or on rectification of any defects that appears during the defects liability period which ever happens latter. 3)The E.M.D. collected at the time of entering into agreement is also returnable along with item (2) above.

#### 42 Interest on Money due to the Contractor

Any omission by the Engineer-in-Charge or the sub-divisional officer to pay the amount due upon certificates shall vitiate or make void the contract, nor shall the contractor be entitled to interest upon any guarantee fund or payments in arrear, nor upon any balance which may, on the final settlement of his accounts, found to be due to him.

#### 43 Certificate of Completion of works

##### Certificate of Completion of works

43.1.1 When the whole of the work has been completed and has satisfactorily passed any final test that may be prescribed by the Contract, the Contractor may give a notice to that effect to the Engineer-in-Charge accompanied by an undertaking to carry out any rectification work during the period of maintenance, such notice and undertaking shall be in writing and shall be deemed to be a request by the Contractor for the Engineer-in-Charge to issue a Certificate of completion in respect of the Works. The Engineer-in-Charge shall, within twenty one days of the date of delivery of such notice either issue to the Contractor, a certificate of completion stating the date on which, in his opinion, the works were completed in accordance with the Contract or give instructions in writing to the Contractor specifying all the Works which, in the Engineer-in-Charge's opinion, required to be done by the Contractor before the issue of such Certificate. The Engineer-in-Charge shall also notify the Contractor of any defects in the Works affecting completion that may appear after such instructions and before completion of the Works specified therein. The Contractor shall be entitled to receive such Certificate of Completion within twenty one days of completion to the satisfaction of the Engineer-in-Charge of the Works so specified and making good of any defects so notified.

43.1.2 Similarly, the Contractor may request and the Engineer-in-Charge shall issue a Certificate of Completion in respect of:

- a) Any section of the Permanent works in respect of which a separate time for completion is provided in the Contract, and
- b) Any substantial part of the Permanent Works which has been both completed to the satisfaction of the Engineer-in-Charge and occupied or used by the Department.

43.1.3 If any part of the Permanent Works shall have been completed and shall have satisfactorily passed any final test that may be prescribed by the Contract, the Engineer-in-Charge may issue such certificate, and the Contractor shall be deemed to have undertaken to complete any outstanding work in that part of the Works during the period of Maintenance.

#### 44 Taxes included in the bid

The percentage quoted by the contractor shall be deemed to be inclusive of all other taxes on all materials that the contractor will have to purchase for performance of this contract except GST.

#### 45 Price Adjustment :

45.1 Price Adjustment will be assessed as per GO Ms No.35 T(R&B) (RI) Department Dated 28/02/2006 , GO Ms No. 73 T(R&B) (RI) Department Dated 24/04/2006 , GO

Rt.No.175 T R&B (RI) Department, Dated 19.02.2007 , GO Ms.No.94 T R&B (RI) Department Dated 16-04-2008, GO Ms No.252 T R&B (RI) Department Dated 28-8-2008, GO Ms No.35 T R&B (RI) Department Dated 30-1-2009 and Go.MS.No.1, FINANCE (WORKS & PROJECTS-F7) DEPARTMNET, dated:25.02.12.

This Price Adjustment clause shall apply for Steel, Cement, Bitumen and P.O.L, subject to the following conditions.

- 45.2 The Price Adjustment shall be both for increase and decrease in the prices for the works completed within the original agreement period.
- 45.3 In addition, the Price adjustment shall be for valid extension given for natural calamities duly limiting to the actual period/days lost and for portion of work where work is delayed due to land acquisition/shifting of utilities (this shall be limited to actual length affected).
- 45.4 The variation clause will be when the variation in rates is more or less than 5% of the rate provided in the technical sanctioned estimate based on which bids are invited or All India wholesale price index of the respective items.
- 45.5 Price adjustment shall be calculated separately for the components of the payment for work done in the manner .
- 45.6 In the formula of Price Adjustment, R, the value of work shall exclude Seigniorage charges, VAT and all other over head charges.

**45.7 Adjustment clause for cement component shall be as follows**

Price adjustment for increase or decrease in the cost of cement procured by the contractor shall be paid in accordance with **G.O.Ms.No.94 of T R&B Dept dt:16-4-2008 and Go.MS.No.1, FINANCE (WORKS & PROJECTS-F7) DEPARTMNET, dated:25.02.12.**

**45.8 Adjustment clause for steel component shall be as follows:**

Price adjustment for increase or decrease in the cost of steel procured by the contractor shall be paid in accordance with **G.O.Ms.No.94 of T, R&B Dept dt:16-4-2008 and Go.MS.No.1, FINANCE (WORKS & PROJECTS-F7) DEPARTMNET, dated:25.02.12.**

**45.9 Adjustment clause for bitumen component shall be as follows:**

Price adjustment for increase or decrease in the cost of bitumen procured by the contractor shall be paid in accordance with **G.O.Ms.No.252 of T, R&B Dept dt:28-8-2008 and Go.MS.No.1, FINANCE (WORKS & PROJECTS-F7) DEPARTMNET, dated:25.02.12**

**45.10 Adjustment clause for POL component shall be as follows**

Price adjustment for increase or decrease in the cost of POL shall be paid in accordance with **G.O.Ms.No.252 of T, R&B Dept dt:28-8-2008 and Go.MS.No.1, FINANCE (WORKS & PROJECTS-F7) DEPARTMNET,dated:25.02.12**

**46 Retention:**

- 46.1 The department shall retain from each payment due to the contractor @ the rate of 7.5% of bill amount until completion of the whole of the works.

- 46.2 On completion of the whole of the works 97.5% of the total amount retained is re-paid to the Contractor and 2.5% when the Defects Liability Period has passed and the Engineer-in-Charge has certified that all the Defects notified by the Engineer-in-Charge to the Contractor before the end of this period have been corrected.
- 46.3 On completion of the whole works, the contractor may substitute retention money with an “on demand” Bank Guarantee.

47 Liquidated Damages

- 47.1 If for any reason, which does not entitle the contractor to an extension of item, the rate of progress of works, or any section is at any time, in the opinion of the Engineer-in-charge too slow to ensure completion by the prescribed time or extended time for completion Engineer-in-charge shall so notify the contractor in writing and the contractor shall there upon take such steps as are necessary and the Engineer-in-charge may approve to expedite progress so as to complete the works or such section by the prescribed time or extended time. The contractor shall not be entitled to any additional payment for taking such steps. If as a result of any notice given by the Engineer-in-charge under this clause the contractor shall seek the Engineer-in-charge’s permission to do any work at night or on Sundays, if locally recognized as days of rest, or their locally recognized equivalent, such permission shall not be unreasonably refused.
- 47.2 If the contractor fails to complete whole of the works or any part thereof or section of the works within the stipulated periods of individual mile stones (including any bonfire extensions allowed by the competent authority without levying liquidated damages), the Engineer-in-charge may without prejudice to any other method of recovery will deduct for the period of delays subject to a maximum of 10% of the contract value from any monies in his hands due or which may become due to the contractor. The payment or deductions of such damages shall not relieve the contractor from his obligation to complete the works, or from any other of his obligations and liabilities under the contract.
- 47.3 The liquidated damages for the whole of the work are Rs.1048/-(amount per day)

For milestone 1	-	Rs.1048/-	Per day
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The maximum amount of liquidated damages for the whole of the works is ten percent of final contract price.

48 Mobilization Advance:

- 48.1 The contractors for works exceeding more than Rs.1.00 Crore of estimated contract value are permitted to avail the facility of mobilization advance in two installments equivalent to 10% of the contract amount (5% for labour mobilization and 5% for machinery and equipment) named in the letter of acceptance payable as per above. Payment of the loan will be done under separate certification by the Executive Engineer after (I) Execution of the form of agreement by the parties there to (ii) Provisions by the contractor of the further security in accordance with relevant condition and (iii) provision by the contractor of a Bank Guarantee from Nationalized Bank acceptable to the Executive Engineer for an amount equal to 12% (which includes 2% for the interest charges) of a contract amount as indicated in the letter of acceptance towards the first installment of the advance mobilization loan, such bank guarantee to remain effective until the said advance loan has been completely repaid by the contractor out of the current earnings under the contract and

certified accordingly by the Executive Engineer The 'Advance mobilization loan' will be paid in 30 days after fulfilling the above – i, ii, and iii items. Advancemobilization loan will be paid only in case of contracts with estimated contract valueexceeding Rs.100 Lakhs.

- 48.2 The contractor exclusively for mobilization expenditures, including the acquisition of constructional plant, in connection with the works, shall use the advance mobilization loan. Payment of the second installment of advance mobilization loan equivalent to 5 percent of the contract amount will be due within a period of 9 Months for local purchase of machinery and equipment and within one year in case the machinery and equipment has to be imported under separate certification by the Engineer-in-Charge after (I) thevalue of the machinery and equipment procured, and brought to site and/or ordered (satisfactory evidence to be produced) by the contractor assessed at 100% for new machinery and 50% for old machinery brought to site and in working condition is equivalent to 5 percent of the contract amount already paid as first advance loan and (ii)furnishing by the contractor of a bank guarantee for an amount equal to 6 percent (onepercent towards interest) of the contract value
- 48.3 Should the contractor misappropriate any portion of the advance loan, it shall become due to the Executive Engineer and payable immediately in one lump by the contractor and no further loan will be considered thereafter.
- 48.4 **The above advance shall bear an interest of 10.50% per annum or Government borrowing rate for the year 2017 - 18whichever is more.** The interest on the amounts paid, as advance is chargeable from the date the amount is paid. However if completionis delayed by circumstances beyond control of the contractor for which an extension hasbeen granted by the Engineer-in-charge the interest charges on such advances shall be waived for the period of extension.
- 48.5 The value of Bank Guarantee for the advance payment given to the contractor can be progressively reduced by the amount repaid by the contractor as certified by the Engineer-in-charge.

49 Recovery of advances:

- 49.1 The advance loan together with interest at the rate of 15% as specified in theabove shall be repaid within percentages deductions from the intermediatepayments under the contract. Deduction shall commence in the next interim payment following that in which the total of all such payments to the contractor have reached 10 percent of the contract amount and shall be made at the rate of 20 percent of amount of all interim payments in which the loan was made together with interest payable up to that date, until such time as the loan together with interest at the rate specified in Para

50 Securities:

- 50.1 The Earnest Money Deposit and Additional Security (for discount tender percentage beyond 15%) shall be provided to the Department not later than the date specified in the Letter of Acceptance and shall be issued in an amount and form and by a bank acceptable to the Department. The Earnest Money shall be valid until a date 28 days from the date of expiry of Defects Liability Period and the additional security shall be valid until a date 28 days from the date of issue of the certificate of completion.

51 Cost of Repairs

51.1 Loss or damage to the Works or materials to the Works between the Start Date and the end of the Defects Correction Periods shall be remedied by the Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions.

#### E. FINISHING OF THE CONTRACT

##### 52 Completion

52.1 The Contractor shall request the Engineer-in-Charge to issue a Certificate of completion of the Works and the Engineer-in-Charge will do so upon deciding that the work is completed.

##### 53 Taking Over

53.1 The Department shall take over the Site and the Works within seven days of the Engineer-in-Charge issuing a certificate of Completion.

##### 54 Final Account

54.1 The Contractor shall supply to the Engineer-in-Charge a detailed account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Engineer-in-Charge shall issue a Defects Liability Certificate and certify any final payment that is due to the Contractor within 56 days of receiving the Contractor's account if it is correct and complete. If it is not, the Engineer-in-Charge shall issue within 56 days a schedule that states the scope of the corrections or additions that are necessary. If the final Account is still unsatisfactory after it has been resubmitted, the Engineer-in-Charge shall decide on the amount payable to the Contractor and issue a payment certificate within 56 days of receiving the Contractor's revised account.

##### 55 Termination

55.1 The Engineer-in-charge may terminate the Contract if the contractor causes a fundamental breach of the Contract.

55.2 Fundamental breaches of Contract include, but shall not be limited to the following.

- a) The Contractor stops work for 28 days when no stoppage of work is shown on the current program and the stoppage has not been authorized by the Engineer-in-Charge.
- b) The Contractor is made bankrupt or goes into liquidation other than for a reconstruction or amalgamation.
- c) The Engineer-in-Charge gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Engineer-in-Charge; and
- d) The Contractor does not maintain a security which is required and
- e) The Contractor has delayed the completion of works by the number of days for which the maximum amount of liquidated damages can be paid as defined.
- f) If the contractor, in the judgment of the Department has engaged in corrupt or fraudulent practices in competing for or in the executing the contract.
- g) The Contractor has contravened Sub-Clause 6 of Conditions of Contract and sublet the work.

- h) The Contractor does not adhere to the agreed construction program (Clause 23.1, 23.2, 23.3 of Conditions of Contract) and also fails to take satisfactory remedial action as per agreements reached in the management meetings (Clause 31) for a period of 15 days.
- i) The Contractor fails to carry out the instructions of Engineer-in-Charge within a reasonable time determined by the Engineer-in-Charge.

For the purpose of this paragraph: "corrupt practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution. "Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment to the Government and includes collusive practice among Tenderers (prior to or after Tender submission) designed to establish Tender prices at artificial non-competitive levels and to deprive the Government of the benefits of free and open competition.

55.3 Notwithstanding the above the RGUKT-Srikakulam may terminate the contract for convenience.

55.4 If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secured, leave the Site as soon as reasonably possible.

#### 56 Payment upon Termination

56.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Engineer-in-Charge shall issue a certificate for the value of the work done less advance payments received upon the date of the issue of the certificate, less other recoveries due in terms of the Contract, less taxes due to be deducted at source as per applicable law and the percentage to apply to the value of the work not completed representing additional cost for completing the works at the rate of 20 percent of balance work. Additional Liquidated Damages shall not apply. If the total amount due to the Department exceeds any payment due to the Contractor the difference shall be a debt payable to the Corporation.

#### 57 Property

57.1 All materials on the Site, Plant, Equipment, Temporary Works and Works are deemed to be the property of the Corporation if the Contract is terminated because of Contractor's default.

#### 58 Release from Performance

58.1 If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either the RGUKT-Srikakulam or the Contractor the Engineer-in-Charge shall certify that the contract has been frustrated. The Contractor shall make the site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all works carried out before receiving it and for any work carried out afterwards to which commitment was made.

## F. SPECIAL CONDITIONS

### 59 Water Supply

The Contractor has to make his own arrangements for water required for the work and to the colonies and work sites, which are to be established by the Contractor.

### 60 Land

#### 60.1 Land for Contractor's use:

The contractor will be permitted to use Institute land for execution of work. The contractor shall have to make his own arrangements for acquiring and clearing the site, leveling, providing drainage and other facilities for labour staff colonies, site office, work-shop or stores and for related activities. The Contractor shall apply to the Institute within a reasonable time after the award of the contract and at least 30 days in advance of its use, the details of land required by him for the work at site and the land required for his camp and should any private land which has not been acquired, be required by the contractor for his use. The same may be acquired by the contractor at his own cost by private negotiations and no claim shall be admissible to him on this account. The Engineer-in-Charge reserves the right to refuse permission for use of any Institute land for which no claim or compensation shall be admissible to the contractor. The contractor shall, however, not be required to pay cost or any rent for the Government land given to him.

#### 60.2 Surrender of Occupied Land:

- a. The Institute land as here in before mentioned shall be surrendered to the Engineer-in-Charge within seven days, after issue of completion certificate. Also no land shall be held by the contractor longer than the Engineer-in-Charge shall deem necessary and the contractor shall on the receipt of due notice from the Engineer-in-Charge, vacate and surrender the land which the Engineer-in-Charge may certify as no longer required by the Contractor for the purpose of the work.
- b. The contractor shall make good to the satisfaction of the Engineer-in-Charge any damage to areas, which he has to return or to other property or land handed over to him for purpose of this work. Temporary structures may be erected by the contractor for storage sheds, offices, residences etc., for non-commercial use, with the permission of the Engineer-in-charge on the land handed over to him at his own cost. At the completion of the work these structures shall be dismantled site cleared and handed over to the Engineer-in-charge. The land required for providing amenities will be given free of cost from Government lands if available otherwise the contractor shall have to make his own arrangements.

#### 60.3 Contractor not to dispose off Spoil etc. :-

The contractor shall not dispose off or remove except for the purpose of fulfillment of this contract, sand, stone, clay ballast, earth, trees and shrubs or other materials obtained in the excavation made or lying on the site of the work, and all such materials and produce shall remain property of the Government. The Department may upon request from the contractor, or if so stipulated in the conditions of the contract allow the contractor to use any of the above materials for the works either free of cost or after payment as may be specifically mentioned or considered necessary during the execution of the work.

