भारत सरकार

GOVERNMENT OF INDIA

केन्द्रीय लोक निर्माण विभाग

CENTRAL PUBLIC WORKS DEPARTMENT

कार्यपालक अभियंता (वैधूत)- कोच्ची का कार्यालय

Office of the Executive Engineer (E) – Kochi,
CPWD, Kochi / के. लो. नि. वि, कोच्ची

निविदा आंमत्रण सूचना
NOTICE INVITING TENDER

सूचकांक/INDEX

Name of Work : **SITC of Audio Visual system for Auditorium and Exhibition room in Independent new building for CMET, Athani, Thrissur, Kerala.**

S. No.	Particulars	Pages
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3.	भाग 'ग' /PART – C SCHEDULE OF QUANTITIES	108 to 124
4.	भाग 'घ' /PART – D MISCELLANEOUS Applicable GCC 2023 (Construction) with Correction slips issued upto the last date of submission of bid	Available on CPWD Web site (www.cpwd.gov.in)

Certified that this NIT contains page 1 to page 124 including this index page. Further certified that this NIT contains printed matter only and there is no correction/insertion/addition/deletion in it.

PART -A

INFORMATIONS AND INSTRUCTIONS FOR CONTRACTORS FOR e-TENDERING, CPWD-6 AND 7, SCHEDULE A TO F

INFORMATION AND INSTRUCTIONS FOR CONTRACTORS FOR e- TENDERING

The **Executive Engineer (Electrical)-Kochi, CPWD, Kendriya Bhavan, Kochi - 682037 (Phone No. 0484-2423729)** on behalf of the President of India invites online bids from **"OEM / Specialized agencies having experience in similar nature of works in two Bid system [(i) Eligibility Bid & (ii) Financial bid]** for the following work :

Sl No.	NIT No.	Name of Work & Location	Estimated Cost put to Bid	Earnest Money	Stipulated Period of Completion of Work	Last date & time of submission of bid, copy of receipt for deposition of original EMD and other document as specified in the NIT	Time & date of opening of Eligibility Bid
1	2	3	4	5	6	7	8
1	49/EE(E)-KOCHI/2026-27	**SITC of Audio Visual system for Auditorium and Exhibition room in Independent new building for CMET, Athani, Thrissur, Kerala.**	**Rs. 60,20,019/-**	**Rs. 1,20,400/-**	**04 (Four) Months**	**24.10.2026 at 15.00Hrs**	**24.10.2026 at 15.30Hrs.**

1. **OEM / Specialized agencies having experience in execution of similar nature of works are also eligible to participate provided they satisfy the laid down eligibility criteria mentioned below**.

(a) Criteria of Eligibility for submission of Bid documents:

Should have successfully completed the works as mentioned below **during the last Seven years** ending the last day of the previous month of submission of bids**.**

Three similar works each costing not less than **Rs. 24.08 Lakhs (40% of ECPT)**

OR

Two similar works each costing not less than **Rs. 36.12 Lakhs (60% of ECPT)**

OR

One similar work costing not less than **Rs. 48.16 Lakhs**. **(80% of ECPT)**

Similar work shall mean works of **"SITC of Audio Visual Systems"**. The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum; calculated from the date of completion to the last day of the previous month of submission of tender.

Completion of work for the purpose of considering experience shall mean completion of entire work in contract and not completion of some portion of the contract even though some portion may be satisfying the magnitude and physical attributes of similar work.

Completion certificates issued should be signed by Office of the Client Department of the rank of Executive Engineer or Equivalent and in case of Private Organization by Managing Director / Proprietor. The completion certificate must clearly indicate the following :

(aa) Date of Completion of Work.

(ab) Nature of work

(ac) That the work has been completed satisfactory

(ad) Completed Valus of the work

(ae) Remarks indicating grant of Extension of Time by the Department if any and penalty if any, levied on this account.

(b) In addition to the above eligibility conditions, OEM / Specialized Agencies should submit the following additional documents.

(i) Should have had Average Annual Financial Turnover of **Rs. 18.06 Lakhs** on similar works during the immediate preceding Three consecutive years ending 31st March 2026. (Scanned copy of Certificate from CA to be uploaded).

(ii) Should not have incurred any loss (profit after tax should be positive) in more than two years during the last five consecutive balance sheets, duly certified and audited by chartered accountants. (The balance sheet in case of Pvt. Ltd/ Public Ltd. Company means it stand alone finance statement and consolidated financial statement both)

(iii) Solvency certificate or Net worth Certificate: Solvency of the amount equal to **Rs. 24.08 Lakhs** or Net worth certificate of minimum **Rs 6.02 Lakhs** issued by certified Chartered Accountant.

(iv) Firms/Contractors who are not blacklisted and/or debarred for its operations at the time of tender submission are not eligible.

2. The intending bidder must read the terms and conditions of **CPWD-6** carefully. He should only submit his bid if he considers himself eligible and he is in possession of all the documents required.

3. The lowest tenderer shall submit along with the performance guarantee after the acceptance of tender, an undertaking from OEM regarding.

a) **The OEM shall un-conditional support the lowest tenderer technically throughout the execution of contract as well as for maintenance/comprehensive maintenance contract for the useful life of the system and shall provide all the spares required for the healthy functioning of the equipment's for at least 7years from the date of successful commissioning of the equipment as per MAF……..**

4. This information and instructions for bidders posted on website shall form part of bid document.

5. The contractor can deposit original EMD either in the office of Executive Engineer inviting bids or division office of any Executive Engineer, CPWD within the period of bid submission. The contractor shall obtain the receipt of EMD from the concerned Executive Engineer (including NIT issuing EE) in the prescribed format uploaded by NIT issuing Executive Engineer. The bid document as uploaded can be viewed and downloaded free of cost by anyone including intending bidder. But the bid can only be submitted after uploading the mandatory scanned documents such as **Insurance Surety Bonds/ Account payee Demand Draft/ Fixed Deposit Receipt (FDR)/ Banker's cheque or Bank Guarantee (as prescribed) issued by a Commercial Bank towards EMD in favour of respective Executive Engineer, copy of receipt of original EMD and other documents specified in the press notice.**

6. The bid document consisting of Plans, Specifications, Schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents can be seen in **office of the Executive Engineer (E),CPWD, Kochi** and downloaded from website **www.etender.cpwd.gov.in**or **www.cpwd.gov.in** free of cost.

Applicants are advised to keep visiting the above mentioned web-sites from time to time (till the deadline for bid submission) for any updates in respect of the tender documents, if any. Failure to do so shall not absolve the applicant of his liabilities to submit the applications complete in all respects including updates thereof, if any. An incomplete application may be liable for rejection.

7. But the bid can only be submitted after deposition of original EMD either in the office of Executive Engineer inviting bids or division office of any Executive Engineer, CPWD within the period of bid submission and uploading the mandatory scanned documents such as Insurance Surety Bonds, Account Payee Demand Draft or Banker's Cheque or Fixed Deposit Receipts or/ and Bank Guarantee (as prescribed) issued by a commercial bank towards EMD **in favour of Executive Engineer, Cochin Central Division, CPWD, Cochin** receipt for deposition of original EMD to division office of any Executive Engineer (including NIT issuing EE/AE), CPWD and other documents as specified..

A part of earnest money (EMD) is acceptable in the form of bank guarantee also. In such cases, 50% of earnest money or Rs. 20 Lakh whichever is less, will have to be deposited in shape prescribed above and balance can be accepted in form of Bank Guarantee issued by a Commercial bank. The bank guarantee submitted as a part of Earnest Money shall be valid for a period of 90 days or more from the date of submission of the tender.

8. Those contractors who are not registered **or have not updated their profile** on the website mentioned above, are required to get registered / **update their profile** beforehand. **The necessary training materials including the videos with step to step process available on download section of https://etender.cpwd.gov.in**

9. The intending bidder must have **valid class-III digital signature certificate with encryption key (Combo type) to perform any operations / transactions on the e-tendering portal / Website and the bidder should download and install the eMsigner on their system as per instructions available on download section of https://etender.cpwd.gov.in**

10. Contractor can upload documents in the form of **JPG** format and **PDF** format. **Bidder should ensure that the document uploaded is legible and full documents page is properly scanned.**

    a) The contractor must ensure to quote rate in the prescribed column(s) meant for quoting rate in figures appears in Yellow colour and the moment rate is entered, it turns sky blue.

    b) Tenderer shall quote the percentage rate above or below two places of decimals only.

    c) The tenderer shall quote only one overall percentage rate above or below on the designated place, which shall be applicable on Civil and E&M components

    In addition to this, while selecting any of the cells a warning appears that if any cell is left blank the same shall be treated as "0" (ZERO). However, if a bidder quotes nil rate, the bid shall be treated as invalid and he will not be considered as lowest bidder

    a) If a tenderer quotes nil rates against each item in item rate tender or does not quote any percentage above/below on the total amount of the tender or any section/sub-head in percentage rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer.

    b) It is mandatory to upload scanned copies of all the documents including GST registration. If documents are not uploaded, then bid will become invalid and shall summarily be rejected.

    c) Please read para – 9 of CPWD-6 for further details.

11. Tenders with any condition including that of conditional rebates shall be rejected forthwith. If any information furnished by the applicant is found incorrect at a later stage, he shall be liable to be debarred from tendering/ taking up of works in CPWD. The Department reserves the right to verify the particulars furnished by the applicant independently.

12. All necessary licenses such as labour license, EPFO and ESI, BOCW welfare registration, etc. (as applicable), shall be taken by contractor within the time limits as prescribed under clause 1 of schedule 'F' and submitted in the O/o Engineer-in-Charge.

13. The Department reserves the right to reject any prospective application without assigning any reason and to restrict the list of qualified contractors to any number deemed suitable by it, if too many bids are received satisfying the laid down criteria.

14. Contractor shall not divert any advance payments or part thereof for any other purpose other than needed for completion of the contracted work. All advance payments received as per terms of the contract (i.e., mobilization, secured against materials brought at site, secured against plant & machinery and / or for work done during interim stages, etc.) are required to

be re-invested in the contracted work to ensure advance availability resources in terms of materials, labour, plant & machinery needed for required pace of progress for timely completion of work.

15. Any dispute arising out of this tender including dispute related to encashment of any Bank Guarantee/ FDR etc., shall be subject to the jurisdiction of courts of Kerala State only.

16. The tenderer should also read the **General Conditions of Contract (GCC) for Construction Works 2023 amended up to date** (available on CPWD above websites), which is available as Govt. of India Publications.

17. If the bidder has not obtained GST Registration as applicable, then he shall scan and upload following undertaking along with other bid documents.

"If work is awarded to me, I/we shall obtain GST registration Certificate, as applicable, within one month from the date of receipt of award letter or before release of any payment by CPWD, whichever is earlier, failing which I/We shall be responsible for any delay in payments which will be due towards me/us on a/c of the work executed and/or for any action taken by CPWD or GST department in this regard."

18. If the bidder does not possess valid electrical license of appropriate voltage / class issued by competent authority, he shall scan and upload the following undertaking along with other bid documents.

"If work is awarded to me, I/we shall either obtain valid electrical license of appropriate voltage/ class issued by competent authority at the time of execution of electrical work or associate with agency possessing valid electrical contractor license of appropriate voltage / class issued by competent authority through which the electrical works will be executed."

19. List of Documents to be filled in by the bidders in various forms to be scanned and uploaded in JPG / PDF format within the period of bid submission:

1. Treasury Challan /Demand Draft/Pay order or Banker`s Cheque /Deposit at Call Receipt/FDR/ Bank Guarantee of any Scheduled Bank (**drawn in favour of Executive Engineer, Cochin Central Division, CPWD, Cochin**) against EMD.

2. Copy of receipt for deposition of original EMD issued from Division Office of any Executive Engineer, CPWD (including NIT issuing EE/AE(P))

3. GST registration Certificate as applicable or undertaking as per Para -17 above

4. Confirmation for Submission of Financial Bid – **Form 'C'** on the firm's letterhead

5. Copy of PAN No. (Permanent Account Number)

6. An undertaking **Form-'D'** (Undertaking regarding not debarred by Govt / Autonomous Body etc) at the time of submission of Tender to be furnished on the firm letterhead.

7. An undertaking **Form-'E'** (Undertaking regarding work not got executed back to back basis) to be furnished on the firm letterhead.

8. Experience / Completion Certificates **Form 'F', 'F-1', 'G'**

9. TDS Certificate for Work done, if experience / completion is claimed on a non-government work.

10. Structure and Organization **Form 'H'**

11. Should have had Average Annual Financial Turnover of **Rs. 18.06 Lakhs** on works during the immediate preceding Three consecutive years ending 31st March 2026. **(Scanned copy of Certificate from CA to be uploaded as per format given in NIT.**

12. Should not have incurred any loss (profit after tax should be positive) in more than two years during the last five consecutive balance sheets ending 31 Mar 2026, duly certified and audited by chartered accountants. (The balance sheet in case of Pvt. Ltd/ Public Ltd. company means it stand alone finance statement and consolidated financial statement both).

13. Solvency certificate or Net worth Certificate: Solvency of the amount equal to **Rs. 24.08 Lakhs** or Net worth certificate of minimum **Rs 6.02 Lakhs** issued by certified Chartered Accountant.

14. Copy of registration with ESI / EPF authorities. In case the intending bidder does not have any registration with the ESI / EPF authorities, but has applied for the same, he shall upload a copy of acknowledgement of the application with these authorities. In case the intending bidder is not covered under the ESI / EPF Acts, he shall upload a self-declaration on his letter head to this effect.

15. Declaration about Site Inspection **Form-'K.**

16. Letter of Transmittal **Form 'M'**

17. The agency other than OEM has to submit the undertaking that he must submit the undertaking from OEM as mentioned in NIT at the time of performance guarantee.

Documents to be submitted at the time of Performance guarantee

1. The Manufacturer's Authorization Form as per Annexure-1 given on Page 22 of this document shall be submitted by the successful bidder along with performance guarantee after the acceptance of tender.

ASSISTANT ENGINEER (E) (P)
O/o EE(E)-Kochi, CPWD, KOCHI

EXECUTIVE ENGINEER (E) - KOCHI
CPWD, KOCHI

ANNEXURE 20A.14
(New Annexure as per DG/MAN/341)

INFORMATION AND INSTRUCTIONS FOR EXECUTIVE ENGINEER for e-TENDERING

The Executive Engineer of all divisions including Division / Sub Division of CPWD should receive the original EMD for tender of other division.

The NIT approving authority/EE at the time of issue of NIT shall also fill and upload the following prescribed format of receipt of deposition of original EMD along with NIT:-

Receipt of deposition of original EMD (Receipt No...../Date.....)

Name of Work: **SITC of Audio Visual system for Auditorium and Exhibition room in Independent new building for CMET, Athani, Thrissur, Kerala.**

NIT No. : **49/EE(E)-KOCHI/2026-27**

Estimated Cost: : Rs. 60,20,019/-

Amount of Earnest Money Deposit: : Rs. 1,20,400/-

Last date of submission of bid: : 24.10.2026 up to 15.00.Hrs

Name of Contractor :

Form of EMD :

Amount of Earnest Money Deposit :

Date of submission of EMD :

Signature, Name and Designation of EMD receiving officer (EE/AE(P)/AE/AAO) along with Office stamp.

(# to be filled by EMD receiving EE / AAO/ AE(P)/AE)

3. The Executive Engineer receiving EMD in original form shall examine the EMD deposited by the bidder and shall issue a receipt of deposition of earnest money to the agency in a given format uploaded by tender inviting EE. The receipt may be issued by the AE (P)/AE/AAO.

4. The Executive Engineer receiving original EMD shall also intimate tender inviting Executive Engineer about deposition of EMD by the agency by email/fax/telephonically.

5. The original EMD receiving Executive Engineer shall release the EMD after verification from the e-tendering portal website (www.etender.cpwd.gov.in) that the particular contractor is not L-1 tender and work is awarded. The tender inviting Executive Engineer will call for original EMD of the L-1 tenderer from EMD receiving Executive Engineer immediately.

NOTE : Earnest Money in the form of Treasury Challan or Demand Draft or Pay order or Banker`s Cheque or Deposit at Call Receipt or Fixed Deposit Receipt (drawn in favour of Executive Engineer, Cochin Central Division, CPWD, Cochin.)

Form – C

CONFIRMATION FOR SUBMISSION OF FINANCIAL BID

To,

The Executive Engineer (E) - Kochi
CPWD, Kochi

Sub: **SITC of Audio Visual system for Auditorium and Exhibition room in Independent new building for CMET, Athani, Thrissur, Kerala.**

Sir,

I/We ..... the Bidder have uploaded financial bid from our firm for above work.

Yours faithfully

Signature

Full Name of the Firm/Bidder:.....

Designation:.....

Address:.....

Tele Nos. (O)..... (R).....

E mail:.....

Fax No.....

FINANCIAL INFORMATION

Name of the firm / contractor……..:

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

Fig in lakhs Rs.

Sl. No.	Particulars	Financial Years				
		2021-22	**2022-23**	**2023-24**	**2024-25**	**2025-26**
i)	Gross Annual turnover on construction works					
ii)	Profit / Loss (Standalone finance statement and consolidated financial					

II. Financial arrangements for carrying out the proposed work.

Signature of Chartered Accountant with Seal **Signature of Bidder(s)**

Note: This Form 'A ' of financial information regarding the bidder must be signed by both bidder as well as Chartered Accountant.

Form – D

UNDERTAKING

I/We declare that, I/we have not been debarred/restrained/black listed by any Central Govt/ State Govt. Agency/ Autonomous body of the Central or State Govt./PSU etc.

Signature of the Bidder

Address

Note: In case of any litigation in process, the details of same should be furnished/ (scanned and uploaded at the time of submission of bid) in the following Format.

S. N.	Name of work	Year	Details of litigations	Type of litigation	Status of litigation

Signature of Bidder(s) or an authorized

Officer of the firm with stamp

Form – E

UNDERTAKING

I/We undertake and confirm that eligible similar works (s) has / have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of the Department, then I/We shall be debarred from bidding in CPWD in future forever. Also, if such a violation comes to the notice of Department before date of start of work, the Engineer-in-Charge shall be free to forfeit the entire amount of Earnest Money Deposit /Performance Guarantee.

Signature of the Bidder

Address:

FORM 'F'

DETAILS OF ELIGIBLE SIMILAR NATURE OF WORKS COMPLETED DURING THE LAST SEVEN YEARS ENDING LAST DAY OF PREVIOUS MONTH OF SUBMISSION OF TENDERS.

Name of the firm / contractor…….

Sl. No.	Name of work / project and location	Owner or sponsoring organization	Cost of work in crores of Rs.	Date of commencement as per contract	Stipulated date of completion	Actual date of completion	Litigation/ arbitration cases pending / in progress with detail	Name and Address (Postal & E-mail) / telephone number of officer to whom reference may be made	Whether work was done on back to back basis. Yes/no
1	2	3	4	5	6	7	8	9	10

*indicate gross amount claimed and amount awarded by the Arbitrator.

Signature of bidder(s)

FORM 'F'-1

PROJECTS UNDER EXECUTION

Sl. No.	Name of work / project and location	Owner or sponsoring organization	Cost of work in cores of Rs.	Date of commencement as per contract	Stipulated date of completion	Up-to-date percentage progress of the work	Slow progress if any and reasons therof	Name and Address (Postal & E-mail) / telephone number of officer	Remarks
1	2	3	4	5	6	7	8	9	10

FORM 'G'

PERFORMANCE REPORT OF WORKS REFERRED TO IN FORM "F"

1.	Name of work / Project & Location		
2.	Agreement No.		
3.	Estimated Cost		
4.	Tendered Cost		
5.	Date of Start		
6.	Date of completion		
	i)	Stipulated Date of Completion (as mentioned in work order)	
	ii)	Actual Date of Completion	
7.	(a) Whether case of levy of compensation for delay has been		Yes/No
	(b) If decided, amount of compensation levied for delayed completion, if any		
8	Amount of reduced rate items ,if any		
9	Performance Report		
	1) Quality of Work		Outstanding/Very Good/Good/Poor
	2) Financial Soundness		Outstanding/Very Good/Good/Poor
	3) Technical Proficiency		Outstanding/Very Good/Good/Poor
	4) Resourcefulness		Outstanding/Very Good/Good/Poor
	5) General Behaviour		Outstanding/Very Good/Good/Poor
10	Remarks (if any):		
Dated:			Executive Engineer or Equivalent Officer with stamp, Office address, telephone number & email ID.

STRUCTURE & ORGANISATION (FORM 'H')

1.	Name & Address of the bidder		
2.	Telephone No. / Email id /Telex No./Fax No.		
3.	Legal status of the bidder (Scan & upload copies of original document defining the legal status).		
	a)	An Individual	
	b)	A proprietary firm	
	c)	A firm in partnership	
	d)	A limited company or Corporation	
4.	Particulars of registration with various Government bodies (Scan & upload attested photo-copy).		
	Organization/Place of Registration		Registration No.
	1.		
	2.		
	3.		
5.	Names and Titles of Directors & Officers with designation to be concerned with this work.		
6.	Designation of individuals authorized to act for the organization.		
7.	Has the bidder, or any constituent partner in case of partnership firm, limited company/joint venture ever been convicted by a court of law? If so, give details.		
8	Any other information considered necessary but not included above.		

Signature of bidder(s) with stamp

FORM 'K'

DECLARATION ABOUT SITE INSPECTION

To,

The Executive Engineer (E) - Kochi,
CPWD, Kochi.

Name of Work: - **SITC of Audio Visual system for Auditorium and Exhibition room in Independent new building for CMET, Athani, Thrissur, Kerala.**

Dear Sir,

It is hereby declared that as per CPWD–6 FOR e-BIDDING, I/ We the bidder(s) inspected and examined the subject site and its surrounding and satisfy myself / ourselves as to the nature of the ground and sub-soil (so far as is practicable), the forms and nature of the site. Ourselves before submitting the bid, the accommodation which may require and all necessary information as to risks, contingencies and other circumstances which may influence or affect our bid have been obtained. I/We the bidder shall have full knowledge of the site and no extra charge consequent upon any misunderstanding or otherwise shall be claimed in later date.

I /We bidder shall be responsible for arranging and maintaining at own cost all materials, tools & plants, water, electricity, access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a bid by me/us implies that I / We have read this notice and all other contract documents and has / have made myself /ourselves aware of the scope and specifications of the work to be done and local conditions and other factors having a bearing on the execution of the work.

Yours faithfully

(Duly authorized signatory of the bidder)

FORM 'M'

LETTER OF TRANSMITTAL

To,

The Executive Engineer (E) - Kochi,
CPWD, Kochi

Sub: Submission of bids in two bid system for the work of.....

Sir,

Having examined the details given in the bid document for the above work, I/ We hereby submit the relevant information.

1. I/ We hereby certify that all the statement made and information supplied in the enclosed forms and accompanying statement are true and correct.

2. I/ We have furnished all information and details necessary for eligibility and have no further pertinent information to supply.