61 Roads

In addition to existing public roads and roads Constructed by Institute, if any, in work area all additional approach roads inside work area and camp required by the Contractor shall be constructed and maintained by him at his own cost. The layout design, construction and maintenance etc. of the roads shall be subject to the approval of the Engineer-in-Charge. The contractor shall permit the use of these roads by the Institute free of charge.

It is possible that work at, or in the vicinity of the work site will be performed by the Institute or by other contractors engaged in work for the Institute during the contract period. The contractor shall without charge permit the Institute and such other contractor and other workmen to use the access facilities including roads and other facilities, constructed and acquired by the contractor for use in the performance of the works.

The contractor's heavy construction traffic or tracked equipment shall not traverse any public roads or bridges unless the contractor has made arrangement with the authority concerned. In case contractor's heavy construction traffic or tracked equipment is not allowed to traverse any public roads or bridges and the contractor is required to make some alternative arrangements, no claim on this account shall be entertained. The contractor is cautioned to take necessary precautions in transportation of construction materials to avoid accidents.

62 Payment for Camp Construction

No payment will be made to the contractor for construction, operation and maintenance of camp and other camp facilities and the entire cost of such work shall be deemed to have been included in the tendered rate for the various items of work in the schedule of quantities and bids.

63 Explosive And Fuel Storage Tanks

No explosive shall be stored within ½ (half) KM of the limit of the camp sites. The storage of gasoline and other fuel oils or of Butane, Propane and other liquefied petroleum gases, shall conform to the regulations of Andhra Pradesh State Government and Government of India. The tanks, above ground and having capacity in excess of 2000 liters, shall not be located within the camp area, nor within 200m, of any building.

64 Manpower

The contractor shall, make his own arrangements for the engagement of all staff and labour, local or other, and for their payment, housing, feeding and transport.

Labour importation and amenities to labour and contractor's staff shall be to the contractor's account. His quoted percentage shall include the expenditure towards importation of labour amenities to labour and staff;

The contractor shall, if required by the Engineer-in-Charge, deliver to the Engineer-in-Charge a written in detail, in such form and at such intervals as the Engineer-in-Charge may prescribe, showing the staff and the numbers of the several classes of labour from time to time employed by the contractor on the

Site and such information pertaining to Contractor's Equipment as the Engineer-in-Charge may require.

#### 64.1 Transportation of Labour

The contractor shall make his own arrangement for the daily transportation of the labour and staff from labour camps colonies to the work spot and no labour or staff of the contractor shall stay at the work spot. No extra payment will be made to the contractor for the above transportation of the labour and his quoted percentage to the work shall include the transportation charges of labour from colonies to work spot and back.

The contractor will at all times duly observe the provisions of employment of children Act XXVI of 1938 and any enactment or modification of the same and will not employ or permit any person to do any work for the purpose under the provisions of this agreement in contravention of said Act. The contractor here by agrees to indemnify the Institute from and against all claims, penalties which may be suffered by the RGUKT-Srikakulam or any person employed by the RGUKT-Srikakulam by any default on the part of the contractor in the observance and performance of the provisions of the employment of children Act. XXVI of 1938 or any enactment or modification of the same.

As per Govt. memo No.721/Gr.(1)/81-15, dt:17.11.87. The contractor shall obtain the insurance at his own cost to cover the risk on the works to labour engaged by him during period of execution against fire and other usual risks and produce the same to the Engineer-in-charge concerned before commencement of work.

#### 65 Safety Measures

- 65.1 The contractor shall take necessary precautions for safety of the workers and preserving their health while working in such jobs, which require special protection and precautions. The following are some of the measures listed but they are not exhaustive and contractor shall add to and augment these precautions on his own initiative where necessary and shall comply with directions issued by the Engineer-in-charge or on his behalf from time to time and at all times.
- 65.2 Providing protective foot wear to workers situations like mixing and placing of mortar or concrete, sand in quarries and places where the work is done under much wet conditions.
- 65.3 Providing protective head wear to workers at places like under ground excavations to protect them against rock falls.
- 65.4 Providing masks to workers at granulates or at other locations where too much fine dust is floating about and sprinkling water at frequent intervals by water hoses on all stone crushing area and storage bins abate to dust.
- 65.5 Getting the workers in such jobs periodically examined for chest trouble due to too much breathing in to fine dust.
- 65.6 Taking such normal precautions like fencing and lighting in excavation of trenches, not allowing rolls and metal parts of useless timber spread around, marking danger areas for blasting providing whistles etc.
- 65.7 Supply work men with proper belts, ropes etc., when working in precarious slopes and heights etc.
- 65.8 Avoiding un-insulated electrical wire etc., as they would electrocute the workers.

65.9 Taking necessary steps towards training the workers concerned on the machinery before they are allowed to handle them independently and taking all necessary precautions in and around the areas where machines hoists and similar units are working.

66 Fair Wage Clause

- 66.1 The contractor shall pay not less than fair wages to laborers engaged by him on the work.
- 66.2 "Fair" wages means wages whether for time or piecework notified by the Government from time to time in the area in which the work is situated.
- 66.3 The contractor shall notwithstanding the revisions of any contract to the contrary cause to be paid to the labour, in directly engaged on the work including any labour engaged by the sub-contractor in connection with the said work, as if the laborers had been directly employed by him.
- 66.4 In respect of labour directly or indirectly employed in the works for the purpose of the contractor's part of the agreement the contractor shall comply with the rules and regulations on the maintenance of suitable records prescribed for this purpose from time to time by the RGUKT-Srikakulam. He shall maintain his accounts and vouchers on the payment of wages to the laborers to the satisfaction of the Engineer-in-charge.
- 66.5 The Engineer-in-charge shall have the right to call for such record as required to satisfy himself on the payment of fair wages to the laborers and shall have the right to deduct from the contract amount a suitable amount for making good the loss suffered by the worker or workers by reason of the "fair wages" clause to the workers.
- 66.6 The contractor shall be primarily liable for all payments to be made and for the observance of the regulations framed by the Govt., from time to time without prejudice to his right to claim indemnity from his sub-contractors.
- 66.7 As per contract labour (Regulation and abolition) Act. 1970 the contractor has to produce the license obtained from the licensing officers of the labour department along with the tender or at the time of agreement.
- 66.8 Any violation of the conditions above shall be deemed to be a breach of his contract.
- 66.9 Equal wages are to be paid for both men and women if the nature of work is same and similar.
- 66.10 The contractor shall arrange for the recruitment of skilled and unskilled labour local and imported to the extent necessary to complete the work within the agreed period as directed by the Engineer-in-charge in writing.

The tenderers should submit Indemnity Bond at the time of the Agreement as specified below

**Name of work: Providing Electrification for Hostel, Tutorial and Dining Hall Blocks, IIT Srikakulam, S.M.Puram, Srikakulam (Dist).**

I/We \_\_\_\_\_ do hereby bind myself to pay all the claims may come (a) under Workmen's Compensation Act. 1933 with any statutory modification thereof and rules there under or otherwise for or in respect of any damage or compensation payable in connection with any accident or injury sustained (b) under Minimum wages Act 1948 (c) under payment of wages Act.1936 (d) under the Contractor labour (Regulation and Abolition) Act. 1970 by workmen engaged for the performance of the business relating to the above contract ie., Failing such payment of claims of workmen engaged in the above work, I abide in accepting for the recovery of such claims, effected from any of my assets with the Corporation and with other Government Departments / Corporations.

68 Compliance With Labour Regulations

During continuance of the contract, the contractor and his sub contractors shall abide at all times by all existing labour enactments and rules made there under, regulations, notifications and bye laws of the State or Central Government or local authority and any other labour law (including rules), regulations, bye laws that may be passed or notifications that may be issued under any labour law in future either by the State or the Central Government or the local authority and also applicable labour regulations, health and sanitary arrangements for workmen, insurance and other benefits. Salient features of some of the major labour laws that are applicable to construction industry are given below. The contractor shall keep the Corporation indemnified in case any action is taken against Corporation by the competent authority on account of contravention of any of the provisions of any Act or rules made there under, regulations or notifications including amendments. If the Corporation is caused to pay or reimburse, such amounts as may be necessary to cause or observe, or for non-observance of the provision stipulated in the notifications/bye laws/Acts/Rules/regulations including amendments, if any, on the part of the contractor, the Corporation shall have the right to deduct any money due to the contractor including his amount of performance security. The Corporation shall also have right to recover from the contractor any sum required or estimated to be required for making good the loss or damage suffered by the Corporation.

The employees of the Contractor and the Sub-contractor in no case shall be treated as the employees of the Corporation at any point of time.

69 Salient features of some major labour laws applicable to establishment engaged in buildings and other construction work:

- (a) Workmen compensation Act 1923: The Act provides for compensation in case if injury by accident arising out of and during the course of employment.
- (b) Payment of Gratuity Act 1972: Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if any employee has completed 5 years service or more, or on death, the rate of 15 days wages for

- every completed year of service. The Act is applicable to all establishments, employing 10 or more employees.
- (c) Employees P.F. and Miscellaneous provision Act 1952: The Act provides for monthly contributions by the Department plus workers @ 10% or 8.33%. The benefits payable under the Act are:
- (i) Pension or family pension on retirement or death, as the case may be.
  - (ii) Deposit linked insurance on the death in harness of the worker.
  - (iii) Payment of P.F. accumulation on retirement/death etc.,
- (e) Maternity Benefit Act 1951: The Act provides for leave and some other benefits to women employees in case of confinements or miscarriage etc.
- (f)
- (e) Contract Labour (Regulation & Abolition) Act 1970: The Act provides for certain welfare measures to be provided by the contractor to contract labour and in case the Contractor fails to provide, the same are required to be provided by the Principal Department by Law. The Principal Department is required to take certificate of Registration and the contractor is required to take license from the designated Officer before concluding agreement. The Act is applicable to the establishments or Contractor of Principal Department if they employ 20 or more contract labour.
- (f) Minimum wages Act 1948: The Department is supposed to pay not less than the Minimum wages fixed by appropriate Government as per provisions of the Act if the employment is a scheduled employment construction of Buildings, Roads, Runways are scheduled employments.
- (g) Payment of wages Act 1936: It lays down as to by what date the wages are to be paid, when it will be paid and what deductions can be made from the wages of the workers.
- (h) Equal Remuneration Act 1979: The Act provides for payment of equal wages for work of equal nature to Male or Female workers and for not making discrimination against Female employee in the matters of transfers, training and promotions etc.
- (i) Industrial Disputes Act 1947: The Act lays down the machinery and procedure for resolution of Industrial disputes, in what situations a strike or lock-out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.
- (j) Industrial Employment (Standing Orders) Act 1946: It is applicable to all establishments employing 100 or more workmen (employment size reduced by some of the State and Central Government to 50). The Act provides for laying down rules governing the conditions of employment by the Department on matters provided in the Act and get the same certified by the designated Authority.
- (k) Trade Unions Act 1926: The Act lays down the procedure for registration of trade unions of workmen and Departments. The Trade Unions registered under the act have been given certain immunities from civil and criminal liabilities.
- (l) Child Labour (Prohibition & Regulation) Act 1986: The Act prohibits employment of children below 14 years of age in certain occupations and processes and provides for regulation of employment of children in all other occupations and processes, Employment Child Labour is prohibited in Building and Construction Industry.
- (m) Inter-State Migrant workmen's (Regulation of Employment & Conditions of service) Act 1979. The Act applicable to an establishment, which employs 5 or more inter-state migrant workmen through an intermediary (who has recruited

workmen in one state for employment in the establishment situated in another State). The inter State migrant workmen, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as housing, medical aid, travelling expenses from home up to the establishment and back, etc.

- (n) The Building and Other Construction workers (regulation of Employment and conditions of service) Act 1996 and the Cess Act of 1996: All the establishments who carry on any building or other construction work and employs 10 or more workers are covered under this Act. All such establishments are required to pay cess at the rate not exceeding 2% of the cost of construction as may be modified by the Government. The Department of the establishment is required to provide safety measures at the Building or construction work and other welfare measures, such as Canteens, First-aid facilities, Ambulance, Housing accommodations for workers near the work place etc. The Department to whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the Government.
- (o) Factories Act 1948: The Act lays down the procedure for approval of plans before setting up a factory, health and safety provisions, welfare provisions, working hours, annual earned leave and rendering information regarding accidents or dangerous occurrences to designated authorities. It is applicable to premises employing 10 person or more with aid of power or 20 or more persons without the aid of power engaged in manufacturing process.
- (p) Payment of bonus act 1965: The Act is applicable to all establishments employing 20 or more employees. The Act provides for payment of annual bonus subject to a minimum of 8.33% of wages and maximum of 20% of wages to employees drawing Rs. 3500/- per month or less. The bonus to be paid to employees getting Rs.2500/- per months or above and up to Rs.3500/- per month shall be worked out by taking wages as Rs.2500/- per monthly only. The Act does not apply to certain establishments. The newly set-up establishments are exempted for five years in certain circumstances. Some of the State Governments have reduced the employment size from 20 to 10 for the purpose of applicability of this Act.

## 70 Liabilities of the Contractor

### 70.1 Accident Relief and workmen compensation

The contractor should make all necessary arrangements for the safety of workmen on the occurrence of the accident, which results in the injury or death of any of the workmen employed by the contractor, the contractor shall within 24 hours of the happenings of the accident and such accidents should intimate in writing to the concerned Asst. Engineer / Asst. Executive Engineer of the RGUKT-Srikakulam the act of such accident. The contractor shall indemnify RGUKT-Srikakulam against all loss or damage sustained by the RGUKT-Srikakulam resulting directly or indirectly from his failure to give intimation in the manner aforesaid including the penalties or fines if any payable by RGUKT-Srikakulam as a consequence of RGUKT-Srikakulam failure to give notice under workmen's compensation Act or otherwise conform to the provisions of the said Act. in regard to such accident.

- 70.2 In the event of an accident in respect of which compensation may become payable under the workmen's compensation Act VIII 23 whether by the contractor, by the RGUKT-Srikakulam it shall be lawful for the Engineer-in-charge to retain such sum of money which may in the opinion of the Engineer-in-charge be sufficient to meet such liability. The opinion of the Engineer-in-charge shall be final in regard to all matters arising under this clause.

70.3 The contractor shall at all times indemnify the RGUKT-Srikakulam against all claims which may be made under the workmen's compensation act or any statutory modification thereafter or rules hereunder or otherwise consequent of any damage or compensation payable in consequent of any accident or injuries sustained or death of any workmen engaged in the performance of the business relating to the contractor.

71 Contractor's Staff, Representatives and Labour

- (a) The contractor shall, at all times, maintain on the works, staff of qualified Engineers, and Supervisors of sufficient experience of similar other jobs to assure that the quality of work turned out shall be as intended in the specifications. The contractor shall also maintain at the works, a Work Manager or sufficient status, experience and office and duly authorize him to deal with all aspects of the day-today work. All communications to any commitments by the Work Manager shall be considered as binding on the Contractor.
- (b) The Contractor shall at all times submit details of skilled and unskilled labour and equipment employed to the Engineer-in-Charge in prescribed proforma as he may require to assess and ensure the proper progress of work.

72 Accommodation and food

The contractor should arrange accommodation he needs, at his own cost. The contractor shall make his own arrangements for supply of food grains, fuel and other provision to his staff and laborers including controlled commodities.

73 Relationship

Contractor shall have to furnish information along with tender, about the relationship he is having with any officer of the RGUKT-Srikakulam.

74 Protection of adjoining premises

The contractor shall protect adjoining sites against structural, decorative and other damages that could be caused by the execution of these works and make good at his cost any such damages.

75 Work during night or on Sundays and holidays

The works can be allowed to be carried out during night, Sundays or authorized holidays in order to enable him to meet the schedule targets and the work shall require almost round the clock working keeping in view:

- (i) The provisions of relevant labour laws being adhered to:
- (ii) Adequate lighting, supervision and safety measures are established to the satisfaction of the Engineer-in-Charge and
- (iii) The construction programme given by the Contractor and agreed upon by the Engineer-in-Charge envisages such night working or working during Sundays or authorized holidays.

76 Layout of materials stacks

The contractor shall deposit materials for the purpose of the work on such parts only of the ground as may be approved by the Engineer-in-Charge before starting

work. A detailed survey, clearly indicating position and areas where materials shall be stacked and sheds built is to be conducted by the contractor at his own cost and only after obtaining necessary approval of the plan for use of sites by the Engineer-in-Charge, the Contractor can use the sites accordingly.

77 Use of blasting materials

Procurement of blasting materials and its storage is the responsibility of the contractor. The contractor shall engage licensed blaster for blasting operation. The contractor is to act in accordance with Indian Explosive Act and other rules prevailing, during the execution of work. It is the responsibility of the contractor to see, that works by other agencies in the vicinity are not hampered, in such cases if any claim is made by other agencies that should be borne by the contractor. Carriage of blasting materials, from the magazine to the work site, is the responsibility of the contractor.

78 Plant and Equipment

78.1 The contractor shall have sufficient plant, equipment and labour and shall work such hours and shifts as may be necessary to maintain the progress on the work as per the approval progress schedule. The working and shifts hours shall comply with the Govt. Regulations in force.

78.2 It is to expressly and clearly understood that contractor shall make his own arrangements to equip himself with all machinery and special tools and plant for the speedy and proper execution of the work and the RGUKT-Srikakulam does not undertake responsibility towards their supply.

78.3 The RGUKT-Srikakulam shall supply such of the machinery that may be available on hire basis but their supply cannot be demanded as matter of right and no delay in progress can be attributed to such non-supply of the plant by the RGUKT-Srikakulam and the RGUKT-Srikakulam cannot be made liable for any damage to the contractor. The Contractor shall be responsible for safe custody of the RGUKT-Srikakulam machinery supplied to him (which will be delivered to contractor at the machinery yard at site of work) and he has to make good all damages and losses if any other than fire, wear and tear to bring it to the conditions that existed at the time of issue to the contractor before handing over the same to the RGUKT-Srikakulam. The hire charges for the machinery handed over to the contractor will be recovered at the rate prevalent at the time of supply. The contractor will have to execute supplemental agreement with Engineer-in-charge at the time of supply of the machinery.

78.4 The acceptance of RGUKT-Srikakulam machinery on hire is optional to the contractor.

79 Steel forms

Steel forms should be used for all items involving and use of centering and shuttering shall be single plane without any dents and undulations.

80 Inconvenience to public

The contractor shall not deposit materials at any site, which will cause inconvenience to public. The Engineer-in-Charge may direct the contractor to remove such materials or may undertake the job at the cost of the contractor.

81 Conflict of interest

Any bribe, commission, gift or advantage given, promised or offered by on behalf of contractor or his partner, agent or servant or any one on his behalf to any officer, servant, representatives, agents of Engineer-in-Charge, or any persons on their behalf, in relation to the obtaining or to execution of this, or any other contract with Engineer-in-Charge shall in addition to any criminal liability, which it may occur, subject to the cancellation of this or all other contracts and also to payment of any loss or damage resulting from any such cancellation. Engineer-in-Charge shall then be entitled to deduct the amount, so payable from any money, otherwise due to the contractor under this or any other contract.

82 Contract documents and materials to be treated as confidential

All documents, correspondences, decisions and orders, concerning the contract shall be considered as confidential and/or restricted in nature by the contractor and he shall not divulge or allow access to them by any unauthorized person.

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85 obligations of Contractor

85.1 The contractor shall, subject to the provision of the contract and with due care and diligence, execute and maintain the works in accordance with specifications and drawings.

85.2 The contractor shall promptly inform the Corporation and the Engineer-in-Charge of any error, omission, fault, defect in the design of or specifications for the works which are discovered when reviewing the contract documents or in the process of execution of the works.

85.3 Disputes

If Contractor believes that a decision taken by the Engineer-in-Charge was either outside the authority given to the Engineer-in-Charge by the Contract or that the decision was wrongly taken, the decision shall be referred to the technical expert within 14 days of the notification of the Engineer-in-Charge's decisions on occurrence of such event.

85.4 Procedures for disputes

a) The technical expert shall give a decision in writing with in 28 days after receipt of a notification of a dispute.

b) The Technical expert shall be paid daily at the rate specified in the contract data together with reimbursable expenses of the types specified in the contract Data and the cost shall be divided equally between the employer and the contractor, whatever decision is reached by the technical expert. Either party may refer a decision of the technical expert to an Arbitrator within 28 days of the technical expert's written decision. If neither party refers the dispute to arbitration within the above 28 days, the technical expert's decision will be final and binding.

c) Appointing Authority for the Technical Expert: Director, RGUKT IIIT-Srikakulam

d) The Technical expert's daily fee is Rs.2,000/- together with reimbursable expenses as of the type like stationery, typing, postage, conveyance etc. . Arbitration takes place in Hyderabad.

e) Replacement of Technical Expert:

Should the Technical expert resign or die, or should the employer and the contractor agree that the Technical Expert is not fulfilling his functions in accordance with the provisions of the contract, a new Technical expert will be jointly appointed by the employer and the contractor. In case of disagreement between the employer and contractor, within 30 days, the Technical expert shall be designated by the Appointing Authority designated in the Contract data at the request of either part, within 14 days of receipt of such request.

85.5 Pending finalization of disputes, the contractor shall proceed with execution of work with all due diligence.

#### 86 Security measures

- a. Security requirements for the work shall be in accordance with the Institute / Government's general requirements including provisions of this clause and the Contractor shall conform to such requirements and shall be held responsible for the actions of all his staff, employees and the staff and employees of his sub-contractors.
- b. All contractors' employees, representatives and sub-contractor's employees shall wear identifications badges provided by the contractor. Badges shall identify the contractor, showing employee's number and shall be worn at all times while at the site. Individual labour will not be required to wear identification badges.
- c. All vehicles used by the contractor shall be clearly marked with contractor's name.
- d. The contractor shall be responsible for the security of the works for the duration of the contract and shall provide and maintain continuously adequate security personnel to fulfill these obligations. The requirements of security measures shall include, but not limited to maintenance of order on the site, provision of all lighting, fencing, guard flagmen and all other measures necessary for the protection of the works within the colonies, camps and elsewhere on the site, all materials delivered to the site, all persons employed in connection with the works continuously throughout working and non working period including nights, Sundays and holidays for duration of the contract.
- e. Other contractors working on the site concurrently with the contractor will provide security for their own plant and materials. However, their security provisions shall in no way relieve the contractor of his responsibilities in this respect
- f. Separate payment for provision of security services will not be made and its cost shall be deemed to have been included in the offer of the tenderer.

#### 87 Fire fighting measures

- a. The contractor shall provide and maintain adequate firefighting equipment and take adequate fire precaution measures for the safety of all personnel and temporary and permanent works and shall take action to prevent damage to destruction by fire of trees shrubs and grasses.
- b. Separate payment will not be made for the provision of fire prevention measures.

#### 88 Provisions of Health and Sanitation

The contractor shall implement the sanitary and watch and ward rules and regulations for all forces employed under this contract and if the Contractor fails to

enforce these rules, the Engineer-in-Charge may enforce them at the expenses of the Contractor.

The contractors special attention is invited to clause 37, 38, 39 and 51 of the preliminary specification to the A.P.S.S. and he is requested to provide at his own expenses the following amenities to the satisfaction of Engineer-in-charge concerned.

88.1 First Aid: At the work site there shall be maintained in a readily accessible place, first aid appliances and medicine including adequate supply of sterilized dressing and sterilized cotton wool. The appliance shall be kept in good order. They shall be placed under the charge of a responsible person, who shall be readily available during working hours.\

88.2 Drinking water:

- a. Water of good quality for drinking purpose shall be provided for the worker on a scale of not less than 2 gallons per head per day.
- b. Where drinking water is obtained from an intermittent public water supply each work site shall be provided with a storage tank, where such drinking water shall be stored.
- c. Every water supply storage shall be at a distance of not less than 10 M. from any latrine drain or other source of pollution where water has to be drained. Any existing well, which is within such proximity of any latrine, drain or other source of pollution, the well shall be properly chlorinated before water is drawn from it for drinking. All such wells shall be dust and water proof.
- d. A reliable pump shall be fitted to each inner well. The trap door shall be kept locked and opened only for inspection or cleaning which shall be done at least once a month.

86.3 Washing and bathing place:

Adequate washing and bathing places shall be provided separately for men and women. Such place shall be kept clean and well drained, bathing or washing should not be allowed in or near any drinking water well.

86.4 Latrine and Urinals:

There shall be provided within the area of every work site latrines and urinals in an accessible place to men and women separately. For each of them shall be on the following scales or the scale as directed by Engineer-in-charge in any particular case.

- 1. Where the number of persons employed does not exceed 50 2
- 2. Where the number of persons employed exceeds 50 but does not exceed 100 3
- 3. For every additional 100 3

If women are employed, separate latrines and urinals separated from those for men shall be provided on the same scale.

Except in work site provided with water flushed latrines connected with a water borne sewage systems all latrine shall be cleaned at least four times daily and at least twice during working hours and kept in a strict sanitary condition. The receipt scales shall be tarred inside and outside at least once a year.

The excrete from the latrines shall be disposed off at the contractors expenses in a way approved by the local public health authority. The contractor shall also employ adequate number of scavengers and conservancy shall to keep the latrines and urinals in a clean condition.

86.5 Shelters during Rest

At the work site there shall be provided free of cost two suitable sheds, one for meals and other for rest for the use of workers.

86.6 Crèches

At every work site at which 50 or more women workers are ordinarily employed there shall be provided two huts of suitable size for use of children under the age of 6 years. One hut shall be used for infants games and other as a bed room. The hut shall be constructed on a standard not lower than the following.

1. Thatched roofs
2. Mud floors and wall
3. Planks spread over the mud floor and covered with matting. The use of huts shall be restricted to children their attendants and mothers of the children.

86.7 Canteens:

A cook for canteen on a moderate scale shall be provided for the benefit of works if it is considered essential.

86.8 Sheds for the workers:

The contractor should provide at his own expense sheds for housing the workers. The sheds shall be on a standard not less than the cheap shelter type to have in which the workers in the locality are accustomed. The sheds are to be in rows with 1.5 Mts., clear space between sheds and 2.5 Mts. clear space between roofs. If conditions permit, the workers camp shall be laid out in units of 400 persons each unit to have a clear space of 4' each side.

86.9 Land should be acquired temporarily for Storing Contractor's materials or for housing their staff.

The contractor should make his own arrangements for temporary acquisition of land required for storing his materials and for the housing of his staff at his own expenses

89 Ecological balance

a) The contractor shall maintain ecological balance by preventing de-forestation, water pollution and defacing of natural landscape. The contractor shall so conduct his construction operation as to prevent any unnecessary destruction, scarring, or defacing of the natural surrounding in the vicinity of the work. In respect of the ecological balance, Contractor shall observe the following instructions.

i) Where unnecessary destruction, scarring, damage or defacing may occur, as result of the operation, the same shall be repaired replanted or otherwise corrected at the contractor's expense. The contractor shall adopt precautions when using explosives, which will prevent scattering of rocks or other debris outside the work area. All work area including borrow areas shall be smoothed and graded in a manner to conform to the natural appearances of the landscape as directed by the Engineer-in-Charge.

ii) All trees and shrubbery which are not specifically required to be cleared or removed for construction purposes shall be preserved and shall be protected from any damage that may be caused by the contractor's construction operation and equipment. The removal of trees and shrubs will

be permitted only after prior approval by the Engineer-in-Charge. Special care shall be exercised where trees or shrubs are exposed to injuries by construction equipment, blasting, excavating, dumping, chemical damage or other operation and the contractor shall adequately protect such trees by use of protective barriers or other methods approval by the Engineer-in-Charge. Trees shall not be used for anchorages. The contractor shall be responsible for injuries to trees and shrubs caused by his operations. The term "injury" shall include, without limitation bruising, scarring, tearing and breaking of roots, trunks or branches. All injured trees and shrubs be restored as nearly as practicable without delay to their original condition at the contractor's expense.

(iii) The contractor's construction activities shall be performed by methods that will prevent entrance or accidental spillage of solid matter contaminants, debris and other objectionable pollutants and wastage into river. Such pollutant and waste include earth and earth products, garbage, cement concrete, sewage effluent, industrial wastes, radio-active substances, mercury, oil and other petroleum products, aggregate processing, mineral salts and thermal pollution. Pollutants and wastes shall be disposed off in a manner and at sites approved by the Engineer-in-Charge.

(iv) In conduct of construction activities and operation of equipments the contractor shall utilize such practicable methods and devices as are reasonably available to control, prevent and otherwise minimize the air pollution. The excessive omission of dust in to the atmosphere will not be permitted during the manufacture, handling and storage of concrete aggregates and the contractor shall use such methods and equipment as a necessary for collection and disposal or prevention of dust during these operations. The contractor's methods of storing and handling cement shall also include means of eliminating atmospheric discharges of dust, equipment and vehicles that give objectionable omission of exhaust gases shall not be operated. Burning of materials resulting from clearing of trees, bushes, combustible construction materials and rubbish may be permitted only when atmospheric conditions for burning are considered favorable.

b) Separate payment will not be made for complying with the provisions of this clause and all cost shall be deemed to have been included in the unit rates and prices included in the contract if any provision is not complied with within a reasonable time even after issue of a notice in this respect, the necessary operations would be carried out by the Engineer-in-Charge at the cost of the Contractor, Orders of the Engineer-in-Charge in this respect would be final and binding on the contractor.

90 Preservation of existing vegetation

a) The contractor will preserve and protect all existing vegetation such as trees, on or adjacent to the site which do not unreasonably interfere with the construction as may be determined by the Engineer-in-Charge. The contractor will be held responsible for all unauthorized cutting or damage of trees, including damage due to careless operation of equipment, stockpiling of materials or trekking of grass areas by equipment. Care shall be taken by the Contractor in felling tressauthorized for removal to avoid any unnecessary damages to vegetation and tress that are to remain in place and to structures under construction or in existence and to workmen.

- b) All the produce from such cutting of trees by the contractor shall remain the property of RGUKT-Srikakulam and shall be properly stacked at site, approved by the Engineer-in-Charge. No payment whatsoever, shall be made for such cutting and its stacking by the Contractor. If any produce from such cutting is not handed over to the RGUKT-Srikakulam by the contractor, he shall be charged for the same at the rates to be decided by the Engineer-in-Charge. The recovery of this amount shall be made in full from the intermediate bill that follows.
- c) The contractor shall also make arrangements of fuel deposits for supply of required fuel for the laborer to be employed for cooking purpose at his own cost in order to prevent destruction of vegetation growth in the surrounding area of the work site.

91 Possession prior to completion

The Engineer-in-charge shall have the right to take possession of or use any completed part of work or works or any part there of under construction either temporarily or permanently. Such possession or use shall not be deemed as an acceptance of any work either completed or not completed in accordance with the contract with in the interest of Clause 28 of APSS except where expressly otherwise specified by the Engineer-in-charge.

92 Payment upon termination

If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Engineer-in-Charge shall issue a certificate for the value of the work done less advance payments received upon the date of the issue of the certificate, less other recoveries due in terms of the Contract, less taxes due to be deducted at source as per applicable law and the percentage to apply to the value of the work not completed representing additional cost for completing the works at the rate of 20 percent of balance work. Additional Liquidated Damages shall not apply. If the total amount due to the Department exceeds any payment due to the Contractor the difference shall be a debt payable to the Corporation. In case of default for payment within 28 days from the date of issue of notice to the above effect, the contractor shall be liable to pay interest at 12% per annum for the period of delay.

93 Access to the contractor's books

Whenever it is considered necessary by the Engineer-in-Charge to ascertain the actual cost of execution of any particular extra item of work or supply of the plant or material on which advance is to be made or of extra items or claims, he shall direct the contractor to produce the relevant documents such as payrolls, records of personnel, invoices of materials and any or all data relevant to the item or necessary to determine its cost etc. and the contractor shall when so required furnish all information pertaining to the aforesaid items in the mode and manner that may be specified by the Engineer-in-Charge.

94 Drawing to be kept at site

One copy of the drawings furnished to the contractor shall be kept by the contractor on the site and the same shall at all reasonable time be available for inspection and use by the Engineer-in-Charge and the Engineer-in-Charge's representative and by any other persons authorized by the Engineer-in-Charge in writing.

95 B.I.S. [I.S.I.] books and APSS to be kept at site

A complete set of Indian Standard specification referred to in "Technical Specifications" and A.P.S.S. shall be kept at site for reference.

96 Variations by way of modification, omissions or additions

- a. For all modifications, omissions from or additions to the drawings and specifications, the Engineer-in-charge will issue revised plans, or written instructions, or both and no modification, omission or addition shall be made unless so authorized and directed by the Executive Engineer in writing.
- b. The Engineer-in-Charge shall have the privilege of ordering modifications, omission or additions at any time before the completion of the work and such orders shall not operate to annul those portions of the specifications with which said changes do not conflict.
- c. Engineer-in-Charge's Decision:  
It shall be accepted as in separable part of the contract that in matters regarding materials, workmanship, removal of improper work, interpretation of the contract drawings and contract specification, mode of the procedure and the carrying out of the work, the decision of the Engineer-in-Charge, which shall be given in writing shall be binding on the contractor.