3. I/We submit the requisite certified certificate and authorize the Executive Engineer (E)-Kochi, CPWD, Kochi to approach the bank issuing the certificate to confirm the correctness thereof. I/We also authorize Executive Engineer (E)-Kochi, CPWD, Kochi to approach individuals, employers, firms and corporation to verify our competence and general reputation.

4. I/we submit the following certificates in support of our suitability, technical knowledge and capability for having successfully completed the following eligible similar works

S.N.	Name of work	Amount	Experience Certificate from
1.			
2.			
3.			

Certificate:

It is certified that the information given in the enclosed eligibility bid are correct. It is also certified that I/we shall be liable to be debarred, disqualified/cancellation of enlistment in case any information furnished by me/us found to be incorrect.

Enclosures:

Seal of bidder

Date of submission:

SIGNATURE(S) OF BIDDER(S):

FORM 'B'

FORM OF SOLVENCY / BANKERS' CERTIFICATE FROM A SCHEDULED BANK

This is to certify that to the best of our knowledge and information that M/s./ Sh……..... ..... having marginally noted address, …….as a Customer of our bank are/ is respectable and can be treated as good for any engagement upto a limit of Rs…….. (Rupees……..)

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

(Signature)
For the Bank

NOTE:

(1) Bankers certificate should be on letter head of the Bank addressed to the Executive Engineer-Cochin, CHCD, CPWD, Kochi.

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

(3) The certificate should not be more than 6 months old.

FORM "B1"

FORM FOR CERTIFICATE OF NET WORTH FROM CHARTERED ACCOUNTANT

It is to certify that as per the audited balance sheet and profit & loss account during the financial year.....,the net worth of M/s..... (name and registered address of individual/firm/company), as on ..... (the relevant date) is Rs..... after considering all liabilities. It is further certified that the net worth of the company has not eroded by more than 30% in the last three years ending on .....(the relevant date)

Unique Document Identification Number (UDIN) …….

Signature of the Chartered Accountant

.....

Name of the Chartered Accountant

.....

Membership no. of ICAI

Date and seal

ANNEXURE 1

FORMAT OF UNDERTAKING TO BE GIVEN ON LETTER HEAD OF OEM

Undertaking

NIT No. :- 49/EE(E)-KOCHI/2026-27

With reference to above tender, we, the OEM of …… solemnly undertake as follows:-

We, the OEM authorize, M/s …… As our system integrator (SI) to quote our product.

We, the OEM shall unconditionally support M/s …… technically throughout the execution of contract as well as for maintenance/comprehensive maintenance contract for the useful life of the system, and

We, the OEM shall provide all the spares required for healthy functioning of the equipment for at least 7 years from the date of successful commissioning of the equipment.

We, the OEM, hereby confirm that the “Product quoted are not end-of-life for further period of 7 years.

All the Equipment supplied by us are guaranteed for 1 years from the date of handing over.

In case of discontinuation of model and non-availability of spares, we will replace the equipment with equivalent/high end model in case of manufacturing defect during the warranty period of 1 years.

Signature of OEM

With seal

Signature of Bidder/SI

Name of Bidder/SI:-…….

GOVERNMENT OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT
CPWD-6 FOR e-TENDERING

Percentage rate bids are invited on behalf of the President of India from **"OEM / Specialized agencies having experience in similar nature of works in two Bid system [(i) Eligibility Bid & (ii) Financial bid]** for the following work:

Name of Work: **SITC of Audio Visual system for Auditorium and Exhibition room in Independent new building for CMET, Athani, Thrissur, Kerala.**

1.1 The work is estimated to cost **Rs. 60,20,019/-.** This cost, however, is given merely as a rough guide.

1.2 Intending Bidders is eligible to submit the bid provided he has definite proof from the appropriate authority, which shall be to the satisfaction of the competent authority, of having satisfactorily completed similar work of magnitude specified below.

1.2.1 Criteria of Eligibility for submission of Bid documents:

Should have successfully completed the works as mentioned below **during the last Seven years** ending the last day of the previous month of submission of bids**.**

Three similar works each costing not less than **Rs. 24.08 Lakhs (40% of ECPT)**

OR

Two similar works each costing not less than **Rs. 36.12 Lakhs (60% of ECPT)**

OR

One similar work costing not less than **Rs. 48.16 Lakhs**. **(80% of ECPT)**

Similar work shall mean works of **"SITC of Audio Visual Systems"**. The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum; calculated from the date of completion to the last day of the previous month of submission of tender.

Completion of work for the purpose of considering experience shall mean completion of entire work in contract and not completion of some portion of the contract even though some portion may be satisfying the magnitude and physical attributes of similar work.

Completion certificates issued should be signed by Office of the Client Department of the rank of Executive Engineer or Equivalent and in case of Private Organization by Managing Director / Proprietor. The completion certificate must clearly indicate the following :

(aa) Date of Completion of Work.

(ab) Nature of work

(ac) That the work has been completed satisfactory

(ad) Completed Valus of the work

(ae) Remarks indicating grant of Extension of Time by the Department if any and penalty if any, levied on this account.

(b) In addition to the above eligibility conditions, OEM / Specialized Agencies should submit the following additional documents.

(i) Should have had Average Annual Financial Turnover of **Rs. 18.06 Lakhs** on similar works during the immediate preceding Three consecutive years ending 31st March 2026. (Scanned copy of Certificate from CA to be uploaded).

(ii) Should not have incurred any loss (profit after tax should be positive) in more than two years during the last five consecutive balance sheets, duly certified and audited by chartered accountants. (The balance sheet in case of Pvt. Ltd/ Public Ltd. Company means it stand alone finance statement and consolidated financial statement both)

(iii) Solvency certificate or Net worth Certificate: Solvency of the amount equal to **Rs. 24.08 Lakhs** or Net worth certificate of minimum **Rs 6.02 Lakhs** issued by certified Chartered Accountant.

(iv) Firms/Contractors who are not blacklisted and/or debarred for its operations at the time of tender submission are not eligible.

All the eligible similar works executed and submitted by the bidders may be got inspected by a committee which may consist of client or any other authority as decided by NIT approving authority.

To become eligible for issue of bid, the bidders shall have to furnish an affidavit as under:-

I/We undertake and confirm that eligible similar works(s) has/have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of Department, then I/we shall be debarred for bidding in CPWD in future forever. Also, if such a violation comes to the notice of Department before date of start of work, the Engineer-in-Charge shall be free to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee. (Scanned copy to be uploaded at the time of submission of bid)

2. Agreement shall be drawn with the successful bidders on prescribed **Form No. CPWD 7/8** (or other standard Form as mentioned) which is available as a Govt. of India Publication **and also available on website www.cpwd.gov.in.** Bidders shall quote his rates as per various terms and conditions of the said form which will form part of the agreement.

3. **The time allowed for carrying out the work will be 04 (Four) Months from the date of start as defined in schedule 'F' or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any, indicated in the bid documents.**

4. The entire site is available

~~**OR**~~

~~The Site for the the work shall be made available in parts as specified.~~

5. The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents except Standard General Conditions of Contract Form can be seen on website **www.etender.cpwd.gov.in** or **www.cpwd.gov.in** free of cost.

6. After submission of the bid the contractor can re-submit revised bid any number of times but before last time and date of submission of bid as notified. While submitting the revised bid, contractor can revise the rate of one or more items(s) any number of times (be need not re-enter rates of all the items) but before last time and date of submission of bid as notified.

7. Earnest Money in the form of Treasury Challan or Demand Draft or Pay order or Banker`s Cheque or Deposit at Call Receipt or Fixed Deposit Receipt (**drawn in favour of Executive Engineer, Cochin Central Division, CPWD, Cochin.**) shall be scanned and uploaded to the e-Tendering website within the period of bid submission. The original EMD should be deposited either in the office of Executive Engineer inviting bids or division office of any Executive Engineer, CPWD within the period of bid submission. The EMD receiving Executive Engineer (including NIT issuing EE/AE) shall issue a receipt of deposition of earnest money deposit to the bidder in a prescribed format (enclosed) uploaded by tender inviting EE in the NIT. This receipt shall also be uploaded to the e- tendering website by the intending bidder upto the specified bid submission date and time.

   Copy of Enlistment order and other documents as specified in Tender notice shall be scanned and uploaded to the e-Tendering website within the period of Bid submission. However, certified copy of all the scanned and uploaded documents as specified shall have to be submitted by the lowest bidder only along with original duly filled Proforma for EMD Declaration uploaded within a week physically in the office of Tender opening authority. Online Bid documents submitted by intending bidders shall be opened only of those bidders, whose duly filled Proforma for EMD Declaration and other documents scanned and uploaded are found in order.

8 The contractors registered prior to 01.04.2015 on e-tendering portal of CPWD shall have to deposit tender processing fee at existing rates, or they have option to switch over to the new registration system without tender processing fee any time.

The Bid submitted shall be opened at 15.30 Hrs on 24.10.2026.

9. The bid submitted shall become invalid and e-Tender processing fee shall not be refunded if:
   (i) The bidder is found ineligible.
   (ii) The bidder does not deposit original EMD with Division Office of any Executive Engineer, CPWD.
   (iii) The bidder does not upload scanned copies of all the documents stipulated in the Bid document.
   (iv) GST Registration Certificate if already obtained by the bidder.

   If the bidder has not obtained GST registration as applicable, then he shall scan and upload following under taking along with other bid documents.

   "If work is awarded to me, I/we shall obtain GST registration Certificate, as applicable, within one month from the date of receipt of award letter or before release of any payment by CPWD, whichever is earlier, failing which I/We shall be responsible for any delay in payments which will be due towards me/us on a/c of the work executed and/or for any action taken by CPWD or GST department in this regard."

(v) If any discrepancy is noticed between the documents as uploaded at the time of submission of bid and hard copies as submitted physically by the lowest bidder in the office of tender opening authority.

(vi) If a tenderer quotes NIL rates against all items in Item rate tender or does not quote any percentage above/below on the total amount of the tender or any section/sub head in percentage rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer.

10. The contractor whose bid is accepted will be required to furnish Performance guarantee of **5% (Five Percent)** of the bid amount within the period specified in Schedule F. This guarantee shall be in the form of cash (in case guarantee amount is less thanRs.10000/-) or Deposit at Call receipt of any scheduled bank/Banker's cheque of any scheduled bank Demand Draft of any scheduled bank/Pay order of any Scheduled Bank of any scheduled bank (in case guarantee amount is less than Rs. 1,00,000/-) or Government Securities or Fixed Deposit Receipts or Guarantee Bonds of any Scheduled Bank or the State Bank of India in accordance with the prescribed form. **Performance Guarantee (drawn in favour of Executive Engineer, Cochin Central Division, CPWD, Cochin)**. In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule 'F', including the extended period if any, he shall be suspended for one year and shall not be eligible to bid for CPWD Tenders from date of issue of Suspension order. The Contractor whose bid is accepted will also be required to furnish either copy of applicable license / registrations or proof of applying for obtaining labour licenses, registration with EPFO, ESIC and BOCW Welfare Board including Provident Fund Code No if applicable and also ensure the compliance of aforesaid provisions by the sub-contractors, if any engaged by the contractor for the said work within the period specified in Schedule F.

11. The description of the work is as per **Brief Particulars of Work.**

Intending Bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their bids as to the nature of the ground and sub-soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid. A bidders shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. The bidders shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a bid by a bidders implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. will be issued to him by the Government and local conditions and other factors having a bearing on the execution of the work.

12. The competent authority on behalf of the President of India does not bind itself to accept the lowest or any other bid and reserves to itself the authority to reject any or all the bids received without the assignment of any reason. All bids in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidders shall be summarily rejected.

13. Canvassing whether directly or indirectly, in connection with bidders is strictly prohibited and the bids submitted by the contractors who resort to canvassing will be liable for rejection.

14. The competent authority on behalf of President of India reserves to himself the right of accepting the whole or any part of the bid and the bidders shall be bound to perform the same at the rate quoted.

15. The contractor shall not be permitted to bid for works in the CPWD Circle (Division in case of contractors of Horticulture/Nursery category) responsible for award and execution of contracts, in which his near relative is posted a Divisional Accountant or as an officer in any capacity between the grades of Superintending Engineer and Junior Engineer (both inclusive). He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any gazetted Officer in CPWD or in the Ministry of Urban Development. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of this Department.

16. No Engineer of Gazetted Rank or other Gazetted Officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of one year after his retirement from Government service, without the prior permission of the Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the bid or engagement in the contractor's service.

17. **The bid for the works shall remain open for acceptance for a period of Seventy Five (75) days from the date of opening of Technical Bid in case bids are invited on 2 Bid system.** If any bidder withdraws his bid before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the bid which are not acceptable to the department, then the Government shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further the bidders shall not be allowed to participate in the rebidding process of the work.

18. This notice inviting Bid shall form a part of the contract document. The successful bidders/contractor, on acceptance of his bid by the Accepting Authority shall within 15 days from the stipulated date of start of the work, sign the contract consisting of:

    (a) The Notice Inviting Bid, all the documents including additional conditions, specifications and drawings, if any, forming part of the bid as uploaded at the time of invitation of bid and the rates quoted online at the time of submission of bid and acceptance thereof together with any correspondence leading thereto.

    (b) Standard C.P.W.D. Form 7 / 8 or other Standard C.P.W.D. Form as applicable.

BRIEF PARTICULARS OF WORK

E & M WORKS

1. The work is situated at **C-MET, Athani, Thrissur, Kerala.**
2. General features and major components of the work are as under:
   a. SITC of Video Wall and confidence monitor in Auditorium.
   b. SITC of digital podium in Auditorium.
   c. SITC of audio system in Auditorium and Exhibition room.
   d. SITC of Projector with screen in Exhibition room.

GENERAL TERMS AND CONDITIONS

1.1 General Specifications & Order of preference:

i. Except for the items, for which Particular Specifications are given or where it is specifically mentioned otherwise in the description of the items in the schedule of quantities, the work shall generally be carried out in accordance with the "CPWD Specifications for Electrical Works Part-I Internal -2023, Part-II External – 2023, Indian Electricity Act 2003, CEA (Measures relating to Safety and Electric Supply) Regulations, 2023" with up-to-date amendments / correction slips, additional / Particular Specifications, Architectural / structural drawings and as per instructions of Engineer-in-Charge.

ii. The several documents forming the tender are to be taken as mutually complementary to one another. Detailed drawings shall be followed in preference to small scale drawings and figured dimensions in preference to scaled dimensions.

iii. If there is any difference or discrepancy between the description of items as given in the schedule of quantities, particular specifications for individual items of work (including special conditions) and I.S. Codes etc., the following order of preference shall be observed

1. **Description of items as given in Schedule of Quantities.**
2. **Particular Specifications, Special Conditions and Additional conditions, if any.**
3. **Drawings.**
4. **CPWD Specifications.**
5. **General conditions of contract for CPWD works.**
6. **Indian Standard Specifications of B.I.S.**
7. **Manufacturers' specifications & as decided by Engineer-in-charge.**
8. **Sound Engineering practices.**

"In the event of any variation/ discrepancy in the drawings, specifications and tender documents etc. the decision of the Engineer-in-charge shall be final binding and conclusive on the contractor and in the case the contractor have any doubt and the same should be got clarified immediately from the Engineer-in-charge and no claim of the contractor shall be entertained thereafter. Moreover, the agency is not allowed to take benefit out of any clerical/ grammatical mistake in the standard clauses/Schedule of Quantities/Specifications etc. being used in the agreement".

iv. Any reference made to any Indian Standard Specifications, shall imply to the latest version of that standard, including such revisions / amendments as issued by the

Bureau of Indian Standards up to last date of receipt of tenders. **The Contractor shall keep at his own cost all such publications including relevant Indian Standard Codes applicable to the work at site**.

b. **Scope:**

i. The works to be governed by this contract shall cover delivery and transportation up to destination, safe custody at site, insurance, erection, testing and commissioning of the entire works.

The works to be undertaken by the contractor shall inter alia include the following:

1. Preparation of detailed SHOP drawings and AS BUILT drawings wherever applicable.
2. Pre-commissioning tests as per relevant standard specifications, code of practice, Acts and Rules wherever required.
3. Warranty obligation for the equipment and/or fittings/fixtures supplied by the contractor.

ii. Contractor shall provide all the shop drawings or layout drawings for all the coordinated services before starting any work or placing any order for any of the services etc. These shop drawings/layout drawings shall be got approved from Engineer-in-charge before implementation and this shall be binding on the contractor. The contractor shall submit material submittals along with material sample for approval of Engineer-in-charge prior to delivery of material at site.

iii. All the hidden items such as water supply lines, drainage pipes, conduits, sewers etc. are to be properly tested as per the design conditions before covering and their measurements in computerized measurement book duly test checked shall be deposited with Engineer in charge or his authorized representative, prior to hiding these items.

c. **Deployment of Technical staff & skilled labour:**

1.3.1 The quality of work is of paramount importance. Contractor shall have to engage well experienced skilled labour and deploy modern T&P and other equipment to execute the work to provide the desired quality.

d. **Removal of Machinery, Tools & Equipment:**

1.4.1 Removal of machinery, tools & equipment shall be allowed to be moved away from the site only when, in written opinion of Engineer-in-Charge, the same are no longer required at site of work.

e. **Site condition**:

i. The tenderer shall acquaint himself with the site of work and see the approaches to the site. In case any approach from main road is required at site or existing approach is to be improved and maintained for cartage of materials by the contractor, the same shall be provided, improved and maintained by the contractor at his own cost.

f. **Precautionary measures:**

i. Contractor shall take all precautionary measures to avoid any damage to adjoining property. All necessary arrangement shall be made at his own cost. The contractor shall take all precautions to prevent his workmen and employees from removing and damaging any Flora (plant/vegetation) from the campus/site.

ii. The contractor shall take all precautions to avoid accidents by exhibiting necessary caution boards day and night, speed limit boards, red flags, red lights and providing barriers. He shall be responsible for all damages and accidents caused to work due to negligence on his part. No hindrances shall be caused to traffic, during the execution of the work. In case of any accident of the labourers/ contractual staff, the entire responsibility will rest on the contractor and any compensation under such circumstances, if becomes payable, shall be entirely borne by the contractor.

iii. The contractor, his authorized representative, workmen etc. shall strictly observe orders pertaining to fire precautions prevailing in the area.

iv. The Contractor shall take all necessary precautions to prevent any nuisance or inconvenience to the owners, tenants or occupants of the adjacent properties and to the public in general. The Contractor shall take all care, as not to damage any other adjacent property or other services running adjacent to the plot. If any damage is done, the same shall be made good by the Contractor at his own cost and to the entire satisfaction of the Engineer-in-Charge. The Contractor shall use such methodology and equipment for execution of the work, so as to cause minimum environmental pollution of any kind during construction, to have minimum construction time and minimum inconvenience to road users and to the occupants of the buildings on the adjacent plot and public in general, etc. He shall make good at his own cost and to the entire satisfaction of the Engineer in Charge any damage to roads, paths, cross drainage works or public or private property whatsoever caused, due to the execution of the work or by traffic brought thereon, by the Contractor.

v. Further, the Contractor shall take all precautions to prevent any pollution of streams and waterways. All waste or superfluous materials shall be carted away by the Contractor, entirely to the satisfaction of the Engineer-in-Charge. Utmost care shall be taken to keep the noise level to the barest minimum so that no disturbance as far as possible is caused to the occupants / users of adjoining buildings. No claim what so ever on account of site constraints mentioned above or any other site constraints not specifically stated here, shall be entertained from the Contractor. Therefore, the Contractors are advised to visit site and get first hand information of site constraints. Accordingly, they should quote their tenders. Nothing extra shall be payable on this account.

g. **General cleanliness of the site and Stacking & Storage of Materials:**

i. The site of work shall be always kept clean in general strictly adhering to approved job layout and green building parameters. The Contractor shall take all care to prevent

any water- logging at site. The waste water shall not be allowed to be collected at site. It may be directly pumped into the public drainage system with prior approval of the concerned authorities. For discharge into public drainage system, necessary permission shall be obtained from concerned authorities after paying the necessary charges, if any, directly to the authorities. The work shall be carried out in such a way that the area is kept clean and tidy. All the fees/charges in this regard shall be borne by the Contractor. Nothing extra shall be payable on this account.

ii. The contractor shall take instructions from the Engineer-in-Charge regarding collection and stacking of materials at any place. No excavated earth or building rubbish shall be stacked on areas where other buildings, roads, compound wall, services etc. are to be constructed.

iii. For construction works which are likely to generate malba / rubbish, contractor shall dispose of malba, rubbish & other unserviceable materials and wastes at his own cost to the notified/specified dumping ground and under no circumstances these shall be stacked / dumped even temporarily, outside the construction premises.

iv. The contractor shall construct suitable godowns, yard at the site of work for storing all other materials so as to be safe against damage by sun, rain, damages, fire, theft etc. at his own cost and also employ necessary watch and ward establishment for the purpose at his cost.

h. **Lab Equipment:**

The contractor shall provide at his own cost suitable weighing, surveying and levelling and measuring arrangements as may be necessary at site for checking. All such equipment shall be got calibrated in advance from laboratory, approved by the Engineer-in-Charge. Nothing extra shall be payable on this account.

i. **Setting Out**

i. The approval by the Engineer-in-Charge, of the setting out by the contractor, shall not relieve the contractor of any of his responsibilities and obligation to rectify the errors/defects, if any, which may be found at any stage during the progress of the work or after the completion of the work.

ii. The contractor shall be entirely and exclusively responsible for the horizontal, vertical and other alignments, the level and correctness of every part of the work and shall rectify effectively any errors or imperfections therein. Such rectifications shall be carried out by the contractor at his own cost to the instructions and satisfaction of the Engineer-in-Charge.

iii. The Contractor shall carry out survey of the work area, at his own cost, setting out the layout of building in consultation with the Engineer-in-Charge & proceed further. Any discrepancy between the architectural drawings and actual layout at site shall be brought to the notice of the Engineer-in-charge. It shall be responsibility of the Contractor to ensure correct setting out of alignment. Total station survey instruments only shall be used for layout, fixing boundaries, and

centre lines, etc., along with the theodolites. Nothing extra shall be payable on this account.

j. **Temporary Water, Electricity & Telephone Connections:**

i. The contractor shall make his own arrangements for water including boring of tube wells etc. if necessary and for electricity by obtaining electric connections and by providing diesel generators of adequate capacity if required and make necessary payments directly to the State Govt. departments concerned. Necessary approval shall be taken by the contractor from the ground water department for boring of tube wells. Nothing extra shall be paid on these accounts. Contractor shall get the water tested from laboratory approved by the Engineer-in-charge at regular interval as per the CPWD Specifications 2019. All expenses towards collection of samples, packing, transportation and testing charges etc. shall be borne by the contractor. The contractor shall obtain environmental and pollution clearance for the diesel generators. Nothing extra shall be paid on this account.

ii. The Contractor shall arrange electricity at his own cost for testing of the various electrical installations as directed by Engineer-in-Charge and for the consumption by the contractor for executing the work. Also all the water required for testing various electrical installations, fire pumps, wet riser / firefighting equipment, fire sprinklers etc. and also testing water supply, sanitary and drainage lines, water proofing of underground sump, overhead tanks, water proofing treatment etc. shall be arranged by the contractor at his own cost. Nothing extra shall be payable on this account.

iii. Arrangement of temporary telephone connection, water and electricity required by Contractor, shall be made by him at his own cost and also necessary permissions shall be obtained by him directly from concerned authorities, under intimation to the Department. Also, all initial cost and running charges, and security deposit, if any, in this regard shall be borne by him. The Contractor shall abide by all the rules/ bye laws applicable in this regard and he shall be solely responsible for any penalty on account of violation of any of the rules / byelaws in this regard. Nothing extra shall be payable on this account.

iv. The Contractor shall be responsible for maintenance and watch and ward of the complete installation and water / electricity meter and shall also be responsible for any pilferage, theft, damage, penalty etc. in this regard. The Contractor shall indemnify the Department against any claim arising out of pilferage, theft, damage, penalty etc. whatsoever on this account. Security deposit for the work shall be released only after **No Dues Certificates** are obtained from the local Authorities from whom temporary electric/ water / telephone connection have been obtained by the Contractor. Nothing extra shall be payable on this account.

v. The Department shall in no way be responsible for either any delay in getting electric and/or water and/or telephone connections for carrying out the work or not getting connections at all. No claim of delay or any other kind, whatsoever, on this account shall be entertained from the Contractor. Also contingency arrangement of stand-by

water & electrical supply shall be made by the Contractor commencement and smooth progress of the work so that work does not suffer on account of power failure or disconnection or not getting connection at all. No claim of any kind whatsoever shall be entertained on this account from the Contractor. Nothing extra shall be payable on this account.

k. **Scaffolding &Staging:**

i. Wherever required for the execution of work, all the scaffolding shall be provided and suitably fixed, by the contractor. The scaffolding shall be provided strictly with steel double scaffolding system, suitably braced for stability, with all the accessories, gangways, etc. with adjustable suitable working platforms to access the areas with ease for working and inspection. Single scaffolding system is strictly prohibited and shall invite necessary action. It shall be designed to take all incidental loads. It should cater to the safety features for workmen. Nothing extra shall be payable on this account. It shall be ensured that no damage is caused to any structure due to the scaffolding.

ii. The contractor should submit the shop drawings of staging and shuttering for approval of Engineer-in-Charge before actually commencing the execution of work under the item. Nothing extra shall be payable on this account.

l. **Co-ordination with other agencies:**

i. The Contractor shall conduct his work so as not to interfere with or hinder the progress of the work being performed by other Contractors or by the Engineer-in-Charge. As far as possible, he shall arrange his work and place, so as not to interfere with the operations of other Contractors or shall arrange his work with that of the others, in an acceptable and coordinated manner and shall perform it in proper sequence.

ii. Other agencies may also simultaneously execute and install the works and the contractor shall afford necessary facilities for the same. The contractor shall leave such recesses, holes, openings, trenches etc. as may be required for such related works (for which inserts, sleeves, brackets, conduits, base plates, clamps etc. shall be available as specified elsewhere in the contract) and the contractor shall fix the same at the time of casting of concrete, stone work and brick work, if required, and nothing extra shall be payable on this account.

iii. The Contractor shall cooperate with and provide the facilities to the associate-Contractors and other agencies working at site for smooth execution of the work. The Contractor shall

(A) Allow use of scaffolding already erected, toilets, sheds etc.