97 Site Order Book :

An order book shall be kept at the Department office on the site of the work. As far as possible all orders regarding the work are to be entered in this book. All entries shall be signed and dated by the Departmental officer who issues such orders and by the contractor or by his representative. The order book shall not be removed from the work spot except with the written permission of the Executive Engineer.

98 Care and diversion of river/stream

The contractor shall submit details regarding the diversion and care of river or stream during construction of the work along with a separate print-out of the time table showing earliest and latest start and finish dates of various activities. He should submit a detailed layout plan with drawings for the diversion and care of river of stream during construction of work. The above arrangements shall be at contractor's cost.

99 Income tax

- a) During the currency of the contract deduction of income tax at 2.24% or amended from time to time shall be made from the gross value of each bill of the contract, the contract value of which is in excess of Rs.20,000/- for deduction of tax at rates stipulated under section 194-C(4) of Income Tax Act, 1961 shall be followed.
- b) Income Tax clearance certificate should be furnished before the payment of final bill.
- c) The contractor's staff, personnel and labour will be liable to pay personnel income taxes in respect of their salaries and wages as are chargeable under the laws and regulations for the time being in force, and the contractor shall perform such duties in regard to such deductions thereof as may be imposed on him by such laws and regulations.

#### 100 Seignior age charges

The Seignior age charge will be remitted as per the rates prescribed by the State Government / Mines and Geology Department from time to time and as per the government orders in vogue at that time for the materials used on the work. In data Seigniorage charges are not included.

#### 101 VAT on works contracts

- i) The percentage quoted by the contractor is exclusive of Value Added ax(VAT) but inclusive of other taxes on all materials that the contractor will have to purchase for performance of this contract.
- ii) VAT component loaded in part "B" of the estimate shall be added in each bill of the contractors who opt for composition scheme and recovered.
- iii) In respect of those contractors, who do not opt for composition scheme, the VAT component loaded in the estimate in part "B" shall not be released to them with their bills . However, VAT loaded in part "B" of the estimate shall be recovered and for the recovery made, a deduction certificate shall be issued, based on which they have to claim adjustment through their returns submitted to their respective assessing authorities.

#### 102 Supply of construction materials

- i. The contractor has to make his own arrangements for procurements, supply and use of construction materials.
- ii. All materials so procured should confirm to the relevant specifications indicated in the bidding documents.
- iii. The contractor shall follow all regulations of the Corporation / Government of India in respect of import licenses etc., of the procurement of the materials is through imports and he shall be responsible for the payment of applicable duties and taxes, port clearances, inland transportation etc.
- iv. The contractor shall make his own arrangements for adequate storage of the materials.

#### 103 CONSTRUCTION MATERIALS

103.1 The contractor has to make his own arrangement for procurement, supply and use of all construction materials including cement, steel and blasting materials etc., and compliance of following should be ensured.

- a. All materials so procured should confirm to the relevant specifications indicated in the tender documents or to alternative standards or specifications which are equal or higher in quality than those specified subject to Engineer-in-Charge's prior review and written approval difference between the standards specified and the proposed alternatives must be fully described by the contractor and submitted to Engineer-in-Charge's at least 30 days prior to the date when the contractor desires Engineer-in-Charge's approval. In the event Engineer-in-Charge determines that the alternative do not ensure equal or higher quality the same will be rejected and the contractor shall comply with the standards set forth within the documents.
- b. All materials to be supplied should fully confirm to provisions of A.P.S.S. / I.S. Specifications as applicable.

103.2 Materials, workmanship, period and certificate of maintenance and defect liability, quality:-

All materials and workmanship shall be of the respective kinds described in the contract and in accordance with Engineer-in-Charge's instructions and shall be subjected from time to time to such tests as the Engineer-in-Charge may direct at the place of manufacture or fabrication or on the site or at such other place or places as may be specified in the contract, or at all or any of such places. The contractors shall provide such assistance, instruments, machines, labour and materials as are normally required for examining measuring and testing the work and the quality weight or quantity of any materials used and shall supply samples of materials before incorporation in the works for testing as may be selected and required by the Engineer-in-Charge.

103.3 Tests, inspection of defective materials:

The contractor shall without extra cost provide samples and co-operate in the testing of materials. The Engineer-in-Charge shall have access at all times to the places of storage and where materials are being manufactured and proceeded for use in the works under contract to determine whether their manufacture and process are proceeding in accordance with the drawings and specifications. The Engineer-in-Charge shall during the progress of the works have power to order in writing from time to time in respect of the following.

- a) The removal from the site, within such time or times as may be specified in the order of any materials which in opinion of the Engineer-in-Charge, are not in accordance with contract.
- b) The substitution of proper and suitable materials and
- c) The removal and proper re-execution, not with standing of any work which in respect of materials or workmanship is not, in the opinion of the Engineer-in-Charge, in accordance with contract.

The contractor shall carry out such order at no extra cost to the Engineer-in-Charge. In case of default on the part of the contractor in carrying out such order, the Engineer-in-Charge shall be entitled to employ and pay other persons to carry out the same and all expenses consequent thereon or incidental thereto shall be recoverable from the contractor by Engineer-in-Charge or may be deducted by the Engineer-in-Charge from any monies due to or which may become due to the contractor.

In lieu of removing the work or materials not in accordance with the contract the Engineer-in-Charge may order such work or materials to remain and in that case such may be paid at the reduced rates as may be decided by Engineer-in-Charge. However any action by the Engineer-in-Charge under this para shall not any way absolve the contractor from his responsibility and liabilities as per conditions of contract.

## TECHNICAL SPECIFICATIONS

[INCORPORATED AS PER REQUIREMENT OF THE WORK PUT TO TENDER WITH THE RELEVANT SPECIFICATION AND NUMBER OF AP STANDARD SPECIFICATION / SPECIAL SPECIFICATION]

## SPECIFICATIONS

## 1.0 PREAMBLE

The technical specifications for various items of work contained here in shall be read in conjunction with the specifications mentioned for each item of work in bill of quantities (Schedule – A) and also plans and drawings.

## 2.0 PART I - GENERAL TECHNICAL SPECIFICATIONS

The following are the general technical specifications normally adopted for construction of buildings/other works. Each item of work shall be executed according to the relevant standard specification number as described in the “Andhra Pradesh Standard Specification” (APSS) and Indian Standard (I.S) Specifications, including Water supply, Sanitary and Electrical Installations. In the absence of any definite provisions on any particular item of work in the aforesaid specifications in A.P.S.S., reference may be made to the latest codes and specifications of Indian Standards or Indian Roads congress (IRC in case of Roads). Where even these are silent, the construction and completion of works shall conform to sound engineering practice as approved by Engineer-in-charge and in case of dispute arising out of the interpretation of the above, the decision of Engineer-in-charge shall be final and binding on the contractor.

## 3.0 GENERAL INSTRUCTIONS

### 3.1 Site Clearance and Demolition

The site shall be cleared of all trees, stumps, roots, brush wood, bushes and other objectionable materials. Useful and saleable material shall be the property of the Owner and shall be stacked properly as directed by the Engineer-in-charge. The areas to be covered with embankments shall be stripped of top soil to required depths to expose acceptable founding strata. Top soil unsuitable for use in embankment construction and other fills shall be disposed off as directed. All combustible materials shall be stacked and burnt in locations sufficiently remote to eliminate all danger of fire hazards. All old concrete, brick works and drains which interfere with construction works shall be dismantled with the approval of the Engineer duly taking all necessary precautions prescribed in safety specification given below. Top soil which is suitable for use in construction work shall be stockpiled for later use. Other objectionable materials such as trash, debris, stones, brick, broken concrete, scrap metal etc., shall be disposed off as directed by the Engineer. Payment for cutting and removal of trees, stumps, dismantling existing structures and stripping shall be regulated by the description in the Schedule of Items or Section 2 of A.P.S.S.

### 3.2 Safety Specification

3.2.1 On every demolition job, danger signs shall be conspicuously posted all-round the structure and all door openings giving access to structure shall be barricaded or marked except during the movement of actual workmen or equipment. However provision shall be made for at least two independent exits for escape of workmen during any emergency.

3.2.2 During night, red lights shall be placed on or about all the barricades.

- 3.2.3 Where in any work of demolition it is imperative, because of danger existing to ensure that no unauthorized person shall enter the site of demolition outside working hours, a watchman should be employed. In addition to watching the site, he shall also be responsible for maintaining all notices, lights and barricades.
- 3.2.4 All the necessary safety appliances as per IS: 4130 shall be issued to the workers and their use explained. It shall be ensured that the workers are using all the safety appliances while at work.
- 3.2.5 The removal of a member may weaken the side wall of an adjoining structure and to prevent possible damage, these walls shall be supported until such time as permanent protection is provided. In case any danger is anticipated to the adjoining structure the same shall be got vacated to avoid any danger to human life.
- 3.2.6 The power on all electrical service lines shall be shut off and all such lines cut or disconnected at or outside the property line, before the demolition work is started. Prior to cutting of such lines the necessary approval shall be obtained from the electrical authorities concerned for demolition work itself.
- 3.2.7 All gas, water, steam and other service lines shall be shut off and capped or otherwise controlled at or outside the building line, before demolition work is started.
- 3.2.8 All the mains and meters of the building shall be removed or protected from damage.
- 3.2.9 If a structure to be demolished has been partially wrecked by fire, explosion or other catastrophe, the walls and damaged roofs shall be shored or braced suitably.
- 3.2.10 Walkways and passageways shall be provided for the use of the workman who shall be instructed to use them and all such walkways and passageways shall be kept adequately lighted, free from debris and other materials.
- 3.2.11 All nails in any kind of lumber shall be withdrawn, hammered or bent over as soon as such lumber is removed from the structure being demolished, and placed in pipes for future cleaning or burning.
- 3.2.12 All the roads and open area adjacent to the work site shall either be closed or suitably protected.
- 3.2.13 No electric cable or apparatus which is liable to be a source of danger or a cable or apparatus used by the operator shall remain electricity charged.
- 3.2.14 All practical steps shall be taken to prevent danger to persons employed from risk of fire or explosion or flooding. No floor, roof or other part of the building shall be so overloaded with debris or materials as to render it unsafe.
- 3.3 Drawings, Instructions, Measurements  
All works shall be done according to the detailed drawings and specifications. Figured dimensions shall be followed. Measurement shall be taken of the actual work done but shall not exceed those marked on the drawings for payments.

- 3.4 Quality of work  
The materials, Equipment, tools and plants and workmanship should be of high and acceptable quality conforming to the standard specifications.
- 3.5 Testing of works and materials
  - 3.5.1 All materials used and works done shall be subject to approval of the Engineer.
  - 3.5.2 The contractor shall arrange sufficiently in advance to test materials and portions of works in order to prove their soundness and efficiency if required, including samples and supporting test results from the approved laboratory and other documentary evidence from the manufacturer, wherever applicable, and indicate the types of materials and their respective sources. The delivery of materials at site shall commence only after the approval of the quality, grading and sources of the materials by the Engineer.
  - 3.5.3 The quality of all materials approved shall be maintained throughout the period of construction and periodical tests shall be carried out to ensure that it is maintained.

*A Register of record of material testing and Register of daily events showing materials received, labour engaged, out turn of work etc. shall be maintained at site and shall be signed by the contractor or his authorized representative and the Engineer*

- 3.6 Rejection of Materials/works
  - 3.6.1 Any material brought to site which in the opinion of the Engineer is defective, sub-standard, damaged, contaminated, deteriorated or does not comply with the requirement of the specification shall be rejected. The contractor shall remove from site such materials within 4 hours of notice from site.
  - 3.6.2 If the work or portion of the work which in the opinion of the Engineer is found to be defective or unsound, the contractor shall pull it down and re-execute the same work at his own cost.
- 3.7 Measurement Materials  
Materials requiring mixing should be measured separately in boxes of appropriate size before being mixed in the specified proportions.
- 3.8 Storage of Materials
  - 3.8.1 Adequate safe, dry storage shall be provided for all materials particularly cement.
- 3.9 Codes
- 3.10 PERFORMANCE OF WORK
  - 3.10.1 Execution of Works
    - 3.10.1.1 All the works shall be executed in strict conformity with the provisions of the contract documents, explanatory detailed drawings and specifications.

- 3.10.1.2 The site should be cleared of all obstructions, vegetation, loose stones and materials before start of work.
- 3.10.1.3 The Engineer in charge, Supervisor will inspect the work on a Day-to-Day basis.
- 3.10.2 Work in Monsoon
  - 3.10.2.1 The construction may entail working in monsoon also. The contractor must maintain a minimum labour force and execute the construction according to the prescribed schedule.
  - 3.10.2.2 Contractor is responsible for keeping the construction work site free from water.
- 3.10.3 Plinth Levels
  - 3.10.3.1 A proper level should be maintained, in terms of horizontal and vertical alignment. A minimum acceptable plinth level above road level shall be maintained. The plinth level shall be agreed with the Engineer's representative.

#### 4.0 ELECTRIFICATION WORKS (TECHNICAL SPECIFICATION)

##### 4.1 INTERNAL ELECTRIFICATION

###### 4.1.1 WIRING INSTALLATION :

###### 4.1.1 Scope

The scope under this section covers wiring installation comprising of

- a) Lighting/Fan/Exhaust Fan/Circuit bell points.
- b) Power circuits and Air Condition circuits.
- c) Circuit wiring.

###### **4.1.1.1 MATERIALS**

The materials listed under "APPROVED MAKE" only shall be used. Materials, equipments, fittings, etc. used in the installation shall conform to the latest relevant IS. In case of materials for which standard specifications do not exist, the consultant / Client's Engineer-in-charge before start of work shall be approved the material.

###### 4.1.2 Standards

The following IS standards are applicable.

- a) IS:732-1989- Code of Practice for Electrical Wiring Installation
- b) IS:1646-1961- Code of Practice for Fire Safety of Buildings (General Electrical Installation)
- c) IS:3646Part I, - Code of practice principles Part II and Part III for good lighting and aspects of design, schedule for values of illumination and glare level and calculation of coefficient of utilization
- d) IS:1985- National electrical code

- e) IS: 2509 - Specification for rigid non-metallic conduits for electrical installations.
- f) IS:3419- Specification for fitting for rigid non-metallic conduits.
- g) IS:5133- Part-I-1969 - Specification for boxes for enclosure of electrical accessories.
- h) IS:694-1977- Specifications for P.V.C. insulated cable for working voltage upto and including 1100 volts.
- i) IS:8130-1984- Specifications for conductors for insulated electrical cables and flexible cords.
- j) IS:5561- Electrical power connectors
- k) IS:3854-1966- Flush type switches
- l) IS:1293-1967-3 pin plug sockets
- m) IS:6538-1978- Plugs

#### 4.1.3

##### Recessed conduit wiring system with rigid conduits

- a) Type and size of conduit: All rigid non-metallic conduits shall conform to accepted standards and shall be used to corresponding accessories. Conduits shall provide adequate mechanical protection for the enclosed cables and the interior of the conduit shall be free from obstructions. No non-metallic conduit less than 20 mm in dia shall be used. The number of insulated cables that can be drawn into rigid non-metallic conduits are given in separate enclosure (Ref: Exhibit (1) page no. 161)
- b) Bunching of cables: Unless otherwise specified, insulated conductors of AC supply shall be bunched in separate conduits. For lighting and small power outlet circuits, phase segregation in separate conduits is recommended.
- c) Conduit Joints: Conduits (metallic) shall be joined by means of screwed couplers and screwed accessories only. In long distance straight runs of conduit, inspection type boxes at reasonable intervals shall be provided. Cut ends of conduit pipes shall have no sharp edges nor any burrs left to avoid damage to the insulation of conductors while pulling them through such conduits.
- d) Inspection type conduit fittings such as inspection boxes, deep boxes, bends, elbows and tees shall be so installed that they remain accessible for such purposes as with drawl of existing cables or installation of additional cables.
- e) Metallic switch board boxes shall be fabricated from 1.6mm thick sheet metal of 16 gauge GI sheet and wooden switch board boxes shall be of Teakwood. The switch boards should be flush mounting type. The MS switch boards should be painted with two coats of red oxide and two coats of synthetic enamel paint of approved grade and make before fixing in position.

The switch boxes should be covered with 3mm thick Decolum Hylum cover.

- f) The chase in the wall shall be neatly made and be of ample dimensions to permit the conduit to be fixed in the manner desired. In the case of building under construction chases shall be provided in the walls, ceiling etc., at the time of their construction and shall be filled up neatly after erection of conduit and brought to original finish of the walls.
- g) The conduits shall be fixed in chases by means of staples or saddles not more than 60 cms apart. Fixing of standard bends or elbows shall be avoided as far as practicable and all curves maintained by bending the conduit pipe itself with a long radius which will permit easy drawing in of conductors. All threaded joints of rigid steel conduit shall be treated with some approved preservative compound to secure protection against rust.
- h) Suitable inspection boxes shall be provided to permit periodical inspection and to facilitate removal of wires if necessary. Minimum size of inspection boxes shall be 75 x 75 mm.
- i) The M.S. switch board boxes, junction boxes etc., should be efficiently earthed with conduit by a suitable means of earth attachment.
- j) When crossing through expansion joints in Buildings, the conduit section across the joint may be through flexible conduits of same size as the rigid conduit.
- k) Wires: Wires shall comply with the following features.
- Annealed copper conductor, multi strand, PVC insulated, 1100 volts grade cables.
  - The following colour coding shall be followed :-
    - Phases - R - Red
    - Phases - Y - Yellow
    - Phase - B - Blue
    - Neutral - Black
    - Earth - Green
- l) On each (lighting/Ceiling Fan/Exhaust Fan) circuit not more than 10 points or 800-1000 watts load should be connected. Example:- If on one of the switch boards there are only 4 switches to control 4 lights, other switch board another 3 switches to control lights etc, then for arriving at the circuit length, the shortest distance from circuit breaker in the MCB distribution board to the nearest switch board shall be considered. Inter connections between such switch boards shall be allowed by providing same wires as are used for light points and no measurement in circuit wiring is allowed for such inter connections. A separate conduit pipe has to be provided for running circuit mains and the conduits for light points shall never be used for the same.
- For 5 Amps 3 pin on separate board the circuit measurement to first nearest 5 Amps 3 pin socket is considered. No measurement will be separately considered for looping of switch boards in circuit wiring.
- m) The mounting height of switch boards (bottom of MS Box) shall be 4'6" from finished floor level.

The 5 Amps/15 Amps 3 pin sockets with shutter protection shall be at 1 mtr. level.

Wiring for power circuits i.e., 15 Amps 3 pin and AC points shall be provided in separate conduit pipes.

- n) Neat holes shall be punched on MS Switch Board Boxes for conduit pipe entries. Rough, burred holes with chisel shall be avoided. Conduit pipes to be fixed to MS Switch Board Boxes, MCB Distribution Boards etc., by providing check nut arrangement. Before drawing of PVC insulated cables inside the conduits, ebonite/ nylon bushes to be provided at conduit ends in order to avoid damage to cables during drawing.
- o) 3mm thick Hylum / Decolum covers provided on Switch Boards should be fixed to switch boards by providing brass coated screws and plated cup washers.
- p) Any loose holes on Switch Board boxes and Distribution Boards shall be properly closed, so as to prevent entry of lizards etc.
- q) Whenever cables of size 6.0Sq.m and above are connected inside switch, socket or MCB, metallic plug point etc, proper type and size of lugs to be crimped to cable leads before making the permanent connection in switches etc.
- r) Telephone/intercom cables shall not be laid in the same conduit where electric lighting/power cables are drawn. Separate conduit pipes to be used for drawing of telephone/intercom cables.
- s) Loose joints with PVC insulation shall be avoided. Wherever possible joints of cables shall be avoided. If found necessary proper type and size of connectors shall be used.
- t) The drop of voltage between the main switch/distant. Terminals and the farthest current consuming apparatus shall not exceed 2% with all devices switched on.

#### 4.1.1.4 Testing

The entire installation shall be tested for

- a) Insulation Resistance
- b) Earth continuity
- c) Polarity of single pole switches

Tests shall be conducted in the presence of Site Engineer. Test results to be tabulated and submitted to the site engineer.

#### 4.1.2 MCB DISTRIBUTION BOARDS, MCB's AND ELCB's:

##### 4.1.2.1 Scope

The scope under this section covers installation comprising.

- a) Low voltage distribution boards

#### 4.1.2.2 Standards

The following IS Standards are applicable

- a) IS:8623- Factory built assemblies
- b) IS:2147-IP42- Protection against ingress
- c) IS:8828-BS-3871- Specification for Miniature CEEP-19 CIRCUIT breakers
- d) IP 20- Protection category
- e) IS:12640-1980- Residual current operated circuit breakers

#### 4.1.2.3 Details

- a) The Distribution Boards shall have vermin, dust, rust proof painting done by powder coating process.
- b) The cables entering the D. Board should be properly bunched and dressed before making connection in MCB's.
- c) Cable glands shall be provided wherever armored cables are connected to switches.
- d) Cable leads shall be provided with proper type and size of lugs crimped to leads before making permanent connection inside MCB's, RCCB's etc.
- e) Permanent circuit identification shall be provided on the distribution boards.
- f) The mounting height of MCB distribution boards etc., (bottom line) shall be 6'-6" from finished floor level.

#### 4.1.3 CABLES:

##### 4.1.3.1 Scope

The scope under this section covers.

- a) Power cables

##### 4.1.3.2 Standards

- a) IS:8130 - Specification for conductors for insulated electric cables
- b) IS:1554-Part I - Specification for Armoured/unarmoured power cables
- c) IS:3961 - Recommended current ratings for cables
- d) IS:5831-1984 - Specifications for PVC insulation and sheeting of electric cables

##### 4.1.3.3 General requirements for cables

- a) Cables should be stranded aluminum conductors for 6mm and above.
- b) L.V. cables shall be 1100 Volts grade.
- c) Cables shall have color coded insulation.
- d) PVC inner and outer sheathing shall be applied by extrusion.
- e) Steel armoring between inner and outer sheathing.
- f) The PVC insulation and sheathing shall confirm to IS:5831-1984.
- g) The armoring for cables upto 16mm<sup>2</sup> shall be of round steel wire and that above 16mm<sup>2</sup> shall be of galvanized steel strings.

#### 4.1.3.4 Laying of Cables

- a) Cables if laid underground shall be at a depth of not less than 60Cms., in a trench. Sand filling shall be provided at the bottom of trench before laying the cable. Bricks shall be provided on either side of the laid cable. Sand filling shall be done to cover the cable laid. Bricks shall be provided on the top. Earth filling shall be done.

M.S. cable identification tags, route indicators embedded in C.C. are to be provided at every 8 meters length of cable laid.

- b) Hume pipe, trenches/tunnels with proper precast slabs to withstand wear and tear of vehicular traffic shall be provided at road crossings.
- c) Cables if laid in the air shall be laid on cable trays and shall be properly clamped to the trays by plated MS. saddles at proper intervals. Cables shall be properly dressed before fixing on the cable trays.
- d) Extra cable loops of minimum 500 mm shall be provided at each end of cables laid.
- e) Cables shall be bent to a radius of 20 times the diameter of the cable with a minimum of 10 times diameter at restricted space.
- f) Control/Telephone cables shall be laid away from power cables on separate cable trays.

#### 4.1.3.5 Testing

Manufacturers test report shall be submitted for tests on cables in accordance with Indian standards specifications.

Cables shall be tested after installation before commissioning by using 1000 Volts Megger and the following readings shall be obtained and tabulated.

- Continuity on all conductors
- Insulation Resistance
  - a) between conductors
  - b) all conductors and ground

The tests shall be conducted in the presence of Site Engineer and results submitted.

4.1.4 CABLE TRAYS AND ACCESSORIES:

4.1.4.1 Scope

The scope covers MS cable trays and cable tray accessories.

4.1.4.2 Standards

(IS. specifications shall be adhered to)

4.1.4.3 Specifications

Material: Hot rolled plain sheets of tested quality "O" grade as per IS 1079.  
Thickness of material: 2.0 mm  
Cable loading on tray: 50 Kg/MTR  
Span between cable tray supports: 1.5 meters to 2.0Mrs.  
Surface finish: Hot dip galvanizing iron as per IS 2629, minimum 70 microns thickness

Length of cable trays: 2.5 Meters

Width of Cable trays: (outside to outside width to be taken)

- a) Ladder type - Bolted/welded construction 300 mm/450mm/600mm (depending on number of cables to be laid)
- b) Perforated cable trays (Same as above)

4.1.4.4 Sizes of Cable Trays:

- a) Ladder type - Bolted/welded construction

Side rail

- \* Flange width 15 mm
- \* Depth 70 mm
- \* Two coupler holes of 10mm diameter required on each side of side rail
- \* Rungs
- \* Channel section: 20 x 40 x 20 mm
- \* Slot size on rungs: 20 x 10 mm (oblong holes)
- \* Interval between rungs not more than 250mm

- b) Perforated type construction

- \* Flange width :30mm
- \* Slot size : 20 x 10 mm (oblong)

4.1.4.5 Sizes of Coupler Plates:

- a) Ladder type - Bolted/welded construction  
Size: 90 x 45 mm  
Thickness of material: 2/2.5 mm

Slot size: 20 x 10mm oblong holes - Two numbers  
Round holes 10mm diameter Two numbers  
Finish: Hot dip galvanized as per IS:2629

b) Perforated type construction:  
Size: 210mm x 25mm  
Thickness of material: 3mm  
Slot size: Oblong holes 20 x 10 mm - 2 numbers  
Round holes 10mm diameter - Two numbers  
Finish: Hot dip galvanized as per IS:2629

4.1.4.6 Hardware for coupler plate: (Electro galvanized)

- a) Hexagonal Head Bolts - 4 Nos.
- b) Plain washers - 8 Nos.
- c) Hexagonal nuts - 4 Nos.

Number of coupler plates per cable tray - Two numbers.

4.1.4.7 Cable tray Accessories:

Material: Hot rolled plain sheets of tested quality "O" grade as per IS: 1079

Finish: Hot dip galvanized as per IS:2629

Minimum bending Radius - 450mm

Tees, Horizontal/vertical elbows, cross and reducers for both ladder type - welded/bolted and perforated construction shall be as per standard manufacturers drawings.

4.1.4.8 Erection

Cable trays shall be erected on walls, trenches (if necessary) by drilling holes in the wall by power drilling machine. Cable Tray shall be fixed to wall by providing proper size Anchor expandable type bolt and nut arrangement.

Proper type of cable tray accessories shall be selected depending on the site condition.

4.1.5 CABLE TERMINATION:

Cable gland body shall be made of brass castings and machined to final size. The general construction of the glands should be as per standard manufacturer's drawings. It mainly consists

- a) Compression Nut - Brass - 1 No.
- b) Gland body with Hexagonal head - Brass - 1 No.
- c) Rubber Ring - Rubber - 1 No.
- d) Brass washers - Brass - 3 Nos.
- e) Check nuts - Brass - 1 No.

Metal parts of the gland shall be free from blow holes and surface shall be machined smoothly.

All edges shall be debarred and then nickel plated wherever necessary. The cable glands shall be of single compression type.

#### 4.1.6 L.T. PANEL BOARDS

##### 4.06.6.1 Scope

The Scope covers the requirement of designs, construction, assembly, testing, Supply and installation of Panel Boards.

##### 4.1.6.2 Standards:

IS:4064 - Code of practice for switch of use units.

IS:4237 - General requirements for switch gear and control gear for voltages not exceeding 1000 Volts.

IS:2147 - Degree of protection provided by enclosures for low voltage switch gear. for cables

IS:9224 - Fuse class category

IS:2705 - Current Transformers

IS:1248 - Indicating Instruments

IS:375 - Marking and arrangement of bus bars

IS:3156 - Voltage Transformers

IS:3231 - Relays

IS:722 - Integrating Information

IS:6975 - Control Switches and push buttons

IS:2959 - Auxiliary contactors

IS:2516 - Air circuit Breakers

IS:2208 - HRC fuse links

IS:8623 - Factory Built Assemblies of switch gear and control gear.

##### 4.1.6.3 CONSTRUCTION:

The panel board shall be:

- i) of the metal enclosed, indoor, floor mounted, free standing type.
- ii) be made up of the requisite vertical sections, which, when coupled together shall form continuous dead front switchboards.
- iii) provide dust and damp protection, the degree of protection being no less than IP, 51 to IS. 2147.
- iv) be readily extensible on both sides by the addition of vertical sections after removal of the end covers.

4.1.6.3.1 The panel boards shall be constructed only of materials capable of withstanding the mechanical, electrical and thermal stresses, as well as the effects of humidity, which are likely to be encountered in normal service.

4.1.6.3.2 Each vertical section shall comprise:

- i) A front framed structure of rolled/folded sheet steel channel section, of minimum 2 mm thickness, rigidly bolted together. This structure shall house the components contributing on the major weight of the equipment, such as circuit breaker fuse switch units, main horizontal bus bars, vertical risers and other front mounted accessories.

The structure shall be mounted on a rigid base frame of folded sheet steel of minimum 2mm thickness and 100mm height. The design shall ensure that the weight of the components is adequately supported without deformation or loss of alignment during transit or during operation.

- ii) A cable chamber housing the cable and connections, and power/control cable terminations. The design shall ensure generous availability of space for ease of installation and maintenance of cabling, and adequate safety for working in one vertical section without coming into accidental contact with live parts in an adjacent section.
- iii) Front and rear doors fitted with dust excluding neoprene gaskets with fasteners designed to ensure proper compression of the gaskets. When covers are provided in place of doors, generous overlap shall be assured between sheet steel surface with closely spaced fasteners to preclude the entry of dust.

4.1.6.3.3 The height of the panel should not be more than 2400 mm. The total depth of the panel should be adequate to cater for proper cabling space.

4.1.6.3.4 Doors and covers shall be minimum 1.5mm thick sheet steel. Sheet steel shrouds and partitions shall be of minimum 1.5mm thickness. All sheet steel work forming the exterior of switch boards shall be smoothly finished, levelled and free from flaws. The corners should be rounded.

4.1.6.3.5 The apparatus and circuits in the panel boards shall be so arranged as to facilitate their operation and maintenance and at the same time to ensure the necessary degree of safety.

4.1.6.3.6 Apparatus forming part of the panel boards shall have the following minimum clearances:

- i) Between phases - 25 mm
- ii) Between phases and earth - 25 mm
- iii) Between phases and earth - 25 mm
- iv) Between neutral and earth - 19 mm

When, for any reason, the above clearances are not available, suitable insulation shall be provided. Clearances shall be maintained during normal service conditions.

Creep age distances shall comply to those specified in relevant standards.

- 4.1.6.3.7 All insulating material used in the construction of the equipment shall be of non-hygroscopic material, duly treated to withstand the effects of high humidity, high temperature tropical ambient service conditions.
- 4.1.6.3.8 Functional units such as circuit breakers and fuse switches shall be arranged in multi-tier formation, except that not more than two air circuit breakers shall be housed in a single vertical section.
- 4.1.6.3.9 Metallic/insulated barriers shall be provided within vertical sections and between adjacent sections to ensure prevention of accidental contact with:
- i) Main bus bars and vertical risers during operation, inspection or maintenance of functional units and front mounted accessories.
  - ii) Cable terminations of one functional unit, when working on those of adjacent unit/units.
- 4.1.6.3.10 All doors/covers providing access to live power equipment/circuits shall be provided with tool operated fasteners to prevent unauthorized access.
- 4.1.6.3.11 Provision shall be made for permanently earthing the frames and other metal parts of the switch gears by two independent connections.

#### 4.1.6.4 METAL TREATMENT AND FINISH:

- 4.1.6.4.1 All steelwork used in the construction of the switchboards, should have undergone a rigorous metal treatment process as follows: (Seven tank process.)
- i) Effective cleaning by hot alkaline degreasing solution followed by cold water rinsing to remove traces of alkaline solution.
  - ii) Pickling in dilute sulphuric acid to remove oxide scales and rust formation, if any, followed by cold water rinsing to remove traces of acidic solution.
  - iii) A recognized phosphate process to facilitate durable coating of the paint on the metal surface and also to prevent the spread of rusting in the event of the paint film being mechanically damaged. This again, shall be followed by hot water rinsing to remove traces of phosphate solution.
  - iv) Passivity in de-oxalate solution to retain and augment the effects of phosphate.
  - v) Drying with compressed air in a dust free atmosphere.
  - vi) Primer coating with two coats of a highly corrosion resistant primer, applied wet on wet & stove dried under strictly controlled conditions of temperature and time.