(B) Properly co-ordinate their work with the work of other Contractors.

(C) Provide control lines and benchmarks to his associate-Contractors and the other Contractors.

(D) Provide electricity and water at mutually agreed rates.

(E) Provide hoist and crane facilities for lifting material at mutually agreed rates.

(F) Co-ordinate with other Contractors for leaving inserts, making chases, alignment of services etc. at site.

(G) Adjust work schedule and site activities in consultation with the Engineer-in-Charge and other Contractors to suit the overall schedule completion.

(H) Resolve the disputes with other Contractor amicably and the Engineer-in-Charge shall not be **made intermediary or arbitrator. The department shall not be responsible for the disputes between the subject work contractor and associate contractor / other agencies working at site. No claim shall be allowed by the department.**

m. **Procurement of materials:**

i. All material shall only be brought at site as per program finalized with the Engineer-in-Charge. Any pre-delivery of the material not required for immediate consumption shall not be accepted and thus not paid for.

ii. The contractor shall procure the required materials in advance so that there is sufficient time for testing of the materials and approval of the same before use in the work.

n. **Protection of Existing Services & buildings and Materials:**

i. Existing drains, pipes, cables, over-head wires, sewer lines, water lines and similar services encountered in the course of the execution of work shall be protected against the damage by the contractor at his own expense. The contractor shall not store materials or otherwise occupy any part of the site in a manner likely to hinder the operation of such services. In case temporary supporting of such services is required to facilitate the work, the same shall be done by the contractor at no extra cost.

ii. In case the existing services are to be shifted permanently, then before dismantling the existing services, alternate/diversion of service lines has to be laid by the contractor so that there is no interruption in use of existing services. The contractor has to plan the alternate suitable route for diversion/shifting of service lines and get the same approved from the Engineer-in-Charge before starting shifting of services. Nothing extra shall be paid except the payment of dismantling and laying of new service lines as per conditions of contract.

iii. All fossils, coins, articles of value of antiquity, structures and other remains or things of geological or archaeological interest discovered on project location during excavation/construction shall be the property of the Government, and shall be dealt with as per provisions of the relevant legislation. The contractor will take reasonable precaution to prevent his workmen or any other persons from removing and damaging any such article or thing. He will, immediately upon discovery thereof and before removal acquaint the Engineer-in-charge of such discovery and carry out the official

instructions of Engineer-in-charge for dealing with the same, till then all work shall be carried out in a way so as not to disturb/ damage such article or thing.

iv. The contractor shall be responsible for the watch and ward / guard of the buildings, safety of all fittings and fixtures including sanitary and water supply fittings and fixtures provided by him against pilferage and breakage during the period of installations and thereafter till the building is physically handed over to the client department. No extra payment shall be made on this account.

v. The contractor shall be fully responsible for the safe custody of materials brought by him/ issued to him even though the materials may be under double lock key system.

Rates and other conditions for payment:

The rates quoted by the Contractor are deemed to be inclusive of the following-

vi. Site clearance, setting out work, profile, establishment of reference bench mark(s), taking spot levels, construction of all safety and protection devices, barriers, barricading, signage, labour safety, welfare & training measures, preparatory works, working during monsoon, working at all depths, height, lead, lift and location etc. until / unless specified otherwise, etc. and any other incidental works required to complete this work. Nothing extra shall be payable on this account. Payment for centring & shuttering, however, if required to be done for floor heights greater than 3.50m shall be admissible at rates arrived in accordance with clause 12 of the agreement if not already specified.

vii. For works below ground level the contractor shall keep that area free from water. If dewatering or bailing out of water is required the contractor shall do it and nothing extra shall be paid except otherwise provided in the items of schedule of quantities.

viii. Any legal or financial implications resulting out of disposal of earth shall be sole responsibility of the contractor. Nothing extra over the schedule shall be paid on this account.

ix. All labour, material, tools and plants and other inputs involved in the execution of the item.

x. Providing sunk flooring in bath-rooms, kitchen, etc.

xi. Performance test of the entire installation(s) before the work is finally accepted.

xii. Any cement slurry added over base surface (or) for continuation of concreting for better bond is deemed to have been built in the items.

xiii. The rates quoted by the tenderer, shall be inclusive of all taxes including GST and levies applicable in respect of this contract shall be payable by the contractor and Government will not entertain any claim whatsoever in respect of the same.

xiv. For completing the work in time, the Contractor might be required to work in two or more shifts (including night shifts). No claim whatsoever shall be entertained on this

account, not with-standing the fact that the Contractor may have to pay extra amounts for any reason, to the labourers and other staff engaged directly or indirectly on the work according to the provisions of the labour and other statutory bodies regulations and the agreement entered upon by the Contractor with them.

xv. The Contractor shall keep himself fully informed of all acts and laws of the Central & State Governments, all orders, decrees of statutory bodies, tribunals having any jurisdiction or authority, which in any manner may affect those engaged or employed and anything related to carrying out the work. All the rules & regulations and bye-laws laid down by Collector / MC etc. and any other statutory bodies shall be adhered to, by the contractor, during the execution of work. The Contractor shall also adhere to all traffic restrictions notified by the local authorities. It is clarified that the extra sewerage charges (one time charges for commencement of work) required to be paid to the Municipal Corporation / other statutory bodies shall be paid by the department and need not be considered by the contractor. The water charges (for municipal water connection as well as tanker water) shall be borne by the contractor. Also, if the contractor obtains water connection for the drinking purposes from the municipal authorities or any other statutory body, the consequent sewerage charges shall be borne by the contractor. All statutory taxes, levies, charges (including GST, water and sewerage charges, charges for temporary service connections and / or any other charges) payable to such authorities for carrying out the work, shall be borne by the Contractor. The Contractor shall arrange to give all notices as required by any statutory / regulatory authority and obtain all requisite licenses wherever required and shall pay to such authority all the fees that are required to be paid for the execution of work. He shall protect and indemnify the Department and its officials & employees against any claim and /or liability arising out of violations of any such laws, ordinances, orders, decrees, by himself or by his employees or his authorized representatives. Nothing extra shall be payable on these accounts. The fee payable to statutory authorities for obtaining the various permanent service connections and Occupancy Certificate for the building shall be borne by the Department.

xvi. Royalty charges towards all materials such as stone aggregate, coarse or fine sand etc. shall be borne by the Contractor.

xvii. All ancillary and incidental facilities required for execution of work like labour camp, stores, fabrication yard, offices for Contractor, watch and ward, temporary ramp required to be made for working at the basement level, temporary structure for plants and machineries, water storage tanks, installation and consumption charges of temporary electricity, telephone, water etc. required for execution of the work, liaison and pursuing for obtaining various No Objection Certificates, completion certificates from local bodies etc., protection works, barricading, testing facilities / laboratory at site of work, facilities for all field tests and for taking samples etc. during execution or any other activity which is necessary (for execution of work and as directed by Engineer-in-Charge), shall be deemed to be included in rates quoted by the Contractor, for various items in the schedule of quantities. Nothing extra shall be payable on these accounts. Before start of the work, the Contractor shall submit to the Engineer-in-Charge, a site / construction yard layout, specifying areas for

construction, site office, positioning of machinery, material yard, cement and other storage, steel fabrication yard, site laboratory, water tank, etc.

xviii. The Contractor shall assume all liability, financial or otherwise in connection with this contract and shall protect and indemnify the Department from any and all damages and claims that may arise on any account. The Contractor shall indemnify the Department against all claims in respect of patent rights, royalties, design, trademarks of name or other protected rights, damages to adjacent buildings, roads or members of public, in course of execution of work or any other reasons whatsoever, and shall himself defend all actions arising from such claims and shall indemnify the Department in all respect from such actions, costs and expenses. Nothing extra shall be payable on this account.

xix. The Contractor shall make all necessary arrangements for protecting from rain or likewise extreme weather conditions, the work already executed and for carrying out the further work, during monsoon including providing and fixing temporary shelters, protections etc. Nothing extra shall be payable on this account. Also, no claims for hindrance shall be entertained on this account.

xx. In case of flooding of site on account of rain or any other cause and any consequent damage, whatsoever, no claim financially or otherwise shall be entertained not withstanding any other provisions elsewhere in the contract agreement. Also, the Contractor shall make good, at his own cost, the damages caused, if any. Further, no claims for hindrance shall be entertained on this account.

xxi. No payment shall be made for any damage caused by fire, rain, snowfall, flood or any other natural calamity, whatsoever during the execution of the work. The contractor shall be fully responsible for any damage to the govt. property and the work for which payment has been advanced to him under the contract and he shall make good the same at his risk and cost. The contractor shall be fully responsible for safety and security of his material, T&P/Machinery brought to the site by him. The contractor shall maintain all the work in good condition at his own cost till the completion of the entire work.

xxii. In case the same item appears more than once in the schedule of work under the same sub head or among the different sub heads of works, the lowest rate quoted for that item shall be taken for other items also and tender will be evaluated accordingly.

xxiii. The ESI and EPF contribution on the part of employer in respect of this contract shall be paid by the contractor. These contributions on the part of employer paid by the contractor shall be reimbursed by the Engineer in charge to the contractor on actual basis. The applicable and eligible amount of EPF& ESI shall be reimbursed preferably within 7 days but not later than 30 days of submission of documentary proof of payment which are in order.

Tools & Plant:

xxiv. No tools and plants including any special T&P etc. shall be supplied by the Department and the Contractor shall have to make his own arrangements at his own cost. No claim of hindrance (or any other claim) shall be entertained on this account.

Computerized MBs & EMBs:

xxv. The contractor will submit computerized bill with measurement sheet for the work carried out by him for making payment as per Clause – '6' of the **CPWD General Conditions of Contract 2023 for Construction Works** (with correction slips upto the last date of submission of tender). For casting of RCC members and other hidden items the corrected and duly test checked measurement sheets of reinforcement or that of other hidden items shall be deposited with Engineer in charge or his authorized representative, before casting of RCC or other hidden items. The delay in submission of corrected and duly checked measurement sheet may, therefore, delay casting of RCC or execution of hidden item for which no hindrance shall be recorded.

xxvi. Electronic measurement book is introduced. The contractor shall comply with the same as per the direction of Engineer-in-charge.

(b) **SECRECY**

a. The contractor shall take all steps necessary that all persons employed on any work in connection with the contract have noticed that the Indian Official Secrets Act 1923 applies to them & will continue so to apply even after the execution of such works under the contract.

b. The contract is confidential and must be strictly confined to the contractor's own use (except so far as confidential disclosure to sub-contractors or suppliers as necessary) and to the purpose of the contract.

c. All documents, copies thereof & extracts there from furnished to the contractor shall be returned to the Engineer-in-Charge on the completion of the work / works or the earlier determination of the contract.

(c) **LABOUR AND SECURITY**

a. In the event of the contractor(s) committing a default or breach of any of the provisions of the Central Public Works Department, Contractor's Labour Regulations and Model Rules for the protection of health and sanitary arrangements for the workers as amended from time to time or furnishing any information or submitting or filing any statement under the provisions of the above Regulations and' Rules which is materially incorrect, he/they shall, without prejudice to any other liability, pay to the Government a sum not exceedingRs.500/- for every default, breach or furnishing, making, submitting, filing such materially incorrect statements and in the event of the contractor(s) defaulting continuously in this respect, the penalty may be enhanced to

Rs.1000/- per day for each day of default subject to a maximum of 5 per cent of the estimated cost of the work put to tender. The decision of the Engineer-in-Charge shall be final and binding on the parties.

No payment shall be made for construction of labour housing.

b. The Contractor shall display all permissions, licenses, registration certificates, bar charts, other statements etc. under various labour laws and other regulations applicable to the works, at his site office.

c. No site is available for labour huts. The contractor shall have to have his own arrangements for hiring land for setting up labour huts. The contractor will be provided space for watchman huts, site office etc. to a very limited extent inside the campus but the space requirement and location, as assessed by Engineer-in-Charge shall be final and binding.

d. If as per the rules of the local authority, the huts for labour are not to be erected at the site of work by the contractors, the contractors are required to provide such accommodation as is acceptable to local bodies and nothing extra shall be paid on this account.

e. Contractor has to follow the security requirement of the campus and obtain necessary entry passes for the labour and vehicles and follow security checks at entry / exit gates, restriction on movement of vehicle, restricted timings of working etc. The Department however shall assist the contractor in obtaining such passes for movement of vehicles and labour. No claim whatsoever shall be entertained on account of delay in entry of vehicles and labour including restrictions in working hours, if there is any.

f. The contractor shall employ only Indian Nationals after verifying their antecedents and loyalty. The contractor shall, on demand submit list of his agents, employees and work people concerned & shall satisfy as to the bonafides of such people.

g. The contractor & his work people shall observe all relevant rules regarding security promulgated in which work is to be carried out by the Controlling Administrative Authority of the campus/area (hereinafter referred to as “Administrator”).

h. The contractor, his representative, workman shall be allowed to enter through specified gates & timing as laid down by the controlling authority. They shall be issued an identity card or an individual pass in accordance with the standing rules & regulations & they should possess the same while working. The contractor shall be responsible for the conduct & actions of his workmen, agents/ representatives.

i. Normally contractor shall be allowed to carry out work between 7 AM to 6 PM. However, he may also be allowed to carry out the work beyond 6 PM &upto 7 AM, if the site conditions / circumstances so demand with prior written

permission from the “Administrator”. However, if the work is carried out in more than one shift or at night, no claim on this account shall be entertained.

j. Normally contractor’s material / vehicles etc. shall be allowed to move in / go-out between **7 AM to 7 PM** only & no movement of material / vehicles out of the site of work shall be allowed during night hours unless specific permission is obtained from the “Administrator”.

k. In case if a separate entry has been allowed, the contractor has to make all arrangement for making a separate entry gate and barricading of the working area to segregate/separate the same from other areas. All these have to be done by the contractor at his own cost including safeguarding any untoward incident in the restricted area due to separate entry gate and barricading arranged by the contractor. No extra amount on this account shall be payable by the department.

l. In the event of any restrictions being imposed by the Security agency, CPWD, Traffic or any other authority having jurisdiction in the area on the working or movement of labour /material, the contractor shall strictly follow such restrictions and nothing extra shall be payable to the contractor on such accounts. The loss of time on these accounts, if any, shall have to be made up by augmenting additional resources whatever required. Nothing extra shall be payable on this account.

4.0 DOCUMENTATION

The Contractor shall render all help and assistance in documenting the total sequences of this project by way of photography, slides, audio / video recording & other records etc. Nothing extra shall be payable to Contractor on this account. However, cost of photographs, slides, audio / video graph etc. shall be borne by the Department. The original films shall be the property of the Department. No copy shall be prepared without the prior approval of the Engineer- in – Charge.

5.0 PROGRESS CHART: -

5.1 The contractor shall submit a Time and Progress Chart for each mile stone. **The Engineer-in-charge may within 10 days thereafter, if required modify, and communicate the program approved to the contractor failing which the program submitted by the contractor shall be deemed to be approved by the Engineer-in-charge. The work programme shall include all details of balance drawings and decisions required to complete the contract with specific dates by which these details are required by contractor without causing any delay in execution of the work.** The chart shall be prepared in direct relation to the time stated in the Contract documents for completion of items of the works. It shall indicate the forecast of the dates of commencement and completion of various trades of sections of the work and may be amended as necessary by agreement between the Engineer-in-charge and the Contractor within the limitations of time imposed in the Contract documents, and further to ensure good progress during the execution of the work, the contractor shall in all cases in which the time allowed for any work, exceeds one month (save for special jobs for which a

separate programme has been agreed upon) complete the work as per mile stones given in Schedule 'F'.

5.2 In case of non-submission of construction programme by the contractor the Program approved by the Engineer-in-charge shall be deemed to be final.

5.3 The approval by the Engineer-in-charge of such programme shall not relieve the contractor of any of the **obligations** under the contract.

5.4 The contractor shall submit the **Time and Progress Chart** and progress report using the **mutually agreed software or in other format decided by Engineer-in-charge** for the work done during previous month to the **Engineer-in-charge on or before 5th day of each month failing which a recovery Rs. 1000/- shall be made on per week or part basis in case of delay in submission of the monthly progress report.**

5.5 The program chart should include the following: -

2. Descriptive note explaining sequence of various activities.

3. BAR CHARTS prepared in mutually agreed software or in other format decided by Engineer-in-charge which will indicate resources in financial terms, manpower and specialized equipment for every important stage.

4. Program for procurement of materials by the contractor.

5. Program for arranging and deployment of manpower both skilled and unskilled so as to achieve targeted progress.

6. Program of procurement of machinery / equipment having adequate capacity, commensurate with the quantum of work to be done within the stipulated period, by the contractor. In addition, to the above to achieve the progress of work as per programme, the contractor must bring at site adequate shuttering material required for cement concrete and RCC works etc. The contractor shall submit shuttering schedule adequate to complete the structure work within the laid down physical milestones.

7. Programme for achieving milestones.

5.6 The submission for approval by the Engineer-in-charge of such programme or such particulars shall not relieve the contractor of any of the duties or responsibilities under the contract. This is without prejudice to the right of Engineer-in-charge to take action against the contractor as per terms and conditions of the agreement.

vi) **PROGRESS AND MONITORING OF WORK**:

6.1 The progress report shall contain the following, apart from whatever else may be required as specified: -

1. Construction schedule of the various components of the work through a bar chart for the next three months (or as may be specified), showing the micro milestones, targeted tasks and up to date progress. At least 10 digital photographs showing all the parts of

construction site along with at least 5 minutes video of executions of different items in soft copy has to be submitted in every monthly progress report.

2. Progress chart of the various components of the work that are planned and achieved, for the month as well as cumulative up to the month, with reason for deviations, if any in a tabular format.

3. Plant and machinery statement, indicating those deployed in the work.

4. Man-power statement, indicating individually the names of all the staff deployed on the work, along with their designations. Number of skilled workers and unskilled workers deployed on the work and their location of deployment.

5. Financial statement, indicating the broad details of all the running account payment received up to date, such as gross value of work done, advances taken, recoveries effected, amount withheld, net payments details of Cheque payment received, extra /substituted /deviations items if any, etc.

6.2 For completing the work in time, the Contractor might be required to work in two or more shifts (including night shifts). No claim whatsoever shall be entertained on this account, not with-standing the fact that the Contractor may have to pay extra amounts for any reason, to the labourers and other staff engaged directly or indirectly on the work according to the provisions of the labour and other statutory bodies regulations and the agreement entered upon by the Contractor with them.

6.3 The work should be planned in a systematic manner so that chase cuttings in the walls, ceilings and floors is minimized. Wherever absolutely essential, the chase shall be cut using chase cutting machines. Chases will not be allowed to be cut using hammer / chisel. The electrical boxes should be fixed in walls simultaneously while raising the brick work. The contractor shall ensure proper co-ordination of various disciplines viz. building works, sanitary & water supply & electrical installations etc.

6.4 The contractor shall conduct his work, so as not to interfere with or hinder the progress or completion of the work being performed by other contractor(s) or by the Engineer-in-Charge and shall as far as possible arrange his work and shall place and dispose of the materials being used or removed so as not to interfere with the operations of other contractor or he shall arrange his work with that of the others in an acceptable and coordinated manner and shall perform it in proper sequence to the complete satisfaction of Engineer-in-charge.

6.5 The Contractor shall do proper sequencing of the various activities by suitably staggering the activities within various pockets in the plot so as to achieve early completion. The agency may deploy adequate equipment, machinery and labour as required for the completion of the entire work within the stipulated period specified. Also, ancillary facilities shall be provided commensurate with requirement to complete the entire work within the stipulated period. Nothing extra shall be payable on this account. Adequate number/sets of equipment in working condition, along with adequate stand-by arrangements, shall be deployed during entire construction period. It shall be ensured by the Contractor that all the equipment, Tools & Plants, machineries etc. provided by him are maintained in proper working conditions at all times during the progress of the work and till the completion of the

work. Further, all the constructional tools, plants, equipment and machineries provided by the Contractor, on site of work or his work shop for this work, shall be exclusively intended for use in the construction of this work and they shall not be shifted / removed from site without the permission of the Engineer-in-Charge.

6.6 All material shall only be brought at site as per program finalized with the Engineer-in-Charge. Any pre-delivery of the material not required for immediate consumption shall not be accepted and thus not paid for.

7. DEFECT LIABILITY PERIOD (REFUND OF SECURITY DEPOSIT):

7.1 The defect liability / maintenance period shall be 12 months after the date of completion of work for this contract agreement.

8.0 SAFETY MEASURES

8.1 The issue of construction safety & standards has gained utmost importance in recent times. This subject is to be dealt with in an integrated manner with an approach to developing and establishing a safety culture at work sites. Broadly, its components are:

1. Creating awareness.
2. Education.
3. Training.
4. Implementation.
5. Enforcement measures.

All workers of contractor and associate agencies, invariably and at all the times, must follow all safety norms, adopt safe construction practices and use all required safety gadgets in their working throughout the project duration.

8.2 The contractor shall issue ***Photo Identity Cards*** with unique numbers containing salient information of workers for the labour& his staff.

8.3 The Contractor shall monitor and achieve the objectives of construction safety continuously, progressively and through affirmative action, and shall oversee implementation of safety program over the entire construction period.

8.4 Warning / Caution Boards

All temporary warning / caution boards / glow signage display such as “Construction Work in Progress”, “Keep Away”, “No Parking”, Diversions & protective Barricades etc. shall be provided and displayed during day time by the Contractor, wherever required and as directed by the Engineer-in-Charge. These glow signage and red lights shall be suitably illuminated during night also. The Contractor shall be solely responsible for damage and accident caused, if any, due to negligence on his part. Also he shall ensure that no hindrance, as far as possible, is caused to general traffic during execution of the work. This

signage shall be dismantled & taken away by the Contractor after the completion of work, only after approval of the Engineer – in – Charge. Nothing extra shall be payable on this account.

8.5 Sign Boards

8.5.1 The Contractor shall provide and erect a display board of size and shape as required and paint over it, in a legible and workman like manner, the details about the salient features of the project, as required by the Engineer-in-Charge. The Contractor shall fabricate and put up a sign board in an approved location and to an approved design indicating name of the project, client / owner, architects, structural consultants, Department etc. besides providing space for names of other Contractors, Associate contractors and specialized agencies. Nothing extra shall be payable on this account.

8.5.2 A display board shall be kept at site which would list the names of workers, teams and agencies following safety program in the best manner. This would be updated weekly.

8.5.3 Necessary protective and safety equipment shall be provided to the Site Engineer, Supervisory staff, labour and technical staff of the contractor by the Contractor at his own cost and used at site.

8.5.4 No inflammable materials including P.O.L shall be allowed to be stored in huge quantity at site. Only limited quantity of P.O.L may be allowed to be stored at site subject to the compliance of all rules / instructions issued by the relevant authorities and as per the direction of Engineer -in- Charge in this regard. Also, all precautions and safety measures shall be taken by the Contractor for safe handling of the P.O.L products stored at site. All consequences on account of unsafe handling of P.O.L shall be borne by the Contractor.

9.0 The following procedure should be followed in case of removal of rejected/sub-standard materials from the site of work.

(i) Whenever any material brought by the contractor to the site of work is rejected, entry thereof should invariably be made in the site order book under the signature of the AE/AEE giving approximate quantity of such materials.

(ii) As soon as the material is removed, a certificate to that effect may be recorded by the AE/AEE against the original entry, giving the date of removal, mode of removal i.e. whether by truck, carts or by manual labour. If removal is by truck, the registration number of the truck should be recorded.

10.0. INSPECTION OF WORKS:

10.1 In addition to the provisions of relevant clauses of the contract, the work shall also be open to inspection by the Superintending Engineer-Cochin, CPWD and other senior officers of CPWD in addition of the Engineer-in-charge, his authorized representatives, Authorities and Team of Third-Party Quality Assurance engaged for the work. The contractor shall at times during the usual working hours and at all times at which reasonable notices of the intention of the Engineer-in-charge or other officers as stated above to visit the works shall have been

given to the contractor, either himself be present to receive the orders and instructions or have a responsible representative duly accredited in writing, to be present for that purpose.

10.2 The committee/consultant appointed by CPWD, shall be inspecting the works including workshops and fabrication factory to ensure that the works in general being executed according to the design, drawings and specifications laid down in the contract. Their observations shall be communicated by CPWD engineering staff and compliance is to be reported to CPWD. The committee/consultant appointed by CPWD shall certify on completion of particular building that it has been constructed according to the approved drawings design and specifications.

10.3 Senior Officers of CPWD, Dignitaries from Central Ministry / Department, State Government and Client Department Authorities shall be inspecting the on-going work at site at any time with or without prior intimation. The contractor shall, therefore, keep updated the following requirements and detailing: -

6. Display Board showing detail of work, weekly progress achieved with respect to targets, reason of shortfall, status of manpower, wages being paid for different categories of workers.
7. Entrance and area surrounding to be kept cleaned.
8. Display layout plan key plan, building drawings including plans, elevations and sections.
9. Up to date displays of programme chart (Bar charts).
10. Keep details of quantities executed, balance quantities, deviations, possible Extra item, substituted Item etc.
11. Keep plastic / cloth mounted one sets of building drawings.
12. Set of Helmets and safety shoes for safety.

11. INSURANCE POLICIES:

Before commencing the execution of work, the Contractor shall, without in any way limiting his obligations and liabilities, insure at his own cost and expense against any damage or loss or injury, which may be caused to any person or property, at site of work. The Contractor shall obtain and submit to the Engineer-in-Charge proper Contractor All Risk Insurance Policy for an amount equivalent to the contract amount for this work, with Engineer-in-Charge as the first beneficiary. The insurance shall be obtained in joint names of Engineer-in-Charge and the Contractor (who shall be second beneficiary). Also, he shall indemnify the Department from any liability during the execution of the work.

12.0. APPLICABLE PERMITS:

12.1 The contractor(s) shall give to the Municipality, police and other authorities all necessary notices etc. that may be required by law and obtain all requisite licenses for temporary obstructions, enclosures etc. and pay all fee, taxes including GST and charges which may be levied on account of these operations in executing the contract. He shall make good any

damage to the adjoining property whether public or private and shall supply and maintain lights either for illumination or for cautioning the public at night.

12.2 The contractor shall ensure that applicable permits mandated by the local bodies and in case warranted for this work are obtained as required under the Applicable Laws.

13.0 LOCAL BYE-LAWS:

13.1 The building work shall be carried out in the manner complying in all respects with the requirements of relevant bye-laws of the local body under the jurisdiction of which the work is to be executed or as directed by the Engineer-in-Charge and nothing extra shall be paid on this account.

13.2 Some restrictions may be imposed by the local police etc. on the working time and for movement of labour, materials etc. the contractor shall be bound to follow all such restrictions/instructions and nothing extra shall be payable on this account.

13.3 The contractor shall not stack building material/ malba on the road or on the land owned by any other authority, as the case may be. In case, the Contractor is found stacking the building material/ malba as stated above, he shall be liable to pay the stacking charges as may be levied by local body or authority and also to face penal action as per the rules, regulations and bye-laws of the said body or authority. The Engineer-in-Charge shall be at liberty to recover the sums due but not paid to the concerned authorities on the above counts from any sums due to the contractor including amount of the Security Deposit or Retention Money in respect of this contract or any other contract.

14.0 FINAL TESTING OF THE INSTALLATION:

The Contractor shall demonstrate trouble free functioning of all the Civil and E & M installations and services. The Engineer-in-Charge or his authorized representatives shall carry out final inspection of the various Civil and E & M services and installations. Any defect(s) noticed during demonstration shall be rectified by the Contractor at his own cost to the entire satisfaction of the Engineer-in-Charge. Nothing extra shall be payable on this account.

15.0 **No surplus land is available with the department for allotting to Contractor to set up Labour Campus. The Contractor should make his own arrangement for hiring suitable piece of land for making Labour Campus as per CPWD Model Rules for protection of health and sanitary arrangements which is forming part of GCC-2023, CPWD Specifications and Special Conditions of NIT.**

16. All the Guidelines/instructions regarding measures Procedures for containment of Covid-19 issued from time to time by Ministry of Home Affairs/Ministry of Health, Government of India, Kerala Government or any other statutory Authority are to be strictly adhered to.

17. The quoted rates shall be deemed to include cost of all measures for COVID control as per guidelines / SOPs / Statutory instructions of Government authorities from time to time and nothing extra shall be paid.

18. The rates quoted by the tenderer shall be inclusive of all taxes including GST and levies applicable in respect of this contract. Government will not entertain any claim whatsoever in respect of the same.

19. In case of reduction in scope of work no claim on account of reduction in value of work, loss of expected profit, consequential overheads etc., shall be entertained.

GUIDELINES REGARDING SIGNING OF INTEGRITY PACT BY THE BIDDER AT THE TIME OF SUBMISSION OF BID

Sub: Clarification regarding Introduction of Integrity Pact introduced vide OM No. CON/255 dated 23.05.2011

A new provision of integrity Pact (IP) was introduced in GCC. It is mentioned that at the time of submission of bid, it shall be mandatory to sign the pact by the bidder failing which the bidder will stand disqualified from the tendering process and such bid would be summarily rejected.

Some field Units have raised their doubts regarding submission of duly signed Integrity Pact by the bidder at the time of submission of bid. In this regard it is clarified that :-

1. Submission of duly signed Integrity Pact by the bidder is applicable in case of manual tendering where e-tendering is not followed.

2. In case of manual tendering Executive Engineer should sign the first page addressed to the intending bidder at the time of issue of tender form and before submission of the bid, each bidder shall sign IP at respective places and submit the bid. If duly signed IP is not submitted by the bidder, such bid shall not be considered.

3. In case of e-tendering, Integrity Pact shall be treated in the same manner as other components of the bid document. In e-tendering, the intending bidder does not sign any document physically and entire bid document is submitted through digital signature. Since IP is a part of bid document no separate physical submissions required with other documents to be submitted in the office of tender opening authority. In addition to other component of bid document, the Integrity Pact shall also be signed between Executive Engineer and successful bidder after acceptance of bid.

4. Further CVC guideline issued vide Lr. No. 007/VGL/033/396514 dated 28.09.2018 will be applicable.

INTEGRITY PACT

To,

……..,
……..,
……..

Sub: NIT No.: **49/EE(E)-KOCHI/2026-27** for the work of **SITC of Audio Visual system for Auditorium and Exhibition room in Independent new building for CMET, Athani, Thrissur, Kerala.**

Dear Sir,

It is here by declared that CPWD is committed to follow the principle of transparency, equity and competitiveness in public procurement. The subject Notice Inviting Tender (NIT) is an invitation to offer made on the condition that the Bidder will sign the integrity Agreement, which is an integral part of tender/bid documents, failing which the tenderer/bidder will stand disqualified from the tendering process and the bid of the bidder would be summarily rejected.

This declaration shall form part and parcel of the Integrity Agreement and signing of the same shall be deemed as acceptance and signing of the Integrity Agreement on behalf of the CPWD.

Yours faithfully

Executive Engineer -Electrical
CPWD, Kochi

INTEGRITY PACT

To,

The Executive Engineer-Electrical
CPWD, Kochi

Subject: Submission of tender for the work of **SITC of Audio Visual system for Auditorium and Exhibition room in Independent new building for CMET, Athani, Thrissur, Kerala.**

Dear Sir,

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

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

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

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

Yours faithfully

(Duly authorized signatory of the Bidder)

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

INTEGRITY AGREEMENT

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

BETWEEN

President of India represented through the **Executive Engineer-Electrical, CPWD, Kochi** (Hereinafter referred as the Principal/Owner', which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

AND

.....(Name and Address of the Individual/firm/ Company) through ..... (Hereinafter referred to as the (Details of duly authorized signatory)

"**Bidder/Contractor**" and which expression shall unless repugnant to the meaning or context here of include its successors and permitted assigns)

Preamble

WHEREAS the Principal/Owner has floated the Tender (**NIT No. 49/EE(E)-KOCHI/2026-27**) (hereinafter referred to as "**Tender/Bid**") and intends to award, under laid down organizational procedure, contract for **SITC of Audio Visual system for Auditorium and Exhibition room in Independent new building for CMET, Athani, Thrissur, Kerala.** hereinafter referred to as the **"Contract"**.

AND WHEREAS the Principal/Owner values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relation with its Bidder(s) and Contractor(s). AND WHEREAS to meet the purpose aforesaid both the parties have agreed to enter into this Integrity Agreement (hereinafter referred to as **"Integrity Pact" or "Pact"**), the terms and conditions of which shall also be read as integral part and parcel of the Tender/Bid documents and Contract between the parties.

NOW, THEREFORE, in consideration of mutual covenants contained in this Pact, the parties hereby agree as follows and this Pact witnesses as under:

Article 1: Commitment of the Principal/Owner

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

(a) No employee of the Principal/Owner, personally or through any of his/her family members, will in connection with the Tender, or the execution of the Contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.

(b) The Principal/Owner will, during the Tender process, treat all Bidder(s) with equity and reason. The Principal/Owner will, in particular, before and during the Tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional

information through which the Bidder(s) could obtain an advantage in relation to the Tender process or the Contract execution.

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

2) If the Principal/Owner obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal code (IPC)/Prevention of Corruption Act, 1988 (PC Act) or is in violation of the principles herein mentioned or if there be a substantive suspicion in this regard, the Principal/Owner will inform the Chief Vigilance Officer and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures.

Article 2: Commitment of the Bidder(s)/Contractor(s)

1) It is required that each Bidder/Contractor (including their respective officers, employees and agents) adhere to the highest ethical standards, and report to the Government / Department all suspected acts of fraud or corruption or Coercion or Collusion of which it has knowledge or becomes aware, during the tendering process and throughout the negotiation or award of a contract.

2) The Bidder(s)/Contractor(s) commits himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the Tender process and during the Contract execution:

a) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal/Owner's employees involved in the Tender process or execution of the Contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the Tender process or during the execution of the Contract.

b) The Bidder(s)/Contractor(s) will not enter with other Bidder(s) into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to cartelize in the bidding process.

c) The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act. Further the Bidder(s)/Contract(s) will not use improperly, (for the purpose of competition or personal gain), or pass on to others, any information or documents provided by the Principal/Owner as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted Electronically.

d) The Bidder(s)/Contractor(s) of foreign origin shall disclose the names and addresses of agents/ representatives in India, if any. Similarly Bidder(s)/Contractor(s) of Indian Nationality shall disclose names and addresses of foreign agents/representatives, if any. Either the Indian agent on behalf of the foreign principal or the foreign principal directly could bid in a tender but not both. Further, in cases where an agent participate in a tender on behalf of one manufacturer, he shall not be allowed to quote on behalf of another manufacturer along with the first manufacturer in a subsequent/parallel tender for the same item.

e) The Bidder(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the Contract.

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

4) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm indulge in fraudulent practice means a willful misrepresentation or omission of facts or submission of fake/forged documents in order to induce public official to act in reliance thereof, with the purpose of obtaining unjust advantage by or causing damage to justified interest of others and/or to influence the procurement process to the detriment of the Government interests.

5) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm use Coercive Practices (means the act of obtaining something, compelling an action or influencing a decision through intimidation, threat or the use of force directly or indirectly, where potential or actual injury may befall upon a person, his/ her reputation or property to influence their participation in the tendering process).

Article 3: Consequences of Breach

Without prejudice to any rights that may be available to the Principal/Owner under law or the Contract or its established policies and laid down procedures, the Principal/Owner shall have the following rights in case of breach of this Integrity Pact by the Bidder(s)/Contractor(s) and the Bidder/ Contractor accepts and undertakes to respect and uphold the Principal/Owner's absolute right:

1) If the Bidder(s)/Contractor(s), either before award or during execution of Contract has committed a transgression through a violation of Article 2 above or in any other form, such as to put his reliability or credibility in question, the Principal/Owner after giving 14 days notice to the contractor shall have powers to disqualify the Bidder(s)/Contractor(s) from the Tender process or terminate/determine the Contract, if already executed or exclude the Bidder/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of transgression and determined by the Principal/Owner. Such exclusion may be forever or for a limited period as decided by the Principal/Owner.

2) Forfeiture of EMD/Performance Guarantee/Security Deposit: If the Principal/Owner has disqualified the Bidder(s) from the Tender process prior to the award of the Contract or terminated/determined the Contract or has accrued the right to terminate/determine the Contract according to Article 3(1), the Principal/Owner apart from exercising any legal rights that may have accrued to the Principal/Owner, may in its considered opinion forfeit the entire amount of Earnest Money Deposit, Performance Guarantee and Security Deposit of the Bidder/Contractor.

3) Criminal Liability: If the Principal/Owner obtains knowledge of conduct of a Bidder or Contractor, or of an employee or a representative or an associate of a Bidder or Contractor which constitutes corruption within the meaning of IPC Act, or if the Principal/ Owner has substantive suspicion in this regard, the Principal/Owner will inform the same to law enforcing agencies for further investigation.

Article 4: Previous Transgression

1) The Bidder declares that no previous transgressions occurred in the last 5 years with any other Company in any country confirming to the anti corruption approach or with Central Government or State Government or any other Central/State Public Sector Enterprises in India that could justify his exclusion from the Tender process.

2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the Tender process or action can be taken for banning of business dealings/ holiday listing of the Bidder/Contractor as deemed fit by the Principal/ Owner.

3) If the Bidder/Contractor can prove that he has resorted / recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal/Owner may, at its own discretion, revoke the exclusion prematurely.

Article 5: Equal Treatment of all Bidders/Contractors/Subcontractors

1) The Bidder(s)/Contractor(s) undertake(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact. The Bidder/Contractor shall be responsible for any violation(s) of the principles laid down in this agreement/Pact by any of its Subcontractors/ sub-vendors.

2) The Principal/Owner will enter into Pacts on identical terms as this one with all Bidders and Contractors.

3) The Principal/Owner will disqualify Bidders, who do not submit, the duly signed Pact between the Principal/Owner and the bidder, along with the Tender or violate its provisions at any stage of the Tender process, from the Tender process.

Article 6- Duration of the Pact

This Pact begins when both the parties have legally signed it. It expires for the Contractor/ Vendor 12 months after the completion of work under the contract or till the continuation of defect liability period, whichever is more and for all other bidders, till the Contract has been awarded. If any claim is made/lodged during the time, the same shall be binding and continue to be valid despite the lapse of this Pacts as specified above, unless it is discharged/ determined by the Competent Authority, CPWD.

Article 7- Other Provisions

1) This Pact is subject to Indian Law, place of performance and jurisdiction is the Headquarters of the Division of the Principal/Owner, who has floated the Tender.

2) Changes and supplements need to be made in writing. Side agreements have not been made.

3) If the Contractor is a partnership or a consortium, this Pact must be signed by all the partners or by one or more partner holding power of attorney signed by all partners and consortium

members. In case of a Company, the Pact must be signed by a representative duly authorized by board resolution.

4) Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intensions.

5) It is agreed term and condition that any dispute or difference arising between the parties with regard to the terms of this Integrity Agreement / Pact, any action taken by the Owner/Principal in accordance with this Integrity Agreement/ Pact or interpretation thereof shall not be subject to arbitration.

Article 8- LEGAL AND PRIOR RIGHTS

All rights and remedies of the parties hereto shall be in addition to all the other legal rights and remedies belonging to such parties under the Contract and/or law and the same shall be deemed to be cumulative and not alternative to such legal rights and remedies aforesaid. For the sake of brevity, both the Parties agree that this Integrity Pact will have precedence over the Tender/Contact documents with regard any of the provisions covered under this Integrity Pact. IN WITNESS WHEREOF the parties have signed and executed this Integrity Pact at the place and date first above mentioned in the presence of following witnesses:

..... (For and on behalf of Principal/Owner)

..... (For and on behalf of Bidder/Contractor) WITNESSES:

1. ..... (signature, name and address)

2. ..... (signature, name and address)

Place:
Dated :

On non-judicial stamp paper of minimum Rs. 100
(Guarantee offered by Bank to CPWD in connection with the execution of contracts)

Form of Bank Guarantee for Earnest Money Deposit/Performance Guarantee/Security Deposit/Mobilization Advance

a) Whereas the Executive Engineer……(name of division)……CPWD on behalf of the President of India (hereinafter called "The Government") has invited bids under …….(NIT number)……dated…….for ……(name of work)……The Government has further agreed to accept irrevocable Bank Guarantee for Rs…….(Rupees…….only) valid upto…….(date)*……as Earnest Money Deposit from……(name and address of contractor)……..(hereinafter called "the Contractor") for compliance of his obligations in accordance with the terms and conditions of the said NIT.

OR**

Whereas the Executive Engineer……..(name of division)……, CPWD on behalf of the President of India (hereinafter called "The Government") has entered into an agreement bearing number……with……..(name and address of the contractor)……..(herein after called "the Contractor") for execution of work……(name of work)…….The Government has further agreed to accept an irrevocable Bank Guarantee for Rs…….(Rupees…….only) valid upto……..(date)……as **Performance Guarantee/Security Deposit/Mobilization Advance** from the said Contractor for compliance of his obligations in accordance with the terms and conditions of the agreement.

b) We,…….(indicate the name of the bank)……(herein after referred to as "the bank"), hereby undertake to pay to the Government an amount not exceeding Rs…….. (Rupees……..only) on demand by the Government within 10 days of the demand.

c) We,……(indicate the name of the Bank)……., do here by undertake to pay the amount due and payable under this guarantee without any demur, merely on a demand from the Government stating that the amount claimed is required to meet the recoveries due or likely to be due from the said Contractor. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs……(Rupees…….only).

d) We,…….(indicate the name of the Bank)……., further undertake to pay the Government any money so demanded notwithstanding any dispute or disputes raised by the contractor in any suit or proceeding pending before any Court or Tribunal, our liability under this Bank Guarantee being absolute and unequivocal. The payment so made by us

under this Bank Guarantee shall be a valid discharge of our liability for payment there under and the Contractor shall have no claim against us for making such payment.

e) We,……(indicate the name of the Bank)…….., further agree that the Government shall have the fullest liberty without our consent and without affecting in any manner our obligation here under to vary any of the terms and conditions of the said agreement or to extend time of performance by the said contractor from time to time or to postpone for any time or from time to time any of the powers exercisable by the Government against the said contractor and to forbear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation or extension being granted to the said Contractor or for any forbearance, act of omission on the part of the Government or any indulgence by the Government to the said Contractor or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

f) We,……..(indicate the name of the Bank)……., further agree that the Government at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor at the first instance without proceeding against the Contractor and notwithstanding any security or other guarantee the Government may have in relation to the Contractor's liabilities.

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

h) We,……..(indicate the name of the Bank)……, undertake not to revoke this guarantee except with the consent of the Government in writing.