- vii) A finishing coat of staving synthetic enamel paint to the specified shade of IS.5. The total thickness of paint should not be less than 15 to 20 microns.
- 4.1.6.5 **BUS BARS:**
- 4.1.6.5.1 The bus bars shall be air insulated and made of high conductivity, high strength aluminum alloy complying with the requirements of grade E91 of IS 5082.
  - 4.1.6.5.2 The bus bars shall be suitably braced with non-hygroscopic SMC supports to provide as through fault withstand capacity of 50 KA RMS symmetrical for one second and a peak short circuit withstand of 105 KA minimum. The neutral as well as the earth bar should also be capable of withstanding the above fault level. Ridges shall be provided on the SMC supports to prevent truckling between adjacent bus bars.
  - 4.1.6.5.3 Large clearances and creep age distance shall be provided on the bus bars system to minimize the possibility of a fault.
  - 4.1.6.5.4 High tensile bolts and spring washers shall be provided at all bus bar joints.
  - 4.1.6.5.5 The cross sections of the bus bars risers for various ratings shall have been decided on the basis of temperature rise tests carried out under conditions closely similar to actual service conditions. For a total operating temperature of 110 deg. C. at an ambient of 40 deg. at the standard current ratings and corresponding cross sections of the main bus bars should be such that the bus bar shall carry 1 Amp. per Sq.mm.
  - 4.1.6.5.6 The main phase bus bars shall have continuous current rating throughout the length and the neutral bus bars shall have a continuous rating of at least 50% of the phase bus bars.
  - 4.1.6.5.7 Connections from the main bus bars to functional circuit shall be arranged and supported so as to withstand without any damage or deformation the thermal and dynamic stresses due to short circuit currents.
  - 4.1.6.5.8 Bus bars shall be color coded for easy identification of individual phases and neutral.
  - 4.1.6.5.9 The bus bars shall be suitably supported with epoxy resin mould insulators.
- 4.1.6.6 **Tests:**  
The panel Board shall be inspected as per relevant standards in presence of the Site Engineer and shall include.
- a) High voltage test
  - b) Insulation test
  - c) Constructional and safety features
- 4.1.6.7 **Name Plates:**  
Main name plates shall be fixed at the top centre. Name plate giving feeder detail shall be provided and are to be fixed by screws.
- 4.1.7 **Earth Electrodes:**
- 4.1.7.1 **Scope:**

- 4.1.7.2 The scope included both pipe earth electrodes and plate earth electrodes.  
Standards:  
IS:3043 - Code of practice for earthing
- 4.1.7.3 Construction:  
Pipe Earth Electrode : G.I pipe shall not be less than 38mm diameter and 2½meter long. It shall be buried vertically into the earth pit with the top not less than 1.25 meters below ground level. The G.I pipe should be "C" / "B" class type.
- Plate Earth Electrode : Copper plate of 600 x 600 x 3.15 mm. shall be buried in the earth with faces vertical and top shall not be less than 1.5meters below ground level.
- The electrodes shall be surmounted by alternate layers of charcoal or coke and salt. Watering arrangement with ½" G.I pipe with a funnel shall be provided, the later being housed with chamber (masonry) of inner size 300 x 300 mm CI hinged cover with CI frame to be provided on the top.
- 4.1.7.4 Tests:  
The resistance of earth electrode shall be less than 5 Ohms.

4.1.1.3 (a) Exhibit (I)

MAXIMUM PERMISSIBLE NUMBER OF 250 V GRADE SINGLE-CORE CABLES THAT CAN BE DRAWN INTO RIGID NON-METALLIC CONDUITS  
(Ref.IS:732-1989)

Size of Cable		Size of Conduit, mm					
Nominal Cross-Sectional Area mm <sup>2</sup>	Number and Diameter of Wires, mm	16	20	25	32	40	50
		Number of Cables, Max					
1.0	1/1.12*	5	7	13	20	-	-
1.5	1/1.40	4	6	10	14	-	-
2.5	1/1.80     3/1.06*	3	5	10	14	-	-
4	1/2.24     7/0.85*	2	3	6	10	14	-
6	1/2.80     7/1.06*	-	2	5	9	11	-
10	11/3.55+     7/1.40*	-	-	4	7	9	-
16	7/1.70	-	-	2	4	5	12
25	7/2.24	-	-	-	2	2	6
35	7/2.50	-	-	-	-	2	5
50	7/3.00+     19/1.80	-	-	-	-	2	3

- \* For copper conductors only.
- + For aluminum conductors only.

## 4.2 EXTERNAL ELECTRIFICATIONS WORKS

### 4.2.1 Underground Cables:

#### i) Medium and low pressure:

Cables should be double steel tape armored over lead covering and paper insulated or PVC insulated as specified in the schedule of work. All repair joints of cables should be in joint boxes and filling in of the compound shall be done as per IS specifications using best quality materials. All accessories and other materials should conform to I.S. Specification. The jointing work should be carried out by a competent authorized cable jointer. The cables shall be 1100 V grade.

#### ii) Trench:

Trenches shall not be less than 45 cm wide and 60cm below ground level. Wherever necessary, suitable propping and storing may be done to avoid caving in of the adjoining trench walls. Where the cables cross other services lines adequate protection should be taken to prevent accidental exposure and/or damage to the cables.

#### iii) Spacing between cables:

Where more than one cable is laid in the same trench the actual space between the cables should normally be 23 cm apart leaving a clear distance of 15cm from the cable and the trench walls.

#### iv) Laying of cables:

Before the cables are laid, a layer of 3" sand base is to be provided for purposes of cushioning. The cables after being uncoiled and laid into the trench from the rollers should be drawn in straight length. After the cable is laid, it is to be covered with another layer of sand of about 15cm in depth, and the top surface is to be suitably leveled to received the cable covers which may be of second class bricks or tiles and laid in such manner as to overlap the cables on either sides by at least 5cm. Cable markers of aluminum or G.I. shall be provided at concrete blocks of 3/20cm x 20cm x 5cm and spaced at distance of about 30cm from center to center and at every change in direction. Cables may also be laid in tier formation in the same trench in this case also after the 1st 3 inches of sand cushion, the first tier of cable is laid and sand filled in the trench to form a bed of 23cm above this tier. After this the second cable is laid and the process repeated, the top most tier being at least 45cm below the Ground level. The top cable shall be suitably covered with bricks or tiles. When laying cables, care should be taken to see that the paper insulated cables are bent/straightened slowly, sharp radii being avoided. The minimum safe bending radius for single core cables is 20 diameters and for multicore cables 10 dia meters and for armored cables 12 diameters, the diameter being the overall diameter of the cable.

Where the cables are required to cross roads they should be normally taken through sleeve pipes at least 10cm in diameter which may be either stone ware, steel or spun reinforced concrete. For more than one cable the diameter should not be less than 15cm. Steel pipes shall be used where it is not possible to obtain sufficient depth to withstand impact from traffic.

v) Cable inside building:

Cables laid inside the building should be properly protected and be carried either in ducts with suitable covers with slabs or chequered plates or fixed to walls by clamps, brackets or cable trays.

vi) Hume Pipes

Wherever cables crossing roads, passages Hume pipes of suitable diameter shall be provided across the road including Civil works of digging, laying of Hume pipes upto a depth of 1 meter and refilling the trench. This shall be properly laid to cover the entire road so as to protect the cables against damage of passing Heavy Vehicles.

vi) Testing the cables:

High voltage tests should be undertaken to ensure that no damage has occurred during the laying operation and that the joints are in order. Cables of 1.1 KV suitable for low and medium voltage should with stand for 15 minutes, 300 volts D.C. current applied between the conductors and between each conductor and sheath. In absence of high pressure testing equipment it is sufficient to test for 1 minute with 1000 volts. If the test results are found to be not satisfactory the contractors shall arrange to replace without any extra cost including removal of rejected materials, Re-laying etc.

vii) Cable laying & termination shall confirm to IS 1255

viii) Earthing of cables and cable glands shall confirm to IS 3043

ix) The cable length given in bill of quantities are approximate and the contractor has to measure exact length of cables to be laid before commencement of work in presence of engineer in charge and give the sizes and quantities required to the engineer in charge to take further action by the engineer in charge. The measurements after laying cables are also to be taken jointly by contractor.

#### 4.2.2 Transformers

The transformers required are intended for use in distribution of power and lighting. The 11 KV / 0.433 volts Transformer required for feeding lighting, pumps, etc.

The transformers shall be designed and manufactured and tested as per IS 2026.

The transformers winding shall be of copper/aluminum winding as specified.

The transformer shall be adequately designed and effectively cooled to ensure its working on full load conditions continuously under short time over load conditions.

The design of core should ensure stability and reduce to a minimum the transformer excitation current and eddy current losses.

The core shall be provided with lugs suitable for lifting the complete core and coil assembly of the transformer.

The transformer coils shall be made of high conductivity copper and insulated with paper of dielectric strength and allow ageing characteristics. The Insulation of the coils shall be treated with suitable insulating material like varnish is to develop full electrical strength of the windings.

The tap changing arrangement shall be provided on the H.T side. The tap changer shall be ON / OFF load type. The tap changing switch shall be mechanically coupled to the external operating handle and the operating handle shall be carried through on oil tight gland on the tank side. A register plate clearly indicating the tapping in use shall be fixed to the external operating mechanism and provision shall be made for securing and padlocking the switch in any of the working position and to ensure that contacts are fully engaged before the transformer is energized. The range of ON / OFF Load tap change shall be +2 1/2% to + 5%.

i) Bushing

The Bushing Insulators of the transformers shall be of sufficient creep age length and shall be unaffected by atmospheric conditions due to weather, fumes, alkalis at site.

ii) Insulating oil

Sufficient oil shall be supplied for first filling. The oil shall comply in all respects with pro IS.335.

All accessories like drain valve, oil filling valve, filter valve, oil sampling valve, pressure relief device, oil level indicator, indicating thermometer (dial type) earthing terminal, bi-directional rollers . Exhaust vent, eye bolts, lugs, Diagram and rating plate.

#### 4.2.3 Over head Lines

The specification of over head line covers installation, testing and commissioning of over head lines, distribution lines upto including 11 KV lines, service connections and street lighting works.

##### Materials

Supports for over head lines and for street lights shall be any of the following types or as specified by Engineer in charge and shall be of adequate strength confirming in all respects to Rule 76 of Indian electricity rules.

##### Steel tubular poles

This shall conform IS 2713-1964 . This shall be seamless/swaged and welded type as specified and shall be in time stepped sections. Unless other wire specified 1/6th from the base length of the pole plus 15cm be coated with black bitumen paint both internally and externally. The remaining portion of the pole shall be painted with one coat of red oxide on its external surface. The pole shall be complete with cap and base plate.

Steel poles (RSJ Joists)

These shall be I section steel rolled poles confirming to IS standards and Medium weight. The height of the pole shall not be less than 9mts and the pole shall be fixed below ground level not less than 5 feet. The size of overhead line steel RS Joist pole shall be concreted in 1:3:6 cement concrete and painted as per steel tubular poles given above.

Priestesses Cement Concrete Poles (PSCC)

PSCC poles shall be of 8.0 Mts. / 9.0 Mts. Height and shall confirm to standards of AP Transco. / APDISCO.

'D' Iron Clamps

Where so specified in the contract conductors shall be spaced vertically supported on shackle which one attached to the pole by means of 'D' sloped clamps made of M.S flats of size not less than 50x6mm and galvanized set the dimensions of 'D' shall be such as to hold 75mm high and 90mm dia (minimum size) shackle insulators. The 'D' iron clamp shall be complete with pole clamp with necessary bolts nuts and washers and bolts holes. Clamps shall also provided for pin insulators as in case of vertical formation.

G.I strap

Where 'D' Iron Clamps are not Specified, a pair of strap Plates of galvanized Iron of size 40mm x3mm and length of 23cms. Shall be used with shackle insulators. The pole clamp shall be treated with one coat of red oxide Primer before erection and finished with two coats of approved paint after erection along with other hard ware as specified. The nuts, bolts, for pole clamp shall be of G.I/ cadmium passicated/galvanised.

Stay / Strut Set

A stay set shall consist of stay rod, anchor plate, bow tightened or turn buckle, thimble, stay wire, and strain insulator. The stay rod shall be with stay grip in case of turn buckle is used instead of bow tightened. The stay wire shall be either 7/4.00mm dia or 7/3.15mm dia. G.I as specified in the contract confirming to IS-2141-1968 grade 2. The anchor plate shall be of M.S. galvanized and not less than 30cms x 30cms x 6.4mm thick and size of stay rod shall be not less than 1.8m (6 feet) long and 19mm dia.

Insulator

Porcelain insulator shall conform to IS 1445-1966 suitable for over head lines for power lines below 1000V and IS 731-1971 for overhead power lines greater than 1000V. This shall be vitreous through out and non absorbent. The exposed surface shall be glazed. Insulator shall have adequate mechanical

strength high degree of resistance to electrical puncture and resistance to climatic and atmospheric attack.

The insulator shall be of the following types as specified.

- a) Pin and shackle insulators for L.T and HT lines.
- b) Pin and disc type for HV lines.

The minimum size of shackle insulators shall be 65mm dia 100mm high. The pin insulators shall be suitable for 12mm cordeam thread and shall be complete with G.I. pin, nuts & washers.

#### Binding Materials

Binding of conductors with the insulators shall be done with 12 SWG soft/Aluminum conductor.

#### Guard Wire

Guard wire shall be G.I.

It shall have minimum breaking strength of 635kg in accordance with Rule 38 of I.E Rule. It shall also be sufficient current carrying capacity to ensure rendering of guard line.

#### Earth Wire

The size of the continuous earth wire shall not be less than 8 SWG. G.I.

#### Section Stay

A stay shall be provided at all angle or terminal poles.

The stay rod with the anchor plate shall be embedded in cement concrete 1:3:6 (1 cement = 3 coarse : 6 graded stone) and not less than 0.28 cu.m in content in such away to prevent uprooting of the stay rod.

The stay wire shall also be connected and bonded properly to the continuous earth wire.

Double stays shall be provided at the all dead ends of the pole.

#### Jumpers

While stringing conductors a sufficient length should be kept at shackle termination for making Jumpers.

#### Guarding

All road crossing, crossings, of overhead lines, and between HV & LV lines carried on the same support, guard shall be provided.

The guard wires shall be bonded to earth wire.  
Cage guard shall be provided for distribution lines of vertical configuration.

#### 4.2.4 Lighting Arrestors

Lightening arrestors shall confirm to IS 3070 - 1965 part I and IS - 3070 - 1966 part-II as applicable. The lightening arrestors system shall confirm to Rule 92 of IE Rule.

#### 4.2.5 Service Connection by Underground Cables:

The service cables from an overhead distribution live shall be fixed to the support with 2 No's of clamp of M.S. flat size 50mm x 6mm. This shall be protected upto a height of 3m from ground level by a G.I. pipe of adequate size clamped to the support with 2 No's of flats of size 50mm x 6mm. The cable shall be laid through pipes while crossing roads, pavements, masonry etc.

#### 4.2.6 ACSR Conductors

Conductors shall be of the following types.

Aluminum conductor steel reinforced (ACSR) This shall comply with the requirements of I.S. 398 - 1961.

The physical and electrical properties of the above conductors shall be in accordance with the specifications as per IS. These conductors shall have a breaking strength of not less than 350kg.

Necessary precautions during storage and handling shall be taken to avoid damage to the conductors.

#### 4.2.7 Testing

All panel boards, switch boards, transformers, over head lines, cables, switches, main switch boards, shall be properly tested with mugger, test lamps for voltage, Insulation, and values shall be submitted to site electrical Engineer before commissioning pressure test of approximate standard shall be carried out on equipment, on overhead lines, cable panel boards etc.

The H.T. side of transformers shall be tested with 1000V mugger and L.T. side of equipment, overhead lines, cables with 500V mugger. The earth pits shall be tested with earth mugger. All results shall be carried out at site in presence of electrical Engineer and report shall be submitted to him in triplicate and also to the consultant.

All test certificates Transformers, main panel boards, main switch boards, cables, overhead lines, sub distribution boards shall be supplied in triplicate to the site electrical Engineer as well as to consultant. All meters shall be properly working without damages.

#### 4.2.8 Commissioning

All the equipment, transformers, cables, panel boards, overhead lines can be commissioned only after the pressure/mugger tests are found satisfactory. The equipment, cables, overhead lines, panel boards, transformer etc shall be energized in presence of Engineer and consultant after satisfactory presence/mugger tests.

### 4.3 Contractor

The contractor for electrical works executing substations, earthing, transformers, lighting shall hold valid class 'A' license issued by Andhra Pradesh electrical licensing board and he should submit his license copy and his previous experiences along with the tenders and also before commencement of work. The contractor shall quote and employ the number of electrical engineers, supervisors, wiremen in his position for such type of works, who are processing necessary permits/certificates/licenses.

Liquidated damages will be levied in case of failure to complete the job in time as per standard clauses.

The contractor shall be able to read the drawings and prepare the drawings as per site conditions and any modifications necessary for submissions to the electrical inspector.

The contractor shall have liaison with APSEB officials and electrical inspectors, get the drawings and installations approved and also getting power supply released from APTRANSCO.

It is complete responsibility of the contractor to get the electrical inspector's approval, including and getting power supply. He should have good liaison with APTRANSCO.