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

Date……

Witness:

1. Signature……
   Name and address

Authorized Signatory
Name

Designation

Staff Code No.

Bank Seal

2 Signature……..
Name and address

*Date to be worked out on the basis of validity period of 90 days where only financial bids are invited and 180 days for two/three bid system from the date of submission of tender.

****In paragraph 1, strike out the portion not applicable. Bank Guarantee will be made either for earnest money or for performance guarantee/security deposit/mobilization advance, as the case may be.**

GOVERNMENT OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT
Percentage Rate Tender & Contract for Works

(A) Tender for the work of: **SITC of Audio Visual system for Auditorium and Exhibition room in Independent new building for CMET, Athani, Thrissur, Kerala.**

To be uploaded by **1500. hours on 24.10.2026** to upload at https://**etender.cpwd.gov.in**

(i) To be opened in presence of tenderers who may be present at **15:30 hours on 24.10.2026** in the office of the **Executive Engineer-Electrical, CPWD, Kendriya Bhavan, Kakkanad, Kochi - 682037**.

TENDER

I/We have read and examined the notice inviting tender, schedule, A, B, C, D, E & F Specifications applicable, Drawings & Designs, General Rules and Directions, Conditions of Contract, clauses of contract, Special conditions, Schedule of Rate & other documents and Rules referred to in the conditions of contract and all other contents in the tender document for the work.

I/We hereby tender for the execution of the work specified for the President of India within the time specified in Schedule 'F' viz., schedule of quantities and in accordance in all respect with the specifications, designs, drawing and instructions in writing referred to in Rule-1 of General Rules and Directions and in Clause 11 of the Conditions of contract and with such materials as are provided for, by, and in respect of accordance with, such conditions so far as applicable.

I/We agree to keep the tender open for Seventy Five (75) days from the date of opening of eligibility bid in case tenders are invited on 2 /3 bid/ system for specialized work and not to make any modification in its terms and conditions.

I/We have deposited EMD for the prescribed amount in the office of concerned Executive Engineer as per the bid document.

A copy of earnest money in receipt treasury challan / deposit at call receipt of a scheduled bank/ fixed deposit receipt of scheduled bank / demand draft of a scheduled bank / bank guarantee issued by a schedule bank is scanned and uploaded (strike out as the case may be). If I/We, fail to furnish the prescribed performance guarantee within prescribed period. I/We agree that the said President of India or his successors, in office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I/We fail to commence work as specified, I/We agree that President of India or the successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money and the performance guarantee absolutely, otherwise the said earnest money shall be retained by him towards security deposit to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form.

Further, I/We agree that in case of forfeiture of Earnest Money or Performance Guarantee as aforesaid, I/We shall be debarred for participation in the re-tendering process of the work.

I/We undertake and confirm that eligible similar work(s) has/have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of

Department, then I/We shall be debarred for tendering in CPWD in future forever. Also, if such a violation comes to the notice of Department before date of start of work, the Engineer-in-Charge shall be free to forfeit the entire amount of Earnest money deposit/Performance Guarantee.

I/We hereby declare that I/We shall treat the tender documents drawings and other records connected with the work as secret/confidential documents and shall not communicate information/derived therefrom to any person other than a person to whom I/We am/are authorized to communicate the same or use the information in any manner prejudicial to the safety& integrity of the State.

Dated: **Signature of Contractor**

Witness: **Postal Address**

Address:

Occupation:

ACCEPTANCE

The above tender (as modified by you as provided in the letters mentioned hereunder) is accepted by me for an on behalf of the President of India for a sum of Rs`……..……..(Rupees…… …… ……).

The letters referred to below shall form part of this contract agreement:-

(a)

(b)

(c)

For & on behalf of President of India

Signatures ……

Dated: **Designation ……**

PROFORMA OF SCHEDULE

SCHEDULE 'A'

Schedule of quantities (as per PWD-3) **: See part D of the NIT**

SCHEDULE 'D' -

Extra schedule for specific requirements/document for the work, if any. : General Terms and Conditions

SCHEDULE 'E'

Reference to General Conditions of contract. CPWD General Conditions of Contract 2023 – Construction Works with up to date amendments.

Name of Work:

SITC of Audio Visual system for Auditorium and Exhibition room in Independent new building for CMET, Athani, Thrissur, Kerala.

Estimated cost of work:	**Rs. 60,20,019/-**
(i) Earnest Money Deposit	**Rs. 1,20,400/-**
(ii) Performance Guarantee	**(a) 5% of Tender Value or Estimated Cost put to Tender (ECPT) [Whichever is higher]**
	(b) Where the Tendered amount is less than Eighty percent (80%) of the Estimated Cost put to Tender (ECPT), the Performance Guarantee, in addition to the requirement under Clause (a) above, shall be increased by an amount equal to the difference between Eighty percent (80%) of the ECPT and the Tendered amount.
(iii) Security Deposit	**2.5% of Tendered Amount**

SCHEDULE 'F'

GENERAL RULES & DIRECTIONS:

Officer inviting tender : Executive Engineer (E) - Kochi
CPWD,Kendriya Bhavan, Kakkanad
Kochi – 682 037

Maximum percentage for quantity of items of work to be executed beyond which rates are to be determined in accordance with Clauses 12.2 & 12.3 as given below :	See under Clause 12

Definitions:

2(v) Engineer-in-Charge	Executive Engineer (E) - Kochi CPWD, Kendriya Bhavan, Kakkanad Kochi – 682 037
2(viii) Accepting Authority.	Executive Engineer (E) – Kochi CPWD, Kendriya Bhavan, Kakkanad Kochi – 682 037
2(x) Percentage on cost of materials and Labour to cover all overheads and profits:	15% [7.5% for Profits + 7.5% for overheads]
2(xi) Standard Schedule of Rates	Delhi Schedule of Rates (E & M) 2025 as modified and corrected and prevailing market rates as applicable.
2(xii) Department	CPWD
2(ii) Standard CPWD Contract Form	CPWD GCC 2023 – Construction Works Form 7/8 with upto date amendments.

Clause 1

(i) Time allowed for submission of Performance Guarantee, Programme Chart (Time and Progress) and applicable Labour licenses, registration with EPFO, ESIC and BOCW Welfare Board or proof of applying thereof from the date of issue of letter of acceptance	**07 (Seven) days**
(ii) Maximum allowance extension with late fee @ 0.1% per day of Performance Guarantee amount beyond the period provided in (i) above	**07 (Seven) days**

Clause 2

Authority for fixing compensation under clause 2	Superintending Engineer – Cochin CPWD, Kendriya Bhavan, Kakkanad Kochi – 682 037

Clause 5

Number of days from the date of issue of letter of acceptance for reckoning date of start	**07(Seven) days**

Milestone(s) as per table given below: -

S.No.	Description of Milestone (Physical)	Time Allowed in Months (from date of start)	Amount to be with-held in case of non-achievement of mile stone
1	Submission of lay out drawing/Technical details, etc, Submission of TDS of materials as per preferred make list for approval and, Shop Floor drawings, SLD etc as required.	**0.50 Months**	1% of Tendered amount
2	Supply of conduits and cables. Placing of order for all major AV equipment after approval etc complete as required.	**1.00 Months**	1% of Tendered amount
3	Supply of AV equipment i/c completion of wiring and cabling etc complete as required	**2.50 Months**	1% of Tendered amount
4	Completion of all works in the scope of NIT i/c , Testing and Commissioning etc.	**3.00 Months**	1% of Tendered amount
5	Trial run i/c training, Statutory approvals and handing over of installation to client complete in all respects.	**4.00 Months**	1% of Tendered amount

Time allowed for execution of work **: 04 (Four) Months**

Authority to decide:

(i) Authority to convey the decision of shifting of mile stone and Extension of time : Executive Engineer (E) – Kochi CPWD, Kendriya Bhavan, Kakkanad Kochi – 682 037

(ii) Rescheduling of mile stones and Extension of time : Superintending Engineer – Cochin CPWD, Kendriya Bhavan, Kakkanad Kochi – 682 037

(iii) Shifting of date of start in case of delay in handing over of site : Superintending Engineer – Cochin CPWD, Kendriya Bhavan, Kakkanad Kochi – 682 037

Schedule of handing over of site

Part	Portion of site	Description	Time Period for handing over reckoned from date of issue of letter of intent.
Part A	**Portion without any hindrance**	**Entire site is available**	
Part B	**Portion with encumbrances**		
Part C	**Portions dependent on work of other agencies**		

Clause 5.2

Documentation of Hindrances	a) The contractor has to first register himself through a registration form, available on CPWD website under 'Contractors Login' tab. After registration, User ID and password will be automatically generated and sent on his registered mobile and email ID. Using this User ID and Password he can access the module and view all the works which are being carried out by him in CPWD and he can register the hindrance against any particular work. After recording the hindrance by the contractor, it will be visible to all concerned officers (JE and above) of that work. An alert through text message and email will be sent to EE. b) Executive Engineer will first assign the work to the JEs/AEs who will give their comments on the hindrance within 2 days. After that Executive Engineer of the work will have to take appropriate action on the hindrance within 2 days. The comments of JEs/AEs will not be visible to contractor, only the decision of the Executive Engineer on the hindrance will be visible to contractor under "Decision of the Engineer-in-charge."

Clause 5.1 (iv)

Schedule of rate of recovery for any delay in submission of the Programme /Modified programme in terms of delay days : **Rs 1000/- per week**

Clause 6
Computerized Measure Book (CMB) / Electronic Measurement Book (EMB)

Mode of Measurement : CMB / EMB

Clause 7

Gross work to be done together with net payment /adjustment of advances for material collected, if any, since the last such payment for being eligible to interim payment : **As per GCC 2023 – Construction Works**

Clause 7A

Whether Clause 7A shall be applicable : Yes

Clause 8A

Authority to decide compensation on account if Contractor fails to submit completion plans : Superintending Engineer – Cochin CPWD, Kendriya Bhavan, Kakkanad Kochi – 682 037

Clause 10A

List of testing equipment to be provided by the Contractor : Megger, Earth Tester, Multimeter

Clause 10B (ii)

Whether Clause 10 B (ii) shall be applicable : No

Clause 10C (Applicable in only those contracts where 10cc is not applicable)

Component of labour expressed as percent of value of work : 25%

Clause 10CA : Deleted

Clause 10CC : ~~Applicable~~ /Not Applicable

13. For Construction period

Sl No.	Relevant component of Material / Labour for price escalation	Percentage of total value of work
~~1.~~	~~Cement component~~	
~~2.~~	~~Labour Component~~	
~~3.~~	~~Civil Component of other Construction Materials~~	
~~4.~~	~~E & M (Electrical & Mechanical) component of Construction Materials~~	
~~5.~~	~~POL (Diesel) component~~	
~~6.~~	~~Reinforcement steel bars / TMT bars / structural steels (including strands and cables) component~~	
~~7.~~	~~Bitumen component~~	
	Total	100%

B **For maintenance period**

Sl No.	Relevant component of Material / Labour for price escalation	Percentage of total value of work
~~1.~~	~~Labour component~~	
~~2.~~	~~Civil Component of other Construction Materials~~	
~~3.~~	~~E & M (Electrical & Mechanical) component of Construction Materials~~	
~~4.~~	~~Bitumen component (For Road work component)~~	
	Total	100%

Clause 11

Specifications to be followed for execution of work: **CPWD General Specifications for Electrical Works Part-I- Internal 2023, Part-II External 2023, As per relevant IE Rules and also as per direction of the Engineer-in-Charge.**

Clause 12

Clause 12	:	The completion cost shall, in no case, exceed 1.5 times the contract amount. Contractor will devise a system to keep a watch on quantum of work vis-a-vis balance item to complete design scope of work and will give the alerts to Engineer-in-charge before taking up extra item(s), deviation(s)so that completion cost does not exceed above limit. Work executed beyond above limit will neither be recorded nor be paid. Engineer-in charge will verify and confirm the alerts before assigning deviations (s) and / or extra item(s) to the contractor. If additional work (s) is required to complete defined scope of work beyond above limit the Engineer-in-charge may take up such work (s) separately. The contractor will not have any claim (s) whatsoever on this account.

Clause 12.2 &.12.3

Deviation Limit beyond which clauses 12.2 & 12.3 shall apply for building work. : **100%**

Clause 16

Competent Authority for deciding reduced rates. : Superintending Engineer – Cochin CPWD, Kendriya Bhavan, Kakkanad Kochi – 682 037

Clause 18

List of mandatory machinery, tools & plants to be deployed execution of by the Contractor at site : As required for timely work as per directions of Engineer-in-charge.

Clause 19C authority to decide penalty for each default **:** Executive Engineer (E) –Kochi, CPWD

Clause 19D authority to decide penalty for each default **:** Executive Engineer (E) –Kochi, CPWD

Clause 19G authority to decide penalty for each default :Executive Engineer (E) –Kochi, CPWD

Clause 19K authority to decide penalty for each default **:** Executive Engineer (E) –Kochi, CPWD

Clause 25

Constitution of Dispute Redressal Committee (DRC)

Conciliator	:	Additional Director General, Region Kochi, CPWD
Arbitrator Appointing Authority	:	Superintending Engineer – Cochin CPWD, Kendriya Bhavan, Kakkanad Kochi – 682 037
Place of Arbitration	:	Cochin, Kerala

Clause 32

Requirement of Technical Representative(s) and recovery Rate

S.No.	Minimum Qualification of Technical Representative	Discipline	Designation (Principal Technical/ Technical Representative	Minimum Experience	Number	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of clause 32	
						Figures	Words
1	Graduate Engineer OR Diploma Engineer	Electrical	Site Engineer	02 Years 05 Years	1	Rs. 15,000/- per month per person	Rupees Fifteen Thousand Only per month per person

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

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

~~**Clause 38 -**~~

~~(i) (a) Schedule / statement for determining theoretical quantity Of cement & bitumen on the basis of DSR 2022 with modified & correction slips issued till last date of submission of Tender.~~

~~(ii) Variations permissible on theoretical quantities:~~

~~(a) Cement~~
~~For Works with estimated cost put to Tender~~
~~Not more than Rs 25 Lakhs : 3% plus/minus~~
~~For Works with estimated cost put to Tender~~
~~more than Rs 25 Lakhs : 2% plus/minus~~
~~(b) Bitumen all works : 2.5% plus & only & nil on minus side~~
~~(c) Steel reinforcement and structural steel~~
~~Sections for each diameter, section & category : 3% plus/minus~~
~~(d) All other materials : NIL~~

ASSISTANT ENGINEER (E) (P)
O/o EE(E)-Kochi, CPWD, Kochi

EXECUTIVE ENGINEER (E) – KOCHI
CPWD, Kochi

INTEGRITY PACT

To,
……..
……..
……..

Sub: NIT No. 49/EE(E)-KOCHI/2026-276 for the work:-

Name of Work: SITC of Audio Visual system for Auditorium and Exhibition room in Independent new building for CMET, Athani, Thrissur, Kerala.

Dear Sir,

It is here by declared that CPWD is committed to follow the principle of transparency, equity and competitiveness in public procurement.

The subject Notice Inviting Tender (NIT) is an invitation to offer made on the condition that the Bidder will sign the integrity Agreement, which is an integral part of tender/bid documents, failing which the tenderer/bidder will stand disqualified from the tendering process and the bid of the bidder would be summarily rejected.

This declaration shall form part and parcel of the Integrity Agreement and signing of the same shall be deemed as acceptance and signing of the Integrity Agreement on behalf of the CPWD.

Yours faithfully

EXECUTIVE ENGINEER (E) - KOCHI,
CPWD, KOCHI.

INTEGRITY PACT

To,

Executive Engineer (E) - Kochi
C.P.W.D.
Kendriya Bhavan
Kochi - 682037

Sub: Submission of Tender for the work of: -

SITC of Audio Visual system for Auditorium and Exhibition room in Independent new building for CMET, Athani, Thrissur, Kerala.

Dear Sir,

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

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

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

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

Yours faithfully

(Duly authorized signatory of the Bidder)

INTEGRITY PACT

TO BE SIGNED BY THE BIDDER AND SAME SIGNATORY COMPETENT / AUTHORISED TO SIGN THE RELEVANT CONTRACT ON BEHALF OF CPWD.

INTEGRITY AGREEMENT

This Integrity Agreement is made at ..... on this ..... day of ..... 20.....**BETWEEN**
President of India represented through **Executive Engineer (E) -Kochi, C.P.W.D., Kendriya Bhavan, Kochi - 682037,** (Hereinafter referred as the (Address of Division) '**Principal/Owner**', which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)
AND
..... (Name and Address of the Individual/ firm/ Company) through..... (Hereinafter referred to as the (Details of duly authorized signatory) "**Bidder/Contractor**" and which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

PREAMBLE

WHEREAS the Principal / Owner has floated the Tender **(NIT No. 49/EE(E)-KOCHI/2026-27)** (hereinafter referred to as "**Tender/Bid**") and intends to award, under laid down organizational procedure, contract for:-
Name of Work:
SITC of Audio Visual system for Auditorium and Exhibition room in Independent new building for CMET, Athani, Thrissur, Kerala.

Hereinafter referred to as the "**Contract**".

AND WHEREAS the Principal/Owner values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relation with its Bidder(s) and Contractor(s).

AND WHEREAS to meet the purpose aforesaid both the parties have agreed to enter into this Integrity Agreement (hereinafter referred to as "**Integrity Pact**" or "**Pact**"), the terms and conditions of which shall also be read as integral part and parcel of the Tender/Bid documents and Contract between the parties.

NOW, THEREFORE, in consideration of mutual covenants contained in this Pact, the parties hereby agree as follows and this Pact witnesses as under:

Article 1: Commitment of the Principal/Owner

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

(a) No employee of the Principal/Owner, personally or through any of his/her family members, will in connection with the Tender, or the execution of the Contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.

(b) The Principal/Owner will, during the Tender process, treat all Bidder(s) with equity and reason. The Principal/Owner will, in particular, before and during the Tender process, provide to all Bidder(s) the same information and will not provide to any

Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the Tender process or the Contract execution.

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

2) If the Principal/Owner obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal code (IPC)/Prevention of Corruption Act, 1988 (PC Act) or is in violation of the principles herein mentioned or if there be a substantive suspicion in this regard, the Principal/Owner will inform the Chief Vigilance Officer and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures.

Article 2: Commitment of the Bidder(s)/Contractor(s)

1) It is required that each Bidder/Contractor (including their respective officers, employees and agents) adhere to the highest ethical standards, and report to the Government / Department all suspected acts of **fraud or corruption or Coercion or Collusion** of which it has knowledge or becomes aware, during the tendering process and throughout the negotiation or award of a contract.

2) The Bidder(s)/Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the Tender process and during the Contract execution:

(a) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal/Owner's employees involved in the Tender process or execution of the Contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the Tender process or during the execution of the Contract.

(b) The Bidder(s)/Contractor(s) will not enter with other Bidder(s) into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to cartelize in the bidding process.

(c) The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act. Further the Bidder(s)/Contract(s) will not use improperly, (for the purpose of competition or personal gain), or pass on to others, any information or documents provided by the Principal/Owner as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

(d) The Bidder(s)/Contractor(s) of foreign origin shall disclose the names and addresses of agents/representatives in India, if any. Similarly Bidder(s)/Contractor(s) of Indian Nationality shall disclose names and addresses of foreign agents/representatives, if any. Either the Indian agent on behalf of the foreign principal or the foreign principal directly could bid in a tender but not both. Further, in cases where an agent participate in a tender on behalf of one manufacturer, he shall not be allowed to quote on behalf of another manufacturer along with the first manufacturer in a subsequent/parallel tender for the same item.

(e) The Bidder(s)/Contractor(s) will, when presenting his bid, disclose (with each tender as per proforma enclosed) any and all CON 255 Page 9 payments he has made, is committed to or

intends to make to agents, brokers or any other intermediaries in connection with the award of the Contract.

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

4) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm indulge in fraudulent practice means a willful misrepresentation or omission of facts or submission of fake/forged documents in order to induce public official to act in reliance thereof, with the purpose of obtaining unjust advantage by or causing damage to justified interest of others and/or to influence the procurement process to the detriment of the Government interests.

5) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm use Coercive Practices (means the act of obtaining something, compelling an action or influencing a decision through intimidation, threat or the use of force directly or indirectly, where potential or actual injury may befall upon a person, his/ her reputation or property to influence their participation in the tendering process).

Article 3: Consequences of Breach

Without prejudice to any rights that may be available to the Principal/Owner under law or the Contract or its established policies and laid down procedures, the Principal/Owner shall have the following rights in case of breach of this Integrity Pact by the Bidder(s)/Contractor(s) and the Bidder/ Contractor accepts and undertakes to respect and uphold the Principal/Owner's absolute right:

1) If the Bidder(s)/Contractor(s), either before award or during execution of Contract has committed a transgression through a violation of Article 2 above or in any other form, such as to put his reliability or credibility in question, the Principal/Owner after giving 14 days notice to the contractor shall have powers to disqualify the Bidder(s)/Contractor(s) from the Tender process or terminate/determine the Contract, if already executed or exclude the Bidder/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of transgression and determined by the Principal/Owner. Such exclusion may be forever or for a limited period as decided by the Principal/Owner.

2) **Forfeiture of Performance Guarantee/Security Deposit**: If the Principal/Owner has disqualified the Bidder(s) from the Tender process prior to the award of the Contract or terminated/determined the Contract or has accrued the right to terminate/determine the Contract according to Article 3(1), the Principal/Owner apart from exercising any legal rights that may have accrued to the Principal/Owner, may in its considered opinion forfeit the entire amount of Performance Guarantee / Security Deposit of the Bidder/Contractor.

3) **Criminal Liability:** If the Principal/Owner obtains knowledge of conduct of a Bidder or Contractor, or of an employee or a representative or an associate of a Bidder or Contractor which constitutes corruption within the meaning of Indian Penal code (IPC)/Prevention of Corruption Act, or if the Principal/Owner has substantive suspicion in this regard, the Principal/Owner will inform the same to law enforcing agencies for further investigation.

Article 4: Previous Transgression

1) The Bidder declares that no previous transgressions occurred in the last 5 years with any other Company in any country confirming to the anticorruption approach or with Central

Government or State Government or any other Central/State Public Sector Enterprises in India that could justify his exclusion from the Tender process.

2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the Tender process or action can be taken for banning of business dealings/ holiday listing of the Bidder/Contractor as deemed fit by the Principal/ Owner.

3) If the Bidder/Contractor can prove that he has resorted / recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal/Owner may, at its own discretion, revoke the exclusion prematurely.

Article 5: Equal Treatment of all Bidders/Contractors/Subcontractors

1) The Bidder(s)/Contractor(s) undertake(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact. The Bidder/Contractor shall be responsible for any violation(s) of the principles laid down in this agreement/Pact by any of its Subcontractors/ sub-vendors.

2) The Principal/Owner will enter into Pacts on identical terms as this one with all Bidders and Contractors.

3) The Principal/Owner will disqualify Bidders, who do not submit, the duly signed Pact between the Principal/Owner and the bidder, along with the Tender or violate its provisions at any stage of the Tender process, from the Tender process.