The contractor can strictly follow the drawings and specifications for carrying out the works and he can get clarifications from site Engineer or Consultant in case of doubt. The contractor shall submit three copies of drawings for conduit routing inside the building, which he is going to carry out and submit one copy to consultant and two copies to client. This also includes the point wiring, telephone point conduit and power plug wiring conduit for each building before starting of the civil works at least one week in advance for verification by client and consultant. The contractor shall also give the total quantity of various conduit to be used in each building before starting work as well the quantity of various wires to be used for each building.

The contractor should plan properly for all electrical material and works entrusted to him 15 days in advance and in form the Engineer in charge and consultant about his work progress. He should co-ordinate with civil persons for recessed conduct laying and also switch boards recessed fixing and any other electrical work associated with civil works as well as electrical Engineer at site and electrical consultant for his works.

### 4.4 Standards for Electrical Equipment

4.4.1 Unless other wise stipulated in this specification, all equipment or material covered under this specifications shall be designed, manufactured and tested in accordance with the latest standards of Indian Standard's specifications.

4.4.2 All equipment shall conform to latest Indian electricity Rules, Indian electricity act and Indian Insurance rules as regard safety, earthing and other essential provisions specified in for installation and operation of electrical equipments.

4.4.3 Extreme care shall be taken to make enclosures for switch gears proof against rodents, lizards and other creeping vermin.

4.4.4 Continuity of power supply is to be given maximum consideration and the design of the equipment shall be such as to simplify inspection maintenance and testing at site. The design shall include all reasonable precautions and provisions for safety of operating personnel and maintenance personnel.

4.5 COMPLETETION CERTIFICATE :

4.5.1 After completion of the work the contractor should submit completion certificate in the following format :

I/We certify that the installation detailed below has been installed by me/us and tested and that to the best of my/our knowledge and belief, it complies with Indian Electricity Rules 1956.

Electrical installation at .....

Voltage and system of supply .....

Particulars of Works :

- a) Internal Electrical Installation.
 

	No.	Total Load	Type of system of wiring	
i)	Light point			
ii)	Fan point			
iii)	Plug point			
	3-pin 5 A			
	3-pin 15 A.			
	b) Others	Description	hp/kW	Type of starting
1)	Motors :			
	i)			
	ii)			
	iii)			
2)	Other plants :			
- c) If the work involves installations of over head line and/or underground cable.
  - 1)
    - i) Type and description of overhead line
    - ii) Total length and No. of spans
    - iii) No. of street lights and its description.
  - 2)
    - i) Total length of underground cable and its size
    - ii) No. of joints :
      - End joint :
      - Tee Joint :
      - Straight through joint :

Eating :

- i) Description of earthing electrode
- ii) No. of earth electrodes
- iii) Size of main earth lead

Test Results :

- a) Insulation Resistance
  - i) Insulation resistance of the whole system of conductors to earth .....Megohms.
  - ii) Insulation resistance between the phase conductor and neutral.  
Between phase R and neutral .....Megohms.  
Between phase Y and neutral .....Megohms.  
Between phase B and neutral .....Megohms.
  - iii) Insulation resistance between the phase conductors  
Between phase R and neutral .....Megohms.  
Between phase Y and neutral .....Megohms.  
Between phase B and neutral .....Megohms.
- b) Polarity test :  
Polarity of non-linked single pole branch switches.
- c) Earth continuity test :  
Maximum resistance between any point in the earth continuity conductor including metal conduits and main earthlinglead ..... Ohms.
- d) Earth electrode resistance :  
Resistance of each earth electrode.
  - i) ..... Ohms.
  - ii) ..... Ohms.
  - iii) ..... Ohms.
  - iv) ..... Ohms.
- e) Lightning protective system.  
Resistance of the whole of lightning protective system of earth before any bonding is effected with earth electrode and metal in/on the structure ..... Ohms.

Signature of the Supervisor  
Name and Address

.....  
.....  
.....

Signature of Contractor  
Name and Address

.....  
.....  
.....

## DRAWINGS

- 1.0 DRAWINGS:
- 1.1 The plans enclosed with the tender are only for tender purpose and liable to be altered during execution of work as per necessity of site conditions. The premium quoted by the contractor for various items shall hold good for execution of work even with altered plans.
- 1.2 One set of drawings, on the basis of which actual execution of the work is to proceed shall be furnished free of cost to the contractor by the Superintending Engineer / Executive Engineer progressively according to the work program submitted by the contractor and accepted by the Superintending Engineer / Executive Engineer. Drawings for any particular activity shall be issued to the contractor at least 30 days in advance of the scheduled date of the start of the activity. However, no extra claims by the contractor toward any delay in issue of drawing or issue of any revision / change to the drawings issued earlier shall be

admissible. The Superintending Engineer shall intimate the contractor 7 days in advance regarding any delay to issue of drawings, for any particular stage of works. If work gets effected due to delay in issue of drawings, for any particular stage of work the contractor shall be granted extension of time as per clause No. 27 of General Conditions of Contract.

1.3 Signed drawings above shall not be deemed to be an order for work unless they entered in the agreement and schedule of drawings under proper alterations has been sent to the contractor by the Engineer-in-charge with a covering letter confirming that the drawing is authority for work in contract.

2.0 DISCREPANCIES:

2.1 In case of discrepancies between documents the following order of procedure shall apply:-

2.1.1 Between the written description of written dimensions in the drawings and the corresponding one in the specifications, the latter shall apply.

2.1.2 Figured dimensions shall supersede scaled dimensions. The drawings on a larger scale shall take precedence over those on a smaller scale.

2.1.3 Drawings issued as construction drawings from time to time shall supersede tender drawings and also the correspondence drawings previously issued.

Note: The contractor should not execute any component of work without obtaining the working drawings. Any work done without drawings shall be at the contractors responsibility only in the absence of any written order from the Engineer-in-Charge. Acceptance for such work will be at the discretion of the Engineer-in-charge.

3.0 SECRECY CLAUSE:

The drawings and specifications made available to the tenderer shall exclusively be used on the work and they are retained from passing on each plan to any unauthorized hand either in parts or in full under the provisions of Section-3 and 5 of the official secrets Act 1923. Any violation in this regard will entail suitable action under appropriate clause or official secret Act 1923.

BILL OF QUANTITIES  
AND  
PRICE BID  
(Schedule – A)

**NAME OF WORK:Providing Electrification for Hostel, Tutorial and Dining Hall Blocks, IIT Srikakulam, S.M.Puram, Srikakulam (Dist).**

**BILL OF QUANTITIES**

**PREAMBLE**

1. The Bill of Quantities shall be read in conjunction with the instructions to Tenderers, General and Special conditions of Contract Technical Specifications and Drawings.
2. The quantities given in the Bill of Quantities are estimated and provisional and are given to provide common basis for tendering. *The quantities here given are those upon which the lumpsum tender cost of the work is based but they are subject to alterations, omissions, deductions or additions as provided for in the conditions of this contract and do not necessarily show the actual quantities of work to be done.* The basis of payment will be actual quantities of work ordered and carried out as measured by the Contractor and verified by the Engineer and valued at the estimate rate plus or minus tender percentage quoted in the Bill of Quantities where applicable, and otherwise at such rates and prices as the Engineer-in-Charge may fix within the terms of Contract.
3. The estimate rates in the Bill of Quantities shall, except in so-far as it is otherwise provided under the Contract include cost of all constructional material, labour, machinery, transportation, erection, maintenance, profit, taxes and duties together with all general risks, liabilities and obligations set out or implied in the Contract.
4. The plans enclosed with the tender are liable to be altered during execution of work as per necessity of site conditions. The Tender percentage quoted by the tenderer shall hold good for execution of work even with altered plans.
5. The whole cost of complying with the provisions of the Contract shall be included in the estimated rates for items provided in the Bill of Quantities and where no items are provided in the Bill of Quantities, their cost shall be deemed to be distributed among the estimate rates entered for the related items of work.
6. General directions and descriptions of work and materials are not necessarily repeated nor summarized in the Bill of Quantities. References to the relevant sections of the Contract documentation shall be made before entering estimate rate against each item in the Bill of Quantities.
7. The method of measurements of completed work for payment shall be in accordance with the relevant B.I.S. Codes & A. P. S. Specifications.
8. All items of work are to be executed as per the drawings / specifications supplied with the contract documents.  
  
If there is any contradiction between the drawings and the text of the specifications, the later shall prevail.
9. The Tenderer should inspect and select the quarries of his choice before he quotes the tender percentage in the Schedule of Bill of Quantities and satisfy himself about the availability of required quantum of materials.
10. Diversion drains should be excavated before completion of the embankments and the useful soils should be used in the nearby embankments.

11. The actual mix proportion by weight to be adopted during execution will be got designed in the laboratories to suit the grade of concrete and mortar to be used. It will be the responsibility of the contractor to manufacture concrete and mortar of required strength.
12. The quantum of measurement for all items of earthwork involving conveyance manually or by machinery shall be as assessed by level measurement. The measurements for the embankment will be for the consolidated banks only.
13. Wherever manual dewatering is involved either for excavation or for foundations or for constructions, the same will have to be carried out by the agency at no extra cost, since the agreement rates are inclusive of dewatering charges.
14. Wherever embankment work is involved, useful soils approved by the Engineer-in-Charge from the cutting reaches and diversion drains shall be taken and used for forming nearby embankments soils used for constructions will be at free of cost.
15. The quoted tender percentage shall also include the work of any kind necessary for the due and satisfactory construction, completion and maintenance of the works according to the drawings and these specifications and further drawings and orders that may be issued by the Engineer-in-Charge from time to time. The quoted tender percentage shall include compliance by the Contractor with all the general conditions of contract, whether specifically mentioned or not in the various clauses of these specifications, all materials, machinery, plant, equipment, tools, fuel, water, strutting, timbering, transport, offices, stores, workshop staff, labour and the provision of proper and sufficient protective works, diversions, temporary fencing and lighting. It shall also include safety of workers, first aid equipments suitable accommodation for the staff and workmen, with adequate sanitary arrangements, the effecting and maintenance of all insurances, the payment of all wages, salaries, fees, royalties / Taxes, duties or other charges arising out of the execution of works and the regular clearance of rubbish, reinstatement and clearing-up of the site as may be required on completion of works safety of the public and protection of the works and adjoining land. The work of Building in quality control / assurance shall be deemed to be covered in the quoted percentage.
16. The Contractor shall ensure that, the quoted tender percentage shall cover all stages of work such as setting out, selection of materials, selection of construction methods, selection of equipment and plant, deployment of personnel and supervisory staff, quality control testing etc. The work quality assurance shall be deemed to be covered in the tender percentage.
17.
  - a) The special attention of the tenderer is drawn to the conditions in the tender notices wherein reference has been made to the Andhra Pradesh Standard Specifications [APSS] and the Standard preliminary specifications containing therein. These preliminary specifications shall apply to the agreement to be entered into between the contractor and the Government of Andhra Pradesh and shall form an in-separable condition of the contract along with the estimate. All these documents taken together shall be deemed to form one contract and shall be complimentary to another.
  - b) The tenderer shall carefully study the drawings and additional specifications and all the documents, which form part of the agreement to be entered into by the successful tenderer. The APSS and other documents connected with contract such as estimate plans, specifications, can be seen on all

working days in the office of the Superintending Engineer, APMSIDC, APMSIDC Circle, Guntur

18. The tenderers attention is directed to requirements for materials under the clause 'materials and workmanship' in the preliminary specifications of APSS. Materials conforming to the Bureau of Indian Standards specifications, APSS etc., shall be used on the work and the tenderers shall quote his overall tender percentage accordingly.
19. The tenderer has to do his own testing of materials and satisfy himself that they conform to the specifications of respective I.S.I. Codes before tendering.
20. The contractor shall himself procure the required construction materials of approved quality including the earth for formation of embankment and water from quarries / sources of his choice. All such quarries / sources of materials required for the work shall be got approved by the Engineer-in-Charge in writing well before their use of the work.
21. The contractor shall himself procure the steel, cement, Bitumen, Blasting materials, sand, metal, soils, etc., and such other materials required for the work well in advance. The contractor has to bear the cost of materials for conveyance. The department will not take any responsibility for fluctuations in market in cost of the materials, transportation and for loss of materials etc.
22. Inspection of site and quarries by the tenderer: Every tenderer is expected before quoting his overall tender percentage, to inspect the site of proposed work. He should also inspect the quarries and satisfy himself about the quality, and availability of materials. The best class of materials to be obtained from quarries, or other sources shall be used on the work. In every case the materials must comply with the relevant standard specifications. Samples of materials as called for in the standard specifications or in this tender notice, or as required by the Engineer-in-charge, in any case, shall be submitted for the Engineer-in-charge's approval before the supply to site of work is begun.
23. The tenderer's particular attention is drawn to the sections and clauses in the A.P. standard specification dealing with
  - a) Test, inspection and rejection of defective materials and work.
  - b) Carriage
  - c) Construction plant
  - d) Water and lighting
  - e) Cleaning up during the progress and for delivery.
  - f) Accidents
  - g) Delays
  - h) Particulars of payments.

The contractor should closely peruse all the specification clauses, which govern the overall tender percentage he is tendering.

24. The defect liability period of contract is twenty four months plus defects correction period.
25. The estimate rates for items shown in the Schedule "A" include all construction materials. No escalation in rates will be paid unless specified in the tender document. The tenderer has to quote an overall tender percentage considering all

the aspects of the tender to complete the finished item of work as per the APSS / B.I.S. specifications, the special specifications appended, Drawings etc.

26. If there is any contradiction between APSS and B.I.S. specifications, listed and detailed technical specifications, the latter shall prevail.
27. In case of a job for which specifications are not available with the Schedule or in APSS / B.I.S. code and are required to be prescribed, such work shall be carried out in accordance with the written instructions of the Engineer-in-charge.
28. The contractor should use the excavated useful soils and stone for construction purpose. Soils used for construction either for homogeneous section in hearting or in casing zone based on the suitability will be at free of cost and the cost of stone used for construction purpose will be recovered from the contractors bill.

The contractor should quote his tender percentage keeping in view of the above aspects.

29. Additions and alternations by the Tenderer in the Schedule of quantities will disqualify the tender.

In the case of discrepancies between the written description of the item in the bill of quantities (Schedule "A") and the detailed description in the specification of the same item, the later shall be adopted

30. The Unit rates noted below are those governing payment of extras or deductions for omissions according to the conditions of the contract as set-forth in the preliminary specifications of the A.P. standard specifications and other conditions of specification of this contract.
31. It is to be expressly understood that the measured work is to be taken according to the actual quantities when in place and finished according to the drawings or as may be ordered from time to time by the Executive Engineer and the cost calculated by measurement or weight at their respective rates without any additional charge for any necessary or contingent works connected works connected herewith. The Percentage Excess or less on ECV quoted are for works in situ and complete in every respect.
32. For all items of work in excess of the quantities indicated the rates payable for such excess quantities will be tendered rates i.e., estimate rates plus or minus tender percentage.
33. For all items of work, intermediate payment will be made provisionally as per relevant clause. Full-accepted agreement rates will be paid only after all the items of works are completed.
34. The contractor is bound to execute all supplemental works that are found essential incidental and inevitable during execution of main work.
35. The payment of rates for supplement items of work will be regulated as under.

36 a) Supplemental items directly deductible from similar items in the original agreement.

36.b) The rates shall be derived by adding to or subtracting from the agreement rate of such similar item the cost of the difference in the quantity of materials labour between the new items and similar items in the agreement worked out with reference to the schedule of rates adopted in the sanctioned estimate with which the tenders are accepted plus or minus overall tender percentage.

c) Similar items but the rates of which cannot be directly deducted from the original agreement.

e) Purely new items which do not correspond to any item in the agreement.

The rate of all such items shall be estimated rates plus or minus overall tender percentage.

36 Extra Items:

36.1 Extra items of work shall not vitiate the contract. The contractor shall be bound to execute extra items of work as directed by the Engineer-in-Charge. The rates for extra items shall be worked out by the Engineer-in-charge as per the conditions of the Contract and the same are binding on the Contractor.

36.2 The contractor shall before the 15<sup>th</sup> day of each month, submit in writing to the Engineer-in-charge a statement of extra items if any that they have executed during the preceding month failing which the contractor shall not be entitled to claim any.

37 Entrustment of additional items:

37.1 Where ever additional items not contingent on the main work and outside the scope of original agreement are to be entrusted to the original contractor dispensing with bids and if the value of such items exceeds the limits upto which the officer is empowered to entrust works initially to contractor without calling for tenders, approval of competent authority shall be obtained. Entrustment of such items on nomination shall be at rates not exceeding the estimated rates.

37.2 Entrustment of the additional items contingent on the main work will be authorized by the officers upto the monetary limits upto which they themselves are competent to accept items in the original agreement so long as the total amounts upto which they are competent to accept in an original agreement rates for such items shall be worked out in accordance with the procedure - For all items of work in excess of the quantities shown in the Bill of Quantities of the Tenders, the rate payable for such items shall be estimate rates for the items (+) or (-) over all tender percentage accepted by the competent authority.