Article 6- Duration of the Pact

This Pact begins when both the parties have legally signed it. It expires for the Contractor/Vendor 12 months after the completion of work under the contract or till the continuation of defect liability period, whichever is more and for all other bidders, till the Contract has been awarded.

If any claim is made/lodged during the time, the same shall be binding and continue to be valid despite the lapse of this Pacts as specified above, unless it is discharged/determined by the Competent Authority, CPWD.

Article 7- Other Provisions

1) This Pact is subject to Indian Law, place of performance and jurisdiction is the Head quarters of the Division of the Principal/Owner, who has floated the Tender.

2) Changes and supplements need to be made in writing. Side agreements have not been made.

3) If the Contractor is a partnership or a consortium, this Pact must be signed by all the partners or by one or more partner holding power of attorney signed by all partners and consortium members. In case of a Company, the Pact must be signed by a representative duly authorized by board resolution.

4) Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intensions.

5) It is agreed term and condition that any dispute or difference arising between the parties with regard to the terms of this Integrity Agreement / Pact, any action taken by the Owner/Principal in accordance with this Integrity Agreement/ Pact or interpretation thereof shall not be subject to arbitration.

Article 8- LEGAL AND PRIOR RIGHTS

All rights and remedies of the parties hereto shall be in addition to all the other legal rights and remedies belonging to such parties under the Contract and/or law and the same shall be deemed to be cumulative and not alternative to such legal rights and remedies aforesaid. For the sake of brevity, both the Parties agree that this Integrity Pact will have precedence over the Tender/Contact documents with regard any of the provisions covered under this Integrity Pact.

IN WITNESS WHEREOF the parties have signed and executed this Integrity Pact at the place and date first above mentioned in the presence of following witnesses:

.....
(For and on behalf of Principal/Owner)

.....
(For and on behalf of Bidder/Contractor)

WITNESSES:

1. .....
(Signature, name and address)

2. .....
(Signature, name and address)

Place :
Date :

PART -B

SPECIAL CONDITIONS,
PARTICULAR SPECIFICATIONS,
LIST OF PREFFERED MAKES

PARTICULAR SPECIFICATIONS AND SPECIAL CONDITIONS FOR E&M WORKS

1. GENERAL

1. The tenderer should in his own interest visit the sites and familiarize himself with the site conditions before tendering.
2. No T&P shall be issued by the department and nothing extra shall be paid on account of this.
3. Care shall be taken, while handling / installing / maintaining the equipment/ carrying out the work, to avoid damage to the building/ premises. The Contractor shall arrange to repair all damages to the building caused by him so as to bring to the original condition. He shall also arrange to remove all unwanted waste materials from site, arising out of his work.
4. The Contractor shall carry out the work in such a manner so as not to interfere or affect or disturb other works being executed by other agencies if any. No claim in the matter shall be entertained.

2. RATES TAXES AND DUTIES:

1. The work shall be treated as on works contract basis and the rates tendered shall be for complete items of works inclusive of all taxes (including works contract tax), duties, and levies etc. and all charges for items contingent to the work, such as packing, forwarding, insurance, freight and delivery, installation, testing, commissioning etc at site i/c temporary constructional storage, risk, overhead charges, general liabilities/ obligations etc.
2. Being an indivisible works contract, sales tax, octroi, excise duty etc. are not payable separately.
3. GST for the work shall be included within the quoted rates for the various items.
4. All statutory deductions like GST, Building and other construction workers welfare cess etc at applicable rates will be made from the Contractors bill.

3. COMPLIANCE WITH REGULATIONS

The work shall comply in all respects with this specification and:

a. The Building Regulations applying to the project including requirements of the National Building Code 2016.

b. Wiring rules and regulations including requirements of Central Electricity Authority (Measures Relating to Safety and Electric Supply) Regulations 2023, National Electrical Code of India 2023, the local electricity supply authority and electrical inspectorate.

c. Any other regulations that apply directly or indirectly to such installations in the location. Where conflict arise between this specification and any of the applicable acts, codes or standards the highest standard of materials and workmanship shall prevail.

d. If the contractor proposes to supply finished goods procured directly or indirectly from vendors, from the countries sharing land border with India, such vendor will be required to be registered with the competent authority under Government of India. Such procurement shall be accepted only on furnishing the details of such registration.

e. For materials to be used in work for which Government of India has notified minimum percentage of local content under, Public Procurement (Preference to Make in India) Order 2017 (Amended up to date), it shall be mandatory to supply materials meeting such stipulation.

f. Prior to commencement of work, all applicable statutory clearances required for taking up the work shall be obtained by the contractor.

4. TERMS OF PAYMENT

4.1 Payment will be made against completion of specific stages of work. The percentage of contract rates payable against various stages of work is given below.

(a) For Internal Electrical Installations:

S.N.	Stage of Work	Payment terms in %
1	Supplying and laying/fixing of conduit, switch boxes, DBs etc.	40%
2	On completion of wiring	50%
3	Supply of fans & fittings	75%
4	Installation of equipment, earthing etc	85%
5	Testing & commissioning	95%
6	Handing Over	100%

(b) For other E&M packages:

S.N	Item of work	On initial inspection of materials and delivery at site in good condition on pro-rata basis	On completion of pro-rata installation	On completion of testing and commissioning	After obtaining statutory clearances, trial run, training and handing over
1	Audio / Visual System	70	15	10	5

4.2 No claim for payment shall accrue to the contractor for incomplete stages.

4.3 The department may at its discretion, allow part payments on written request from the contractor, on account of compelling reasons to be brought on record. In such event, the part rates assessed by the engineer-in-charge will be final and binding.

5. ADDITIONAL CONDITIONS AND TECHNICAL SPECIFICATIONS

1 The work shall be generally carried out in accordance with tender specifications and the following specifications/ rules amended upto date:

(i) Additional conditions and technical specifications for this work.
(ii) Drawings for this work.
(iii) CPWD General Specifications for Electrical Works -Part-I Internal 2023 and Part- II External 2023.
(iv) National Electrical Code of India 2011
(v) National Building Code 2016.
(vi) Relevant IS Codes.
(vii) IEC/ ASHRAE/ SMACNA/ ITU/ TIA/ AVIXA standards.

2. The contractor shall, on demand by the engineer-in-charge, furnish proof to the satisfaction of the engineer-in-charge regarding purchase of materials and equipment from the manufacturer/ manufacturer's authorized outlets.

3. Materials to be used in work are to be ISI marked where available. Prior approval of the engineer-in-charge shall be taken for all the materials required to be used on works. Non-standard quality materials will not be accepted. The engineer-in-charge reserves the right to instruct the contractor to remove any material which, in his opinion, is not acceptable and the same shall be removed from the site of work by the contractor at his cost.

4. All materials used in work shall be supplied with manufacturers test certificates. Samples will be drawn from the supplied materials as per acceptance criterion specified in relevant codes and the same will be got tested through approved third party testing laboratories. The contractor shall make all necessary arrangements and bear all costs towards testing of samples including preparation of samples, packaging, sealing, transportation, loading, unloading, etc. No additional payment will be admissible towards this.

5. Materials shall be brought to site only after taking correct measurements as per actual requirement of work. Excess quantity will not be accepted or paid. Only quantity of materials brought to site and used in work as per actual requirement shall be measured and paid irrespective of quantity mentioned in BOQ/ work schedule. The items brought to site and paid, if not used in the project have to be taken back by the contractor and deductions in the payment shall be made in subsequent bills. The decision of the Engineer-in-charge in this regard shall be final & binding on the contractor.

6. The materials of construction used for various items of work shall be suitable for the environment and intended use of the component. Following general guidelines shall be followed.

(a) Equipment & wiring enclosures, raceways etc used indoor shall be with epoxy powder coated/ hot dipped galvanized finish.

(b) Support structures, fasteners, raceways etc used outdoor shall be of hot dipped galvanized steel or stainless steel.

(c) Paint finish for pipelines used outdoor shall be two coats of epoxy primer with two coats of PU finish. Paint finish for pipelines used indoor shall be two coats of zinc chromate primer with two coats of enamel over coat.

(d) Only UV stabilized SMC/ die-cast aluminium/ GI powder coated enclosures with minimum ingress protection of IP65 may be used outdoor.

7. No work shall be initiated without getting the work method statement approved by the Engineer-in-Charge. Work shall be executed only as per the approved work method statement.

8. Bad workmanship will not be accepted. Such work is liable for rejection and shall be rectified by the contractor at his own cost as per the specifications and directions given by the engineer-in-charge.

9. All repairs and patch works shall be neatly carried out to match with the original finish and to the full satisfaction of the engineer-in-charge.

10. On completion of the installation, the contractor shall arrange for conducting pre-commissioning tests as required by the applicable codes. A report of such tests shall be compiled and submitted to the engineer-in-charge for his approval. Such tests shall commence only on the approval of this report by the engineer-in-charge and shall be carried out by those authorized, skilled, experienced and certified permit holders of the supervisor category.

11. The contractor has to make his own arrangement for stores and watch and ward and no extra claim for this will be entertained.

12. The contractor has to make his own arrangement at his own cost for all the general and special T&P required on this work.

13. The contractor has to make his own arrangement for power supply required for execution of the work.

14. The contractor has to make his own arrangement for water supply required for execution of the work.

15. All the debris due to the works shall be removed from the site by the contractor as soon as the work is completed.

16. The materials used in the work shall be of approved make as per preferred make list.

17. Defect Liability Period*:* All equipment shall be guaranteed for a period of **12 Months** from the date of taking over by the Department. Any defective materials and equipment shall be replaced free of cost at the direction of the Engineer-in-Charge during this period. In case it is felt by the department that undue delay is being caused by the contractor in carrying out these works, the same will be got done by the department at the risk and cost of the contractor. The decision of the Engineer-in-charge in this regard shall be final & binding on the contractor.

18. Five year OEM warrantee from the date of commissioning shall be availed by the contractor for all LED fittings used in the work. A letter/ undertaking from the OEM (Annexure – X) shall be submitted in support of this. If this condition is not fulfilled by the contractor, 5% of the cost of LED fittings will be forfeited from the security deposit deducted for the total work and balance amount only will be refunded after completion of defect liability period.

19. Additional conditions and technical specifications for various components of work to be executed are given in the following sections.

20. Order of Preference:

Should there be any difference or discrepancy between the description of items as given in the Schedule of Quantities, technical specifications for individual items of work (including additional and commercial conditions) and IS Codes etc., the following order of preference shall be followed:

a) Description of Schedule of quantities.
b) Particular specification and Special conditions
c) Drawings.
d) CPWD General Specifications of that particular work.
e) Relevant IS or any other International code in case IS code is not available.

(a) ADDITIONAL CONDITIONS FOR ELECTRICAL WORKS

A) WIRING SYSTEM

1. Recessed/ slab wiring shall be done using medium class PVC conduits (except for fire alarm wiring & data cabling for which specifications for open wiring may be followed).
2. Open wiring shall be done using GI conduits.
    1. Surface conduits shall be supported using spacer bar saddles.
    2. Suspended conduit runs shall be supported using GI strut channel support system. Final connections to equipment from rigid wiring shall be made using GI flexible conduits.
    3. All sections of metallic conduits shall be effectively bonded to the earthing system.
3. Perforated/ ladder/ wire mesh cable trays may be used for horizontal and vertical distribution of cables.
    1. Cable trays shall be hot dipped galvanized including all connection/ support accessories.
    2. All cable tray systems shall be complete with factory made bends, tees, reducers etc and other accessories like connectors, earth clamps, support channels & suspenders, stainless steel cable ties etc.
4. Wiring system shall be complete with all necessary clamps, glands, lugs, connectors, labelling ferrules etc. When different systems of wiring are combined in a single feeder/ circuit, the transition shall be made using suitable glands/ adapters. Nothing extra is payable on this account.
5. **All flexible copper wires used shall have Class 2 copper conductor satisfying the resistance requirements of NEC 2023 Part 1 Section 17, Annex B.**
6. **All flexible copper wires used shall be with FR-LSH PVC insulation.**
7. Wherever light fittings/ fire detectors/ response indicators are proposed to be provided on the false ceiling, the respective wiring shall be brought upto the terminal of the light fittings/ fire detectors/ response indicators. Flexible metal conduits properly glanded to junction boxes shall be used for drawing wires from junctions on ceiling to fittings on false ceiling and nothing extra shall be paid to the contractor for the same.
8. Power cables run under ground with protection shall be laid direct in ground with protection tiles as per IS 5820.
9. Entry of cables into the building shall be through suitable sleeves which shall be sealed after the drawing of cables using waterproof sealing compound/ foam. Nothing extra is payable on this account.

B) LABELLING

1. **GENERAL**
    1. Labelling scheme including sample labels for various equipment forming part of the installation shall be prepared by the contractor and submitted to the engineer-in-charge for his approval. Labelling activities may be taken up only on the approval of this plan by the engineer-in-charge.
2. **CABLES**
    1. All cables shall be labelled showing the fed from/ fed to locations, size of cable and number of runs.
    2. Stamped/ engraved aluminium labels may be used for labelling outdoor enclosures.
    3. Engraved acrylic sheets may be used for labelling indoor enclosures.
    4. Labels shall be connected to the cable/ conduit/ bunched wires using black nylon straps.

5. Fed to labels shall be used near feeding end.
6. Fed from label shall be used near fed end.
7. Both labels shall be used at intermediate locations inside man holes, across openings in walls etc.

3. **PANELS**
    1. All panels shall be provided with labels on the front indicating the switch gear designation, feeding cable size & runs and destination.
    2. Engraved PVC labels may be used for switch gear designation.
    3. Painting may be used for remaining labelling.

4. **DISTRIBUTION BOARDS**
    1. All DBs shall be provided with labels indicating the fed to location of loads & circuit sizes, fed from location & feeder size.
    2. The DB labelling sheets must be computer printed in suitable size paper, laminated and pasted to the inside of the DB door using suitable industrial adhesive.
5. **SWITCH BOARDS**
    1. All switch boards shall be provided with 9mm acid proof labels indicating the DB and circuit designation.
    2. All circuits shall be provided with ferrules on both sides including all loops indicating the circuit, loop and DB designations.
6. **WARNING LABELS**
    1. Approved acid proof graphic labels shall be provided at the following locations.
        a. Near lightning down conductor locations indicating minimum distance of 3m to be maintained in the event of lightning.
        b. In front of panels and DBs warning to keep the area in front of the panel/ DB clear for 1m.
        a. In front of panel incomers warning of the presence of multiple sources of power for panels fed from multiple feeders.
        a. Near earthing points of enclosures and earth buses warning against disconnection of safety earth.

C) ELECTRICAL PANELS

1. **GENERAL CONSTRUCTIONAL FEATURES**
    1. Panels shall be:
        a. Compartmentalized as per Form 4a construction.
        b. Dust and vermin proof construction with minimum IP42 ingress protection for indoor panels and IP54 ingress protection for outdoor panels.
        c. Extendable on both sides.
    2. Panel boards which are free floor standing should be erected on suitable M.S. channels across cable trench if the cable entry to the panel is from bottom and ready made cable trenches exist. Panels should be erected on a M.S. angle iron frame if ready made cable trenches do not exist and if the cable entry to the panel is from the bottom. All mountings in flooring / wall etc should be using anchor fasteners and G.I. hardware.
    3. No equipment needing manual operation shall be located less than 250 mm above floor level. Operating levers, handles etc of highest unit shall not be higher than 1700mm.
    4. Cable alleys shall be provided with suitable hinged doors. Adequate number of slotted cable support arms shall be provided for supporting the cables.
    5. Metallic partitions shall be provided between adjacent cubicles, between feeder compartments, between busbar chambers and other compartments.
    6. Panel shall be divided into suitable sections for convenience during shipment.

7. All doors shall be folded type. All covers and doors may be provided with neoprene gaskets and quarter turn metallic locks (triangular/ square).
8. Provision shall be made for shrouding the outgoing terminals for protection against accidental touch. All exposed live parts shall be totally covered by shrouds. If spreader bars are required, they shall be separated by phase barriers.
9. Wherever more than one cable has to be terminated on any incoming/ outgoing feeder the respective incoming/ outgoing terminals has to be designed in such way as to receive the required number of cables.
10. Bus bars and cable alleys shall be shrouded with FRP sheet for all connections to neighbouring bays.
11. Cable entry shall be provided on top and bottom as per site requirement. All gland plates shall be made out of 3mm thick galvanized iron sheet and bonded to the earth bar using flexible/ braided copper cable with cross section equal to the earth bus.

2. **SHEET METAL WORK**
    1. The panel board shall be fabricated using suitable mild steel structural sections or pressed and shaped cold rolled sheet steel of thickness not less than 2 mm. Stiffeners shall be provided wherever necessary.
    2. All panel edges and door edges shall be reinforced against distortion by rolling, bending or by the addition of welded reinforced members. Cut-outs shall be true in shape and devoid of sharp edges. The complete structure shall be rigid, self-supporting and free from vibration, twists and bends.
3. **PAINTING**
    1. All sheet steel work shall be phosphate with applicable standards. All metal works shall be chemically treated with 7 tank process for degreasing, derusting, phosphating and applied with two coats of Epoxy powder coating.
4. **BUSBARS**
    1. Bus bars shall be of sufficient cross-section so that a current density of 130A/sq.cm is not exceeded at nominal current rating for aluminium bus bars, and 160A/sq.cm for copper bus bars.
    2. The panel shall be provided with three phase and neutral busbar. Busbar shall be of uniform cross section throughout the length of the bus bar section.
    3. All bus bar and bus-taps shall be insulated with color coded heat shrinkable PVC insulation sleeves.
    4. Busbar shall be adequately supported and braced to withstand the stresses due to the specified short circuit currents. Busbar supports shall be made of fiber reinforced moulded plastic material, or cast resin.
5. **CONTROL WIRING**
    1. The control wiring shall be carried out in single core 1.1 KV grade PVC insulated control cables with stranded copper conductors of minimum cross section 1.5 sq.mm (2.5 sq.mm for CT wiring).
    2. Runs of control wires within the switch-board shall be neatly bunched and suitably supported/ clamped. Ferrules shall be provided for easy identification of the control wires.
    3. Control wiring shall correspond to the circuits/ sequence of operations and interlocks agreed to with the Engineer-in-Charge.
    4. Not more than two connections shall be made at any one terminal
    5. The wiring shall be arranged and supported in such a manner that there will be no strain on termination.

6. **LABELLING**
    1. All panels shall be provided with labels on the front indicating the switch gear designation, feeding cable size & runs and destination.
    2. Engraved PVC labels may be used for switch gear designation.
    3. Painting may be used for remaining labelling.
7. **EARTHING/ BONDING**
    1. Panel shall be provided with a set of inter connected earth bus bar running along the entire length of the board at top (where cable entry is from the top) and bottom. At either end of the earth bus, one clamp type terminal with nuts, bolts and washers shall be provided for bolting the earthing conductor.
    2. The earth bus shall be of tinned copper and with minimum cross section equal to half the cross section of the phase bus bar (size may be reduced by 60% for panels with aluminium bus bars).
    3. Earth bus bars shall be supported at suitable intervals. Positive connection between all the metal frames of equipment mounted in the switchboard and earth bus bar shall be provided.
    4. All instrument cases shall be connected to the earth using 1100V grade, single core 2.5 sq.mm stranded, copper conductor cable.
    5. All non current carrying metal hinged doors shall be bonded to the panel using 1100V grade, single core 2.5 sq.mm stranded, copper conductor cable.
    6. All shielded cables used inside panels shall be bonded at both ends to the metallic case/ DIN rails using suitable bonding clamps.
8. **TESTING**
    1. All panels shall be offered for inspection at the factory. All defects and deviations pointed out in the inspection report shall be rectified at the factory before dispatch to site. However, the Engineer-in-Charge may exercise discretion for waiving factory inspection in lieu of proper test certificates.
    2. Panel shall be subjected to following tests as per relevant standards:
        a. Mechanical Operational tests for all movable parts of switch gears, breakers, tripping devices etc.
        b. Testing of interlocks, control circuit operation including timing and sequencing.
        c. Insulation resistance test.
        d. Over voltage withstand test.

D) LED LUMINARIES

1. ANSI/IES LM79, ANSI/IES LM-80 & ANSI/IES TM-21 test reports, IES file and datasheets shall be submitted for all luminaries. Only test reports conducted in NABL accredited laboratories will be accepted.
2. All Luminaries supplied shall have serial numbers or batch code.
3. Luminaries shall be ISI marked as per IS 10322 and conform to IS 16101 to 16108 amended upto date.
4. LEDs shall be low power LEDs of the following makes only - Nitchia, Osram, Philips or manufactured by the OEM in the list of approved makes.
5. Luminaire efficacy of not less than the following
    1. Streetlights: 120 lumen/watt
    2. Panel light, Downlighter, Batten, Industrial fittings, Flood light: 100 lumen/watt.
    3. Other: 80 lumen/watt

6. Minimum Color rendering index (Ra) should be
    1. 70 for streetlights, flood lights, industrial lights and outdoor lights.
    2. 80 for all indoor lights.
7. Correlated Color Temperature (CCT) shall be 5700 K unless otherwise mentioned.
8. The L70B50 life of LED package as per TM-21 report shall be not less than 50,000 Hrs.
9. Light fittings used for outdoor and industrial use shall have minimum IP65 ingress protection, IK08 mechanical impact protection and 4 kV surge protection.
10. OEM accessories and supports shall be used for mounting and suspending luminaries.