37.3 Entrustment of either the additional or supplemental items shall be subject to the provisions under para 176 (B) of APWD Code, the items shall not be ordered by an officer on his own responsibility if the revised estimate or deviation statement providing for the same requires the sanction of competent authority. The Superintending Engineer who entered into the agreement approves the rate for the items / variation in quantity in the current agreement.

Note: It may be noted that the term estimate rate used above means the rate in the sanctioned estimate with which the tender's compared or if no such rate is available in the estimate the rate derived will be with reference to the schedule of rates adopted in the sanctioned estimate with which tenders are compared.

BILL OF QUANTITIES

SCHEDULE -A PART - I

**NAME OF WORK: Providing Electrification for Hostel, Tutorial and Dining Hall Blocks, IIT Srikakulam, S.M.Puram, Srikakulam (Dist).**

S.No	Approximate Quantity In figures/ words	Description of work	Unit In figures / words	Estimate Rate In figures / words	Amount inRs.
		Schedule - A (PART- I )Enclosed			

Schedule - B  
List of Drawings

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S.No.	Drawing No.	Description
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- Enclosed -

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DECLARATION

I/We hereby declare that I / We have inspected and satisfied myself / ourselves thoroughly and I / We am / are conversant with the local conditions, regarding all materials and about required for the work on which I / We have based my / our rates for the work. The Specifications, Plans, Designs and conditions of contract on which the offer has been based completely studied by me / us before submitting the tender.

TENDERER

SCHEDULE - C  
LIST OF I.S. CODES FOR ELECTRICAL INSTALLATIONS  
INSTALLATIONS

1.	Electrical wiring installation (system voltage not exceeding 650 V)	IS 732-1989
2.	Graphical symbols used in Electro-technology art-XI-Electrical Installation buildings.	IS 2032-1969
3.	Fire safety of building (General) Electrical Installation	IS 1646-1961
4.	PVC Insulated cables	IS 694-1977
5.	PVC Insulated cables (heavy duty)	IS 1554-1964
6.	5 A tumbler switches	IS 1087
7.	15A tumbler switches	IS 2120
8.	3 Pin plugs and sockets	IS 1293
9.	Aluminum conductors for insulated cables	IS 1753-1967
10.	Recommended current ratings for cables	IS 1961-1967
11.	Installation and maintenance of paper insulated power cables	IS 1155-1967
12.	Earthing	IS 3043-1966
13.	Rigid steel conduits for electrical wiring	IS 9537-P1I-1989
14.	Fittings for electrical wiring	IS 2667-1964
15.	Flexible steel conduits electrical wiring	IS 3430-1966
16.	Accessories for rigid steel conduit insulated cables	IS 3837-1966
17.	A C circuit breakers	IS 2516-1977
18.	Heavy duty air break switches and fuses for voltage not exceeding 1000V	IS 4047-1967
19.	11 KV XLPE cables	IS 7089-part-II
20.	Fuses	IS 9224-p-I & II
21.	Current Transformers	IS 2705
22.	Voltage Transformers	IS 3516
23.	Indicating Instruments	IS 1248
24.	Relays	IS IS - 722
25.	Integrating instruments	IS IS - 3231
26.	Auxiliary contracts	IS 2959
27.	Auxiliary switches and push buttons	IS 6875

28.	A C isolators and earthing switches	IS 1818-1972
29.	Central gear for voltage not exceeding 1000 V	IS 4337-1967
30.	Installation and maintenance of switchgear	IS 3072-1965
31.	Enclosed distribution fuse board and cutouts for voltage 100 V	IS 2675-1964
32.	Air break isolators for voltage 1000 V	IS 2607-1976
33.	Marking alignment or switchgear bushes main Connections and auxiliary wiring	IS 375-1963
34.	Selection installation and maintenance of fuses (Voltages not exceeding 650 V)	IS 3106-1966
35.	General and safety requirements for electric Lighting fittings	IS 1913-1969
36.	Lighting public thorough fares	IS 1944-1970
37.	Waterproof electric lighting fitting	IS 3528-1966
38.	Water tight electric lighting fittings	IS 3553-1966
39.	Luminaries for street lighting	IS 2149-1970
40.	Mild steel tubular and other wrought steel pipe fittings	IS 1239-1968
41.	Ceiling fans	IS 374-1951
42.	Transformers	IS 2026-1962
43.	Installation and commissioning of transformers	IS 1886-1967
44.	Protecting of buildings and allied structures against lightning	IS 2309-1967
45.	Interior Illumination	IS 3636-1966
46.	Bus bar ratings	IS 8084-1976
47.	On load change over switches	IS 4064-1978
48.	Aluminum alloy for bus bars	IS 5082
49.	Factory built assemblies of switchgear and control gear	IS 8623
50.	General requirements of switchgear and control gear for voltages not exceeding 1000 V.	IS 4237
51.	Degree of protection provided by enclosing for low voltage switchgear	IS 2147

## LIST OF APPROVED MAKES OF ELECTRICAL MATERIALS

Descriptions	Make
1. Annealed copper conductor, PVC insulated, 1100 volts grade flexible copper cables manufactured to IS-694	Q-Flex, Nicco, Finolex, Pawancab Anchor, Havells, RPG, with FR & ISI marking.
2. PVC insulated aluminum conductor, PVC sheathed, Armored Underground cables to IS 1554-Part-I-1976 or latest revision.	Universal, ICC, CCI, Nicco, Pawan cab, Havells, Suncab with ISI marking.
3. M.S. screw type black enameled conduit pipes manufactured as per IS 9538-part-II 1981 or latest revision.	Gupta Brothers, Supreme, Sunce, Adarsh, BCG, Bharat
4. M.S. Boxes	Make out of 16 SWG sheet steel.
5. Flush type deluxe piano marked switches & ISI marked.	Anchor, Leader, Maru with I.S.I marked
6. 3 Plate ceiling Roses ISI marked.	Anchor, Leader, Maru with I.S.I. marked
7. 5 A 3 pin / 2 pin socket & 15 A/5A 3 pin power plug sockets of flush type switches.	Anchor, Leader, Maru with ISI marked
8. Bell pushes	Anchor, Leader, Maru with I.S.I. marked
9. MCB, MCCBs, MCB distribution Boards	Standard/Havells/MDS/ Indo-Copp/L&T.
10. Switch Fuse Unit	L&T /English Electric/ Siemens/Hovels/HPL /standard.
11. Distribution Fuse Board Type 5N 100 TNG E.E. or equipment.	English Electric/Larsen Toubro/ Siemens/Havells/HPL

- |     |  |   |
|-----|--|---|
| 12. | Energy saving model 28Watts with Electronic Choke & Ordinary 40W tube.       | Unit: Trinic<br>Tube: Philips/Wipro/Crompton.                                       |
| 13. | Ceiling Fans   | Crompton Greaves/Polar/<br>Orient/Bajaj with ISI marked & DGS & D<br>approved model |
| 14. | Exhaust fans : Heavy & Light duty  | Crompton Greaves/Orient<br>Polar/Bajaj  |
| 15. | Post top Lanterns, street light fixtures, Bulk head fittings, Halogen Lamps. | Philips/Crompton greaves/Bajaj /<br>Havell's  |
| 16. | Transformers   | ETE/HINT/VOLTAMPS/Vijay<br>Electricals /HIT/APTransco approved makes.               |
| 17. | Pump sets  | Kirloskar/Crompton Greaves\Texmo\Best/<br>Calama                                    |

**SCHEDULE OF TECHNICAL PARTICULARS  
FOR FIRE FIGHTING**

**MANUAL CALL POINTS:**

Make : Globe / Safeway

Material of body : M.S.

Thickness of body : 1.5 mm

Material of frangible element : Safex make Safety glass (if broken it will be of diamond bits)

Contact making/breaking for alarm : Breaking

Overall dimensions : 100mm x 100mm

Size of frangible element : 70mm x 70mm

**ELECTRONIC HOOTER:**

Make : Safeway / Globe

Material of body : M.S.

Thickness of body : 16 guage

**DETECTOR - IONISATION TYPE SMOKE DETECTOR:**

Make : Devidayal / Mather & Platt / Styntics

Type : Ionization Type smoke detector

Specification : IS 11360 - 1985

Type of radio active material and qty. (for Ionization detectors only) : Americal 241 less than 0.9 Micro curies.

Voltage and range : 24 V DC 20-30 V

**MAIN CONTROL PANEL:**

Make : Globe / Safeway

Type : Wall mounting, cable entry from bottom

Overall dimensions : 500 x 350 x 180mm

Thickness of body : 16 Swg

Electrical/Electronic in operation : Electronic (Solid State CMOS-Circuitry)

Power Consumption : 2 Amps Maximum

AC Voltage at input: Single phase 50 Hz 230 V ± 5%

DC Voltage for system operation : 24 Volts

Type of Indicator Lamps : LED

**BATTERY UNIT**

Make : Exide / Amco / Standard.

Type : Lead Acid

Voltage : 2 x 12 Volts

AH Capacity : Calculation of the AD to be given along with the design of the system.

## ARTICLES OF AGREEMENT

Articles of Agreement made this \_\_\_\_\_ day of \_\_\_\_\_ 2017 between the Administrative Officer, IIIT Srikakulam, RGUKT- A.P. (here-in-after called the Superintending Engineer which expression shall, where the context so admits include his successors in Office and assignees) of the one part and \_\_\_\_\_ (here-in-after called the Contractor which expression shall where the context so admits include his heirs, executors, administrators and legal representatives) of the other part.

WHEREAS IIIT Srikakulam, RGUKT-A.P, (herein after called the IIIT Srikakulam Institute ) are desirous of **Providing Electrification for Hostel, Tutorial and Dining Hall Blocks, IIIT Srikakulam, S.M.Puram, Srikakulam (Dist)** and have caused an estimate of probable quantities contained in Schedule A, drawings and specifications describing the work to be done.

AND whereas the said Schedule A, drawings numbered serially from \_\_\_\_\_ (Schedule B) and the specifications (Schedule C) have been signed by the parties hereto.

And whereas the contractor has agreed to the Retention by the Corporation the Earnest Money of Rs. \_\_\_\_\_ paid by him as security for the due fulfillment of the contract to the satisfaction of the Administrative Officer, IIIT Srikakulam (herein after called the AO, IIIT Srikakulam, RGUKT-A.P).

AND whereas the contractor has also signed the copy of the AP Standard Specifications and addenda Volume thereto maintained by the authority who registered him/them in the appropriate class in acknowledgement of being bound by all conditions of the clauses of the Standard Preliminary Specifications for Items of work described by a Standard Specification Number in Schedule-A in addition to having signed the "Tenderers" and Contractor certificate in acknowledgement of being bound by all the conditions of the Standard Preliminary Specifications and all the Standard Specifications for item of work, described by the Standard Specification Number in Schedule A.

AND whereas the contractor has agreed to execute upon and subject to the conditions set forth in the preliminary specification of the Andhra Pradesh Detailed Standard Specifications and such other conditions as are contained in all the specifications forming part of this contract (herein after referred to as the said conditions) the works shown upon the drawings and described in the said specifications and set forth in Schedule A as the "Probable quantities" and comply with the rate of progress noted at the end of this Articles of Agreement for a sum of \_\_\_\_\_ or such other sum as may be arrived at under the Clauses of the

Standard Preliminary Specifications relating to payment on lump sum basis or by final measurement at unit prices.

**NOW IT IS HEREBY AGREED AS FOLLOWS**

In consideration of the payment of the said sum of \_\_\_\_\_ or such other sum as may be arrived at under the clauses of the Standard Preliminary Specifications relating to payment on lump sum basis or by final measurement at unit price, the contractor will, subject to the said conditions, execute and complete the works shown upon the said drawings and described in the said specifications and to the extent of probable quantities shown in the Schedule 'A' with such variations by way of alterations additions to, or deductions from, the said works and method of payment there of as are provided for the said conditions.

The term Administrative Officer in the said conditions shall mean the officer of the Institute in charge of the Division having jurisdiction for the time being over the work, who shall be competent to exercise all the powers and privileges reserved herein in favour of the Corporation with the previous sanction of or subject to ratification by the Executive Committee of the Institute in cases where such sanctions or ratification may be necessary.

The plans, agreement and documents above mentioned shall form the basis of this contract and the decision of the said Administrative Officer as to the materials, workmanship and to the intended interpretation of clauses of the Agreement or any other document attached here to shall be final and binding on both parties.

The said contract comprises the building work mentioned above and all subsidiary works connected there with within the same site as may be ordered to be done from time to time by the said Administrative Officer, even though such works may not be shown on the drawing or described in the said specifications of the priced schedule of quantities.

The Director through the Administrative Officer reserves to himself the right of altering the drawings and nature of the work and adding or omitting from any items of work or of having portions of the same carried out departmentally or otherwise and such alterations or variations shall be carried out without prejudice to this contract.

If at any time after the commencement of the work, the Director for any reason whatsoever does not require the while thereof as specified in the tender to be carried out the Administrative Officer / Director shall give notice in writing of the fact of the Contractor who shall have no claim to any payment of compensation whatsoever on account of any profit or advantage which he might have derived from the execution of the work in full but which he did not derive in consequences of the full amount of the work not having been carried out, neither shall he have any claim for compensation by reason of any alterations having been made in the

original specifications, drawings designs and instructions which shall involve any curtailment of the work as originally contemplated.

Time shall be considered as essence of the Agreement and the contractor hereby agrees to commence the work as soon as his Agreement is accepted by the Superintending Engineer and the site (or premises) is handed over to him as provided for in the said conditions and agrees to complete the work within the period of 1 Months from the date of such handing over of the site (or premises) and to show progress as defined in the tabular statement Rate of progress, subject nevertheless to the provisions for extension of time contained in Clause 59 of the Standard Preliminary Specifications.

The Arbitrator for fulfilling the duties set forth in the arbitration clauses of the standard preliminary specifications shall be as defined with tender conditions vide item No.22 of conditions of contract (A. General) enclosed to the contract.

The said conditions shall be read and construed as forming part of the agreement and the parties here to respectively abide by and submit themselves to the conditions and stipulations and perform the agreement in their parties respectively.

Upon the terms and conditions of this agreement being fulfilled and performed to the satisfaction of the corporation, the balance amount including any deposit of the contractor shall be returned after the expiry of liability period i.e. 24 months + defects correction period after virtual completion of work as per drawings and tender conditions.

Payment will be made to the contractor under the certificate to be issued at reasonably frequent intervals by the Institute Engineer/University Engineer. Intermediate payments will be made by the Administrative Officer of a sum equal to 92 ½ percent of the value of work as so certified and the balance of 7 ½ percent will be withheld and retained as a security for the due fulfillment of the contract. Under the certificate to be issued by the Executive Engineer on the completion of the entire work, the contractor will receive final payment of all the money due or payable to him under or by virtue of the contract except EMD retained as security and a sum equal to 2 ½ percent of the total value of the work done provided there is no recovery from or forfeiture to be made under clause 60 of the PS to APSS. The amount with held from the final bill will be retained under "Deposits" and paid to the contractor together with the EMD retained as security after a period of 24 months after all defects shall have been made good according to the true intent and meaning thereof.

Under provisions of sections 194 (c) add in the Income Tax Act under the Finance Bill two point two percent out of each and every payment made to the contractor will be deducted towards Income Tax at source to be credited to the Income Tax Department and necessary certificates will be issued to the contractor.

All disputes arising out or in any way connected with this agreement shall be deemed to have arisen in Vijayawada and only the court in Vijayawada city shall have jurisdiction to determine the same.

In witness whereof the \_\_\_\_\_ has here into set his hands and Director, IIIT Srikakulam, RGUKT-A.P on behalf of and by the order and direction of the Corporation has here up to set his hand the day and year first above written.

Signature of the Contractor \_\_\_\_\_

Address:

PRICE BID

NAME OF WORK:**Providing Electrification for Hostel, Tutorial and Dining Hall Blocks, IIT Srikakulam, S.M.Puram, Srikakulam (Dist).**

**Estimated contract value (in figures & words): Rs.44841669/-**

[RUPEES FOUR CORES FORTY EIGHT LAKHS FORTY ONE THOUSAND SIXTEEN HUNDRED AND SIXTY NINE ONLY]

I, \_\_\_\_\_ do hereby express my willingness to execute the aforesaid work as per the conditions, standards, specifications, rules, regulations, etc., stipulated in the tender documents.

- a) at an overall tender percentage of \_\_\_\_\_% (in figures)\_\_\_\_\_percentage (in words) on estimated value.

SIGNATURE, NAME OF THE TENDERER / AUTHORISED SIGNATORY.