TECHNICAL SPECIFICATIONS FOR AV SYSTEM

1. LED Video Wall	
	Specifications
Pixel configuration	1 red, 1 green, 1 blue
Diode Type	Surface Mount Device (SMD)
Technology	Active LED
Pixel Pitch	2.5
Total Resolution of the wall	1536 x 864
Contrast Ratio	5000:1
Life of the Product	100000 Hours or better
Brightness	1000 nits
HDR compatibility	Yes
Input Signals	DP 1.4a x 1, HDMI 2.1 x 2, USB x 2
Colour Bit	16 Bit
Refresh rate	3840 Hz
Viewing Angle	Horizontal: 150 degree or better, Viewing Angle - Vertical: 150 degree or better
Power consumption	Maximum 370 (W/m^2) or less
Heat Generation	Maximum 1200 (BTU /m^2) or less
Certification	Safety Certification, EMC Class A, ESD, RoHS, UL
Pixel density	150000 M Square
Minimum Native Resolution of LED wall controller	4K UHD (3840 X 2160)
Physical Dimension in Meters	Length: Min 3.84 Meters Width: Min 2.16 Meters

Commercial display	
	Specifications
Size	55 inches
Resolution	4K UHD (3840 x 2160)
HDR 10 support	Yes
Inbuilt speaker	Yes, 20W
Connectivity	HDMI eARC, USB, RF, Ethernet, Google cast, Apple Airplay, Bluetooth.
Smart features	OS, Voice recognition, Screen mirroring, Wifi (5), Bluetooth audio playback,

Laser projector	
	Specifications
Projection Technology	RGB Liquid Crystal Shutter Projection System (3LCD)
LCD (Size)	1.70 cm (0.67") (C2 Fine)
LCD (Resolution)	WUXGA
LCD (Aspect Ratio)	16:10
Projection Lens (Type)	Optical Zoom (Manual) / Focus (Manual)
Projection Lens (F-Number)	1.50 – 1.70
Projection Lens (Focal Length)	20 – 31.8 mm
Projection Lens (Zoom Ratio)	1.0 - 1.60
Projection Lens (Throw Ratio)	1.35 – 2.20
Lightsource (Type)	Laser Diode
Lightsource (Life)	20,000 hours (Normal) / 30,000 hours (Extended)

Screen Size	Zoom: Wide 50” - 500” [1.44 - 14.76 m] Zoom: Tele 50” - 500” [2.35 - 23.84 m]
Brightness: White Light Output (Normal / Extended)	5200 lm / 3640 lm
Contrast Ratio	Over 50,00,000:1
Sound Output	10 W
Connectivity	Analog RGB Input: 2, HDMI: 2 (HDCP 2.3), Audio Input: 2, USB Input: 2, RS-232C x1, Wired LAN, Wifi, HDMI and D-Sub 15pin output
Air filter	Electrostatic Filter

Digital podium	
	Specifications
Body	Metallic
Keyboard Slider	Available
Document Camera Tray	Available
Top Sliding	Available
Electronic Monitor Lift	Available
Touch Monitor	Available
Multimedia Controller	Available
Touch Monitor Features	Screen Size 21.5” Diagonal Resolution PC Connection 1080p USB Port Brightness 350 cd/m² Input DVI, HDMI
	Touch Finger and Stylus with Capacitive Touch Stylus Type Battery Pen Display Colors 16.7M Response Time 5ms Contrast Ratio 1000:1

Laptop Interface	USB Type C 1 USB 2.0 Type A 3 USB 3.0 Type A 1 Aux 1 LAN 1 HDMI-In 4 HDMI-Out 1 RS232 1
Mini PC specs:	Intel i7, RAM: 16 GB, SSD: 1TB, Operating System: Windows 11 pro , Keyboard & Mouse

Digital podium	
	Specifications
Body	Metallic
Keyboard Slider	Available
Document Camera Tray	Available
Top Sliding	Available
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Touch Monitor	Available
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Touch Monitor Features	Screen Size 21.5” Diagonal Resolution PC Connection 1080p USB Port Brightness 350 cd/m² Input DVI, HDMI
	Touch Finger and Stylus with Capacitive Touch Stylus Type Battery Pen Display Colors 16.7M Response Time 5ms Contrast Ratio 1000:1
Laptop Interface	USB Type C 1 USB 2.0 Type A 3 USB 3.0 Type A 1 Aux 1 LAN 1 HDMI-In 4 HDMI-Out 1 RS232 1
Mini PC specs:	Intel i7, RAM: 16 GB, SSD: 1TB, Operating System: Windows 11 pro , Keyboard & Mouse

USB audio interface	
	Specifications
Supported sample rates	44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz
Bit Depth	24-bit
Microphone input	
Frequency Response	20Hz - 20kHz ± 0.06dB
Dynamic Range (A-weighted)	116dB
THD+N	-100dB (Minimum @ 8dB Gain)
Variable-level Line Inputs	
Frequency Response	20Hz - 20kHz ± 0.05dB
Dynamic Range (A-weighted)	115.5dB
THD+N	-100dB (Minimum @ 8dB Gain)
Fixed-level Line Inputs	
Frequency Response	20-20kHz ± 0.02dB
Dynamic Range (A-weighted)	115.5dB
THD+N	-105dB

2-way passive speaker	
	Specifications
Speaker type:	2 way passive speaker
TRANSDUCERS	HF - 1 x 1" throat titanium dome compression driver, 1.35" dia voice coil LF - 1 x 10" woofer, 2.5" dia glass-fiber former voice coil
CABINET MATERIAL	Polypropylene
POWER HANDLING	

CONTINUOUS	300W
PROGRAM	600W
PEAK	1200W
SENSITIVITY (1 W/ 1M)	95dB
MAX SPL	
CONTINUOUS	120dB (half space)
PEAK	126dB (half space)
ACOUSTIC	
FREQ. RANGE (-10dB)	55Hz ~ 18kHz
FREQ. RESP. (-3dB)	65Hz ~ 17kHz
CROSSOVER FREQ.	2.0kHz
NOMINAL IMPEDENCE	8Ω
DIRECTIVITY	90º x 50º

Stage monitor (Active speaker)	
Speaker type:	2 way active professional speaker
TRANSDUCERS	
HF	1 x 1" throat compression driver, 1.35" VC
LF	1 x 10" woofer, 250W AES, 2.5" VC
CABINET MATERIAL	Industrial grade PP, Black
FORM FACTOR	Trapezoidal
ACOUSTIC FREQ. RANGE (-10dB)	55Hz ~ 18kHz
ACOUSTIC FREQ. RESPONSE (-3dB)	65Hz ~ 17kHz
MAX SPL CONT. (HALF SP)	120dB
MAX SPL PEAK (HALF SPACE)	126dB

DIRECTIVITY	90º H x 50º V
OUTPUT POWER	
CONT., BIAMPED	200W
PROGRAM, BIAMPED	400W
CROSSOVER FREQUENCY, ACTIVE	2.2kHz
INPUTS	2 x MIC/LINE inputs
OUTPUT	MIX OUT
PROTECTION	Overload, Short-circuit, Overheat, Mains Overvoltage

Power amplifier	
CHANNELS	2
OUTPUT POWER PER CH	
8Ω	600W
4Ω	900W
8Ω BRIDGE	1800W
THD @ RATED POWER	< 1%
DAMPING FACTOR	> 300
S/N RATIO (20Hz~20kHz)	103dB
OUTPUT CIRCUITRY	H
FREQ. RESPONSE (±0.5dB)	20Hz ~ 20kHz
INPUT CONNECTORS/CH	XLR with link
AMPLIFIER AND LOAD PROTECTIO	Short circuit, output DC, thermal, RF protection

Loudspeaker management system	
Input	(3) analog line inputs / (2) AES digital inputs (shared connectors), (1) RTA mic input
Input Impedance	> 30 kΩ, balanced line to line
CMRR	> 50 dB @ 1 kHz
Output	(6) Line Outputs
Output Impedance	120 Ω, balanced line to line
Alignment Delay	Up to 1000 ms per output channel
A/D Converter	24-bit
A/D Dynamic Range	117 dB A-weighted, 114 dB unweighted, 22 kHz BW
Type IV Dynamic Range	129 dB with transient material, A-weighted, 22 kHz BW; 126 dB with transient material, unweighted, 22 kHz BW; 121 dB typical with program material, A-weighted, 22 kHz BW
D/A Converter	24-bit
D/A Dynamic Range	116 dB A-weighted, 113 dB unweighted, 22 kHz BW
Internal Processing Word length	32-bit floating point
Supported Sample Rates	48/96 kHz (32-192 kHz using sample rate conversion)
System Performance Dynamic Range	114 dB A-weighted; 110 dB unweighted
THD+Noise	0.0025% typical at +4 dBu, 1 kHz, 0 dB input gain
Frequency Response	20 Hz – 20 kHz, +0 /- 0.5 dB
Inter channel Crosstalk	< -97 dB, -105 dB typical 20-20 kHz, +4 dBu, all channels measured
Latency	Analog input to output: 2.57 ms (48 kHz), 2.28 ms (96 kHz); Digital AES input to output: 2.31 (48 kHz), 2.15 ms (96 kHz)

24 channel Digital mixer	
Frequency Response	20Hz-20kHz +/- 0.5 dB
THD	Mic input (Min gain to bus) @ 1kHz, Mic input (Max gain to bus) @ 1kHz <0.008%
Noise	Residual Noise -96dBu Mic Input E.I.N.22Hz-22kHz unweighted: -128dB EIN
Input Gain	Mic/Line Gain -6dB to +58dB
Gate	Threshold -inf to +6dB Attack 1ms to 400ms Release 5ms to 2000ms Hold 1ms to 2000ms Depth -inf to 0dB
Compressor	Threshold -90dB +6dB Ratio 1:1 - 50:1 Attack 1ms - 400ms Release 10ms - 2000ms Makeup Gain -24dB - +48dB
EQ Channel	4 band parametric EQ Each Band Freq 20Hz to 22kHz Q .05 - 15 Gain -20dB to +20dB HPF 20Hz to 1kHz, LPF 22kHz to 1kHz
De-esser	Threshold -90dB to 6dB Ratio infinity to 1:1 Frequency 2kHz to 15kHz
EQ Outputs	31 band GEQ, 20Hz - 20KHz +-15dB
Compressor outputs	Threshold -90dB +6dB Ratio 1:1 - 50:1 Attack 1ms - 400ms Release 10ms - 2000ms Makeup Gain -24dB - +48dB
dbx® AFS on all outputs	12 parametric EQ's (6 fixed, 6 floating)
Latency	All Processing ON for inputs and outputs 3.2ms
Input and Output Levels	Mic Input +19.5dBu max Line input +19.5dBu max Mix output +20.5dBu max Headphone outputs 500mW 1 output used
Inputs	10 x XLR combo mic/line inputs
	10 x XLR mic inputs
	Two channels of Hi-Z/instrument

	inputs
	stereo RCA line input
	2-channel USB media player
Output	8 balanced XLR Aux/Matrix outputs
	2 quarter-inch headphone outputs
	balanced stereo XLR and quarter-inch main outputs
	Two-channel USB audio playback
Audio interface	32 x 32 low latency audio interface
HDMI output	Yes

16 channel digital mixer	
Frequency Response	20Hz-20kHz +/- 0.25 dB
THD	-20dBFS @ 1kHz <0.006%
Noise	Residual Noise -96dBu Mic Input E.I.N.22Hz-22kHz unweighted: -109dB EIN Mix Noise masters at unity < -90dBu 1 input to Mix at Unity gain < -86dBu
Cross Talk (@1kHz)	Channel ON attenuation <120dB Channel Fader Attenuation <120dB Mic-Mic -103dB@ 1kHz, -93dB@ 10kHz Line-Line -103dB@ 1kHz, -93dB@ 10kHz
Input Gain	Mic/Line Gain -40dB to +50dB (0.1dB steps, Step accuracy depends on size of fader in GUI)
Gate	Threshold -inf to +6dB Auto Attack Auto Release
Compressor	Threshold -90dB +6dB Ratio 1:1 - 50:1 Attack 1ms - 400ms Release 10ms - 2000ms Makeup Gain -24dB - +48dB

EQ Channel	4 band parametriq EQ Each Band Freq 20Hz to 22kHz Q .05 - 15 Gain -20dB to +20dB HPF 20Hz to 1kHz
De-esser	Threshold -90dB to 6dB Ratio infinity to 1:1 Frequency 2kHz to 15kHz
EQ Outputs	32 band GEQ, 20Hz - 20KHz +-15dB
Compressor outputs	Threshold -90dB +6dB Ratio 1:1 - 50:1 Attack 1ms - 400ms Release 10ms - 2000ms Makeup Gain -24dB - +48dB
AFS on all outputs	12 parametric EQ's (6 fixed, 6 floating)
Latency	Mic in - ADC -DSP -DAC - Line output 1.8ms
Input and Output Levels	Mic Input +20dBu max Line input +20dBu max Mix output +23dBu max Headphone outputs 500mW 1 output used (@120Ω), 380mw both outputs used
Input and Output Impedances	Mic input 10kΩ Line Input 10kΩ Hi-Z Input 250kΩ Outputs all at 100Ω
Input	8 XLR combo mic/line, 4 XLR mic, 2 channels of Hi- Z/instrument inputs, stereo RCA line,
Output	4 balanced XLR Aux outputs, 2 quarter-inch headphone outputs, balanced stereo XLR and quarter inch.
HDMI out	Yes

Matrix Switcher	
Inputs	4 HDMI
Outputs	4 HDMI, 4 S/PDIF, 4 balanced stereo audio.
Ports	1 USB, 1 RS-232, 1 IR IN, 1 ethernet
Video	

Max. Resolution:	4K@60Hz 4:4:4
Max. Data Rate:	18Gbps (6Gbps per graphic channel)
Content Protection	Supports HDCP 2.2/1.4.
HDMI Support	HDR10, xvYCC color, Dolby Ture HD/DTS–HD Master Audio, 3D Video as specified in HDMI 2.0.
Controls:	Local control via front panel switching, memory, lock and EDID buttons, Input/Output LED display. Distance control via user–friendly, embedded web pages via the Ethernet, Protocol 3000 API, and RS–232 serial commands transmitted by a PC, touch screen system or other serial controller.

Tablet	
Storage	128gb
Display	11 inch, 2360x1640-pixel resolution at 264 ppi, 500 nits brightness, Fingerprint-resistant oleophobic coating
CPU	5 core CPU, 4 core GPU, 16 core Neural Engine
Camera	12MP Wide camera, ƒ/1.8 aperture, Digital zoom up to 5x, Five-element lens, Autofocus with Focus Pixels
Front camera	Landscape 12MP Center Stage camera, ƒ/2.4 aperture, Smart HDR 4
Speaker	Stereo speaker
Microphone	Dual microphone
Wifi	Wi-Fi 6 (802.11ax) with 2x2 MIMO, Simultaneous dual band Bluetooth 5.3

Sensor	Touch ID, Three-axis gyro, Accelerometer, Barometer, Ambient light sensor
Battery	Built-in 28.93-watt-hour rechargeable lithium-polymer battery

Wireless handheld microphone system	
System support	Up to 12 compatible systems per frequency band
Antenna type	Microprocessor-controlled internal antenna diversity
Frequency selection	One-touch Quick Scan frequency selection quickly locates the best frequency
Output	1/4" and XLR audio outputs
Working range	91 meters
Audio frequency response	50 to 15,000 Hz
THD	Ref. ±33 kHz deviation with 1 kHz tone, 0.5%, typical
Dynamic Range	100 dB, A-weighted, typical
Operating Temperature	-18°C (0°F) to 57°C (135°F)
Microphone	
Type	Electric condenser
Frequency response	50 to 20,000 Hz
Polar pattern	Cardiod
SNR	72dB
Dynamic range	177 dB
Max SPL	139 dB
Bodypack transmitter	
Tx RF power	10 mW
Battery life	14 hours

Gooseneck microphone	
Type	Condenser (electret bias)
Frequency Response	50 Hz – 17 kHz
Polar Pattern	Cardioid
Output Impedance	EIA rated at 150 Ω (170 Ω actual)
Sensitivity	–35 dBV/Pa (17.8 mV)
Maximum SPL	124.2 dB
Equivalent Output Noise	28 dB SPL
Signal-to-Noise Ratio	66 dB
Dynamic Range	96.2 dB
Common Mode Rejection	45 dB minimum
Preamplifier Output Clipping Level	–6 dBV (0.5 V)
Environmental Conditions	Operating temperature range: -18° – 57° C Relative humidity: 0 – 95%
Power Requirements	11 – 52 Vdc phantom, 8.0 mA

Wired Microphone	
Type	Dynamic
Frequency Response	50 to 15,000 Hz
Polar Pattern	Cardioid
Sensitivity	–54.5 dBV/Pa (1.85 mV)
Impedance	Rated impedance is 150Ω (300Ω actual)
Connector	Three-pin professional audio connector (male XLR type)

Assistant Engineer (E) (P)
O/o EE(E)-Kochi, CPWD, Kochi

Executive Engineer (E) – Kochi
CPWD, Kochi

LIST OF ACCEPTABLE MAKES

All materials and Equipment shall conform to the relevant standards and shall be of approved make and design. The list of preferred makes for various equipment/materials etc. is given below. Any item missed out from the list should be got approved by the Engineer in Charge before delivery/ installation. Engineer-in-charge may, for any item, in the interest of work allow use of any other make/brand in addition to the makes/brands mentioned in the preferred makes lists subject to its satisfactory quality and on proper grounds like non-availability of preferred makes/brands in the market etc. In such case, cost adjustment shall be made if the make/brand actually used is priced lower than the lowest priced brands of that item in the preferred makes list. However, nothing extra shall be paid if actually used brand/make is of higher price than the highest priced brand/make in the list of preferred makes.

TABLE 1: LIST OF PREFERRED MAKES FOR INTERNAL EI WORKS

SL.NO	NAME OF THE PRODUCT	MAKES
1	STEEL / MS CONDUIT & ACCESSORIES OF MS CONDUIT (ISI MARKED)	BEC / AKG / NIC / STEEL KRAFT / RMCON / GUPTA / VIMCO / JAVERI
2	PVC CONDUIT (COLOUR – GRAY/IVORY)	PRECISION / POLYCAB / AKG / FINOLEX / KONSEAL / BEC / ASIAN / NIHAR / ANCHOR PANASONIC / AVON PLAST/ MODI / VASAVI / EMJAY / JAVERI / DEC /BALCO/TOMS PIPES PVT LTD
3	PVC INSULATED FRLS COPPER CONDUCTOR CABLES 1.1 KV GRADE (ISI MARKED-CLASS-II)	FINOLEX / RR KABLE / KEI / POLYCAB / ANCHOR / ASMON / MESCAB / LAURITZ KNUDSEN / POWER FLEX / Q FLEX/BONTON
4	MODULAR TYPE SWITCH / GI BOXES / SOCKETS /TV / TELEPHONE/LAN SOCKET OUTLET ETC. NORMAL APPLICATION	LEGRAND -MYRIS- ARTEROR / SCHNEIDER – OPAL-LIVIA / MK-ELEMENTS / HAVELLS-CRABTREE-ATHENA / PANASONIC
		MK-LOGIC-PLUS / HONEYWELL -BENZ PLUS / ANCHOR- ROMA PLUS / SAVIC / CRABTREE-ATHENA
5	DB	LEGRAND / SCHNEIDER / SIEMENS / ABB / GE / HAGER / LAURITZ KNUDSEN / ASMON / PANASONIC BY ANCHOR / POLYCAB / C&S – EPITOME

SL.NO	NAME OF THE PRODUCT	MAKES
	MCB / ELCB / RCBO	LEGRAND-DX3 / SCHNEIDER-ACT19 / SIEMENS 5SX4 / HAVELLS / EATON / ABB / GE / HAGER / LAURITZ KNUDSEN / PANASONIC BY ANCHOR / POLYCAB / C&S (NOTE: IT SHALL BE SAME AS THAT OF DB MAKE)
	MCCB	LEGRAND-DX3 / SCHNEIDER-ACT19 / SIEMENS 5SX4 / LAURITZ KNUDSEN – D SINE / ABB / EATON / C&S (NOTE: IT SHALL BE SAME AS THAT OF DB MAKE)
6	FLOOR TRUNKING/RACEWAY(GI)	HONEYWELL MK / OBO BETTERMANN / LEGRAND / PROFAB
7	DLP TRUNKING	LEGRAND / MK / OBO BETTERMANN / SCHNEIDER
8	INDOOR / OUTDOOR LIGHING FIXTURES	PHILIPS / DISANO / IGGUZINI / REGENT / OSRAM / LT (LIGHTING TECHNOLOGIES)
		EVERYDAY / BAJAJ / HALONIX / JAQUAR / WIPRO / HAVELLS / SYSKA / CROMPTON GREAVES / POLYCAB / PANASONIC / UBITTER TECHNOLOGIES - PROLIMIN
9	LAMPS	GE / OSRAM / PHILIPS / TRILUX / LIGHTING TECHNOLOGIES
		EVERYDAY/ BAJAJ / HALONIX / SURYA / JAQUAR / WIPRO / HAVELLS / SYSKA / CROMPTON / PANASONIC / LIGHTING TECHNOLOGIES / POLYCAB
10	BLDC CEILING FAN	CROMPTON / ORIENT / BAJAJ / ALMONARD / ATOMBERG (5 STAR RATED -ISI MARKED)
11	EXHAUST FANS / FRESH AIR FAN / WALL FAN	CROMPTON / HAVELLS / ORIENT / BAJAJ / ALMONARD /ATOMBERG
12	XLPE INSULATED PVC SHEATHED	UNVERSAL / RPG CABLES / FINOLEX / CCI / ANCHOR PANASONIC / HAVELLS / RR KABLE /

SL.NO	NAME OF THE PRODUCT	MAKES
	AL, CU & CONTROL CABLES	GLOSTER/ KEI / POLYCAB
13	MULTIFUNCTION METER/LOAD MANAGERS	SCHNEDER / SIEMENS / LEGRAND / SECURE / SOCOMEC (DIRIS)
14	CABLE GLAND	PEECO / COMMET / GRIPWELL / DOWELLS / JAINSONS / PRABATH / RAYCHEM / GRANDLAY
15	LUGS AND THIMBLES	DOWELLS / MULTI / CAPITAL / JAINSONS / COMMET / PRABATH / SCHNEIDER ELECTRIC
16	G I PIPE	JINDAL / TATA / SAIL
17	POWER / CONTROL CONTACTORS	GE / LAURITZ KNUDSEN / SIEMENS / SCHNEIDER / ABB
18	ELECTRICAL SWITCHGEAR & STARTERS, RELAYS	SIEMENS / LAURITZ KNUDSEN / ABB / SCHNEIDER
19	SINGLE PHASING PREVENTOR (CURRENT SENSING)	LAURITZ KNUDSEN / SIEMENS / MINILEC
20	CTS	AUTOMATIC ELECTRIC / LAURITZ KNUDSEN / ABB / SIEMENS/ GE / MECO/ KAPPA
21	CONTACTORS	SIEMENS / LAURITZ KNUDSEN / SCHNEIDER / ABB / GE
22	UTP DATA CABLES	LEGRAND / MOLEX / FINOLEX / COMMSCOPE / PANDUIT-PANNET / HAVELLS
23	OF CABLES	LEGRAND / MOLEX / FINOLEX / COMMSCOPE / PANDUIT-PANNET / SEIMENS
24	HOT DIP GALVANISED CABLE TRAY	PROFAB ENGINEER / MEM / RICOH / SLOTTO / STEELWAYS / BEC / FIXOTECH / OBO BETTERMAN / RMCON / PROFAB / INDIANA / MBM /LEGRAND
25	PANEL BOARD / FEEDER PILLAR / METER BOARD	CPRI APPROVED MANUFACTURER FOR RELEVANT BUS BAR RATING
26	FULLY TYPE TEST ELECTRICAL PANEL BOARD ASSEMBLIES AS	ABB/ SIEMENS/ SCHNEIDER/ LEGRAND/ LAURITZ KNUDSEN / GE

SL.NO	NAME OF THE PRODUCT	MAKES
	PER IEC 61439	
27	DWC PIPES	TELEREX / DUTRON / VEEKAY PLAST / DURA-LINE / SUPREME
28	TELEPHONE DP BOXES	KRONE / D-LINK / ITL
29	AIR CIRCUIT BREAKER	SCHNEIDER / SIEMENS / LEGRAND / ABB / LAURITZ KNUDSEN
30	PANEL BOARD MOUNTING SWITCHES / CONTACTOR / SINGLE PHASE PREVENTER / TIMER	SCHNEIDER / SIEMENS / LEGRAND / ABB / LAURITZ KNUDSEN
31	METERS / ELECTRICAL MEASURING INSTRUMENTS / MULTI FUNCTION METERS	AE / LAURITZ KNUDSEN / CONZERV / TRINITY / RISHAB / SECURE
32	INDICATION LAMPS / PUSH BUTTONS / SELECTOR SWITCH	LAURITZ KNUDSEN / SIEMENS /SCHNEIDER / AE / KAYCEE / IMP
33	RISING MAIN / BUS TRUNKING	LEGRAND / LAURITZ KNUDSEN / SCHNEIDER / ABB / SIEMENS
34	SOLAR WATER HEATER	RACOLD/ EMMVEE/ KOTAK URJA/ JAIN/ SUDARSHAN/ V-GUARD
35	PUMPS AND PUMP SETS	KIRLOSKER/ CROMPTON/ TEXMO/ KSB/ GRUNDFOS / XYLEM
36	MOTORS	HAVELLS/ ARMSTRONG/ JOHNSON ELECTRIC/ GE/ SIEMENS/ ABB
37	LIGHTNING CONDUCTORS	OBO / DHEN / CAPS/ FUREE
38	ILLUMINATED SIGN BOARD	LEGRAND / MK / SYSTEM TEK / PROLITE / BAJAJ/HAVELLS
39	LT CABLES	FINOLEX / GLOSTER / HAVELLS / RR CABLE/ UNIVERSAL / POLYCAB / RPG CABLES / CCI
40	SOLAR LED LUMINARIES	PHILIPS / CROMPTON/ WIPRO / BAJAJ / HAVELLS

SL.NO	NAME OF THE PRODUCT	MAKES
41	STREET LIGHT GI POLE	WIPRO / BAJAJ / HAVELLS / CROMPTON
42	STREET LIGHT LED FITTINGS	WIPRO / BAJAJ / HAVELLS / CROMPTON / UBITTER TECHNOLOGIES - PROLIMIN
43	HRC FUSES	LAURITZ KNUDSEN / SIEMENS / HPL / BCH / ABB / GE / HAVELLS
44	UPVC/CPVC PIPE	ASTRAL / SUPREME / FINOLEX
45	HDPE PIPES	VARUN/ MANGALAM/ KODOOR / SUPREME
46	UPS	SCHNEIDER-APC /ABB / LEGRAND- NUMERIC / EMERSON -VERTIV / SIEMENS
47	BATTERIES	EXIDE/ AMARON / PANASONIC
48	INVERTER TYPE CASSETTE /SPLIT AC	HITACHI / PANASONIC / CARRIER/ DAIKIN/ O GENERAL / HAIER / VOLTAS / BLUE STAR / LLYOD
49	STABILIZER	V-GUARD / MICROTEK / APC
50	REFRIGERANT PIPES	GODREJ / MEHTA / MANDEV/ RAJCO / NIPPON/ TOTALINE / AS PER MANUFACTURER'S STANDARDS.
	NOTES: ALL MODULAR SWITCH, SOCKETS AND OTHER ACCESSORIES SHALL BE OF THE SAME MAKE. FOR ITEMS WHERE PREFERRED MAKES ARE NOT SPECIFIED, THE DECISION OF THE ENGINEER-IN-CHARGE SHALL BE FINAL AND BINDING.	

TABLE – 2 : LIST OF PREFERRED MAKES FOR AUDIO VIDEO SYSTEM

SL.NO	NAME OF THE PRODUCT	MAKES
1	INTERATIVE DISPLAY PANELS	LG / SAMSUNG / PANASONIC / VIEWSONIC / SONY
2	TWO-WAY PASSIVE / ACTIVE LOUDSPEAKER	JBL / SONODYNE / BOSCH/YAMAHA /QSC
3	DUAL CHANNEL OR BETTER CLASS AB POWER AMPLIFIERS	BOSCH / HONEYWELL / SONODYNE /QSC
4	DIGITAL / ANALOG AUDIO MIXER	YAMAHA / SOUNDCRAFT / SONODYNE / ALLEN HEATH / BERINGHER
5	GOOSE NECK CONDENSER MICROPHONE	SHURE / AKG / SENNHEISER / SONODYNE / STUDIO MASTER / AUDIO TECHNICA
6	WIRED HAND HELD MICROPHONE	SHURE / AKG / SENNHEISER / SONODYNE / STUDIO MASTER / AUDIO TECHNICA
7	WIRELESS HAND HELD MICROPHONE	SHURE / AKG / SENNHEISER / SONODYNE / STUDIO MASTER / AUDIO TECHNICA
8	WIRELESS LAPEL MICROPHONE	SHURE / AKG / SENNHEISER / SONODYNE / STUDIO MASTER / AUDIO TECHNICA
9	WIRELESS HEAD WORN MICROPHONE	SHURE / AKG / SENNHEISER / SONODYNE / STUDIO MASTER / AUDIO TECHNICA
10	ACTIVE LED WALL DISPLAY	LG / SAMSUNG / PANASONIC
11	DIGITAL PODIUM	PEOPLE LINK / VOITTO / PANASONIC
12	MICROPHONE CABLE/ SPEAKER CABLE / ANTENNA CABLE / HDMI CABLES / VGA	SENNHEISER / AKG / BELDON/ KRAMER / KLOTZ / CRESTRON / AMX /

SL.NO	NAME OF THE PRODUCT	MAKES
	CABLES	EXTRON / ATEN
13	SPEAKER CABLES	FINOLEX / HAVELLS / POLYCAB
14	23" TOUCH MONITOR	HP / DELL / LENOVO
15	DESKTOP PC	HP / DELL / LENOVO
16	MODULAR DIGITAL MATRIX SWITCHER	LIGHTWARE / AMX / EXTRON / KRAMER / ATEN
17	PRESENTATION SWITCHER CUM TRANSMITTER, TRANSMITTER AND RECEIVER, SCALER RECEIVER	LIGHTWARE / AMX / EXTRON
18	CONTROL PROCESSOR	CRESTRON / AMX / EXTRON
19	10" CAPACITIVE TOUCH SCREEN	CRESTRON / AMX / EXTRON
20	FULL HD VIDEO CONFERENCING PTZ CAMERA	SONY / PANASONIC / VADDIO / HONEYWELL / PHILIPS / PEOPLELINK / POLY STUDIO
21	STREAMER & CAMERA SWITCHER	SONY / PANASONIC / VADDIO / HONEYWELL
22	JOYSTICK CONTROLLER	SONY / PANASONIC / VADDIO / HONEYWELL
23	WIRELESS AND WIRED PRESENTATION GATEWAY SYSTEM	CRESTRON / AMX / BARCO
24	ANTENNA DISTRIBUTION SYSTEM	SHURE / AKG / SENNHEISER
25	USB EXTENDER, HDMI TO 3G-SDI SCALER	AMX / CRESTRON/ EXTRON/ GAFEN
26	WIRELESS PRESENTER	WEPRESENT / CRESTRON / EXTRON
27	LAZER PROJECTOR	EPSON / BARCO / SONY

SL.NO	NAME OF THE PRODUCT	MAKES
28	USB AUDIO INTERACE	FOCUSRITE / BERHINGER / PRESONUS
29	LOUD SPEAKER MANAGEMENT SYSTEM	DBX / BERHINGER / JBL / YAMAHA
30	TABLET DEVICE	APPLE / SAMSUNG / MICROSOFT SURFACE
31	MOTORIZED PROJECTOR SCREEN	LOGIC / EPSON / ELCOR
32	NETWORK RACK	NETRACK / VALRACK / RITTAL
33	HDMI SOCKET	LEGRAND / HONEYWELL / LOGIC
34	WIRELESS AND WIRED PRESENTATION GATEWAY SYSTEM	CRESTRON / AMX / BARCO

Assistant Engineer (E) (P)
O/o EE(E)-Kochi, CPWD, Kochi

Executive Engineer (E) – Kochi
CPWD, Kochi

PART -C

SCHEDULE OF QUANTITIES

SCHEDULE OF QUANTITY

Name of Work: - SITC of Audio Visual system for Auditorium and Exhibition room in Independent new building for CMET, Athani, Thrissur, Kerala.

Sl.No	Description of Item	Qty	Rate	Unit	Amount
1	**Auditorium / Seminar hall Audio Visual system**				
1.1	Supply, Installation, Testing, and Commissioning of LED video wall with the following configurations and specifications: Pixel Configuration: 1 red, 1 green, 1 blue, Diode Type Surface Mount Device (SMD), Technology: Active LED, Physical Dimension in Meters- Length: Min 3.84 Meters, Physical Dimension in Meters- Width: Min 2.16 Meters, Diagonal size: Min 173 Inches, Pixel Pitch: 2.5 or Less, Total Resolution of the wall: 1536 x 864 or better, Contrast Ratio: 5000:1 or better, Life of the Product : 100000 Hours or better, Brightness: 1000 nits or better, HDR compatibility: Yes, Input Signals: DP 1.4a x 1, HDMI 2.1 x 2, USBx2, Color Bit: 16 Bit or better, Refresh rate: 3840 Hz or better, Viewing Angle - Horizontal: 150 degree or better, Viewing Angle - Vertical: 150 degree or better, Power consumption : Maximum 370 (W/m^2) or less, Heat Generation: Maximum 1200 (BTU/m^2) or less, Certification : Safety Certification, EMC Class A, ESD, RoHS, UL, Pixel density: 150000 m square or better, Minimum Native Resolution of	1	33,57,987.00	Each	33,57,987.00

Sl.No	Description of Item	Qty	Rate	Unit	Amount
	LED wall controller: 4K UHD (3840 X 2160), Power supply should be Inbuilt with in the Cabinet, 5% of spare Cabinets should be also included to be in the scope at the time of supply, including wall mount accessories from the same OEM, OFC cables and accessories as required.				
1.2	Supply, Installation, Testing, and Commissioning of e-podium with Presentation Point, Metallic Body, All doors Lockable, Top Sliding Mechanism, Provision for Monitor, Document Camera Tray, Processor: Intel i7, RAM: 16 GB, SSD: 1TB, Operating System: Windows 11 pro, Keyboard & Mouse, 21.5" Diagonal Screen Size, 1920 x 1080 Resolution with aspect ratio 16:9, 250 cd/m2 Brightness, HDMI Input, Gooseneck Microphone feature, All extra cables and connectors required for interconnection with LED Wall.	1	3,45,100.00	Each	3,45,100.00
1.3	Supply, Installation, Testing, Commissioning of 700W peak, Continuous: 300W Program: 600W, two-way passive speaker with 10” LF and horn-loaded compression driver, Twist-lock connector, NOMINAL IMPEDANCE 8ohm, frequency response at -10db of 55Hz ~ 18kHz, directivity 90° x 50°, TRANSDUCER COMPLEMENTS HF: 1 x 1" throat titanium dome compression driver, 1.35" dia voice coil, LF: 1 x 10" woofer, 2.5"	6	21,209.00	Each	1,27,254.00

Sl.No	Description of Item	Qty	Rate	Unit	Amount
	dia glass-fiber former voice coil including wall mounting brackets.				
1.4	Supply, Installation, Testing, and Commissioning of Dual channel power amplifier, output power per channel: 8Ω: 600W, 4Ω: 900W, 8Ω BRIDGED: 1800W, Damping Factor: >300, Signal to Noise Ratio (20Hz ~ 20kHz): 103dB, Frequency Response: 20Hz~20kHz, ±0.5dB, Input Connectors Each Channel: XLR with link, Output Connectors Each Channel: Twist-lock connector and binding post, Input Power: As per BISIS616:2017 IEC60065:2014/IEC62368-1, Including all Interconnection cables and accessories, etc as required.	3	70,288.00	Each	2,10,864.00
1.5	Supply, installation, testing and commissioning of digital audio mixer with the following specification. Mixer Type: Rack mountable digital mixer with web browser based remote control. Inputs: Minimum 24 input channels with XLR/TRS combination inputs. Outputs: Minimum 10 output channels including main and aux outputs. Recording: Multitrack USB recording directly to USB drive and computer. Audio Interface: Integrated multichannel USB audio interface. Processing: Built in EQ, compressor, gate, feedback suppression and effects processing. Connectivity: Ethernet and Wi-Fi control support.	1	1,03,610.00	Each	1,03,610.00

Sl.No	Description of Item	Qty	Rate	Unit	Amount
	Phantom Power: +48V phantom power per channel. Frequency Response: 20 Hz – 20 kHz. Mounting: Standard rack mount chassis. Including connecting cables as required.				
1.6	Supply, installation, testing and commissioning of loud speaker management system with the following specification. Input processing: dbx Compression, AFS™ (Advanced Feedback Suppression), Graphic EQ, Auto EQ™, Subharmonic Synthesis. Output processing: Crossover (supports full range, 2-way, 3-way and 4-way systems), Driver Alignment Delays, 8-Band Parametric EQs (used for speaker tunings), Limiter processing on outputs. Physical Inputs: (2) Female XLR line inputs. (1) Female XLR RTA Mic input. A/D Converter: dbx Type IV™ Conversion System. Outputs: 6 nos of Line Outputs. A/D Dynamic Range: 114 dB A-weighted, 112 dB unweighted. Alignment Delay: Up to 1000 ms per output channel. Inter channel Crosstalk: -110 dB, typical. D/A Dynamic Range: 114 dB A-weighted, 112 dB unweighted. Frequency Response: 20 Hz - 20 kHz, ±0.5 dB. Total Harmonic Distortion + Noise: 0.002% at +4 dBu. Input Impedance: Balanced 48 KΩ. Output Impedance: Balanced 120 Ω. Maximum Input Level: +20 dBu. Maximum Output Level: +20	1	79,734.00	Each	79,734.00

Sl.No	Description of Item	Qty	Rate	Unit	Amount
	dBu. Control Interface: Ethernet control via PC, tablet and mobile device using Drive Rack control application. Pre-set Capability: Factory and user configurable pre-sets for speaker and amplifier combinations. Power Supply: Internal universal power supply, 100-240 VAC, 50/60 Hz. Including RTA microphone, Rack Mountable: 1U standard 19-inch rack mount chassis.				
1.7	Supply, installation, testing and commissioning of dual channel lapel microphone system with the following specification. System specification: Up to 12 compatible systems per frequency band, Microprocessor-controlled internal antenna diversity, Range: 91 meters, Audio frequency response: 50 to 15,000 Hz, THD: 0.5%, Dynamic range: 100 dB, A-weighted. Lavalier microphone specification; Type: Electric condenser, Frequency response: 50 to 20,000 Hz, Polar pattern: Cardiod, SNR: 72dB, Dynamic range: 177 dB, Max SPL: 139 dB, Tailored frequency response optimized for public speaking and presentation. Bodypack transmitter spec: Tx RF power: 10 mW, battery life: Upto 14 hours, input impedance: 1M Ohm. Including battery, power adaptor and connection cable etc as required.	1	93,100.00	Each	93,100.00

Sl.No	Description of Item	Qty	Rate	Unit	Amount
1.8	Supply, installation, testing and commissioning of dual channel wireless handheld microphone system with the following specification. System specification: Up to 12 compatible systems per frequency band, Microprocessor-controlled internal antenna diversity, Range: 91 meters, Audio frequency response: 50 to 15,000 Hz, THD: 0.5%, Dynamic range: 100 dB, A-weighted. Microphone specification: Frequency response: 50 to 15,000 Hz, Polar Pattern: Cardiod, Sensitivity: –54.5 dBV/Pa (1.85 mV), battery life: Upto 14 hours, Tx RF power: 10 mW, including battery, power adaptor and connection cable etc as required.	1	99,106.00	Each	99,106.00
1.9	Supply, installation, testing and commissioning of gooseneck microphone with the following specification. Type: Condenser, Polar pattern: Cardioid Frequency Response: 50 Hz – 17 kHz, Sensitivity : –35 dBV/Pa (17.8 mV), Maximum SPL : 124.2 dB, Equivalent Output Noise : 28 dB SPL, Signal-to-Noise Ratio: 66 dB, Dynamic Range: 96.2 dB, Common Mode Rejection: 45 dB minimum, Preamplifier Output Clipping Level : –6 dBV (0.5 V) . Minimum 18 inch flexible gooseneck, Including attached XLR preamp, shock mount, flange mount, snap-fit foam windscreen, mute switch and LED indicator etc	1	45,799.00	Each	45,799.00

Sl.No	Description of Item	Qty	Rate	Unit	Amount
	as required.				
1.10	Supplying and fixing 24U Rack with 4 inch Castor wheels and front brake Floor Standing Rack with Main Frame Pillar of 1.25mm Powder Coated CRCA Sheet with removable side panels, L- Shape adjustable Vertical Mounting Rail of 2mm with 'U' Marking completely knocked-down condition (CKD) Shape, fitted with 4 number cooling fans, minimum 5nos two line cable entry/exit provision at top and bottom with rubber protection, Front door 5mm Toughened Glass with MS frame or MS perforated with lock, ear MS vented or perforated door, Powder coated Color- RAL- 7035 or black, complied with UL & RoHS, 2 x 6 sockets 16A power distribution units, 3 numbers closed cable organizer, Hardware mounting screws packet of 20 x 1 number, etc. complete as required.	1	28,547.15	Each	28,547.15
1.11	Supply, installation, testing and commissioning of USB audio interface with the following specification. Interface Type: Professional USB audio interface suitable for recording and playback applications. Inputs: Minimum 4 input channels including microphone, line and instrument inputs with combo XLR/TRS connectors. Outputs: Minimum 4 balanced line outputs	1	47,901.00	Each	47,901.00

Sl.No	Description of Item	Qty	Rate	Unit	Amount
	and headphone output with independent level control. Preamplifiers: High quality microphone preamplifiers with selectable phantom power support. Audio resolution: Support for up to 24-bit / 192 kHz audio recording and playback. Connectivity: USB Type-C interface for computer connection. Monitoring: Direct monitoring facility with low latency operation. Indicators: Signal and peak level indication for input channels. Construction: Rugged desktop metal enclosure. Accessories: USB cable and necessary connection accessories.				
1.12	Supply, installation, testing and commissioning of active speaker system with the following specification. Speaker Type: Active full range professional speaker system suitable for speech and music applications. Configuration: 2-way speaker system with integrated power amplifier. Power Output: Minimum 300W RMS output power. Speaker Components: Minimum 12-inch low frequency driver and high frequency compression driver. Frequency Response: 50 Hz – 20 kHz or better. Input: Balanced XLR/TRS audio input with output link facility. Controls: Independent volume and equalizer controls. Protection: Built-in overload, short circuit and thermal protection. Mounting: Floor	2	37,117.00	Each	74,234.00

Sl.No	Description of Item	Qty	Rate	Unit	Amount
	standing and pole mount compatible. Enclosure: Rugged wooden or high impact enclosure with metal grille protection. Power Supply: 230V AC operation. Accessories: Power cable and necessary connection accessories.				
1.13	Supply, installation, testing and commissioning of tablet device with the following specification. Display: 11-inch Liquid Retina or equivalent Multi-Touch display with LED-backlit IPS technology, resolution of 2360 x 1640 pixels, True Tone or equivalent adaptive display technology, minimum 500 nits brightness. Processor: Hexa core processor equivalent to A16 performance class with dedicated graphics and AI processing support. Storage Capacity: 128GB internal storage. Connectivity: Wi - Fi only model supporting Wi-Fi 6 (802.11ax) with MIMO, Bluetooth version 5.3 or higher. Camera: Minimum 12MP rear camera with 4K video recording capability, minimum 12MP ultra-wide front camera with automatic framing support. Audio: Stereo speakers and dual microphones. Security: Integrated biometric authentication support. Operating System: Latest supported tablet operating system. Battery Backup: Minimum 10 hours of web browsing or video playback on Wi-Fi. Charging Interface: USB Type-C port with charging and data support.	1	40,354.00	Each	40,354.00

Sl.No	Description of Item	Qty	Rate	Unit	Amount
	Accessories Support: Compatible with stylus pen and Bluetooth keyboard. Build: Aluminium or equivalent premium metal enclosure with scratch resistant glass front.				
1.14	Supply, installation, testing and commissioning of dynamic vocal microphone with the following specification. Type: Dynamic, Frequency Response: 50 to 15,000 Hz, Polar Pattern Cardioid, Sensitivity: –54.5 dBV/Pa (1.85 mV), Connector Three-pin professional audio connector (male XLR type) including connectors etc as required.	2	16,067.00	Each	32,134.00
1.15	Supply installation testing & commissioning of commercial display with the following specification. Size: 55 inch, resolution: 3840 x 2160 (UHD), Supports HDR 10 Pro, inbuilt audio with 10W + 10W speakers, connectivity: HDMI eARC, WiFi-, Screen Share, Google Chromecast, Airplay, blue tooth. 3 x HDMI input, 1x RF input, 2x USB, 1x RJ-45. Including Confidence Monitor Stand having specs: 90 deg adjustable viewing angle, height adjustable and castor locable wheel.	1	71,648.00	Each	71,648.00
1.16	Supply installation testing & commissioning of HDMI Matrix switcher with the following specifications. Inputs: 4x HDMI: On female HDMI connectors, Outputs: 4x HDMI: On female	1	4,92,040.00	Each	4,92,040.00

Sl.No	Description of Item	Qty	Rate	Unit	Amount
	HDMI connectors, 4x S/PDIF: On female RCA connectors, 4 Balanced Stereo Audio, Ports: 1x USB, 1x RS-232, 1x IR IN, 1x Ethernet. Video: Max. Resolution: 4K@60Hz 4:4:4, Max. Data Rate: 18Gbps (6Gbps per graphic channel), Content Protection Supports HDCP 2.2/1.4, HDMI Support HDR10, xvYCC color, Dolby TureHD/DTS-HD Master Audio, 3D Video as specified in HDMI 2.0. Control and management: Local control via front panel switching, memory, lock and EDID buttons, Input/Output LED display. Distance control via user-friendly embedded web pages via the Ethernet, Protocol 3000 API, and RS-232 serial commands transmitted by a PC, touch screen system or other serial controller. Including rack mounting connections as required.				
2	**Discussion / Exhibition room Audio Visual system**				
2.1	Supply, installation, testing, and commissioning of laser projector with support of WUXGA resolution, maximum screen size of 500", minimum 5000 lumens, 2,500,000:1 contrast ratio. Including 3 Feet Heavy Duty ceiling mounting kit and 20 Mtr Power Code, etc as required.	1	2,30,814.00	Each	2,30,814.00
2.2	Supply, installation, testing, and commissioning of motorized projector screen of size 135",	1	32,780.00	Each	32,780.00

Sl.No	Description of Item	Qty	Rate	Unit	Amount
	16:10 aspect ratio, Gain: 1.2, Mount Type: Ceiling & Wall Mount, Motor Type: Tubular, RF remote control provision, screen size of 2910 x 1820, Etc Mounting accessories as required.				
2.3	Supply, Installation, Testing, Commissioning of 700W peak, Continuous: 300W Program: 600W, two-way passive speaker with 10” LF and horn-loaded compression driver, Twist-lock connector, NOMINAL IMPEDANCE 8ohm, frequency response at -10db of 55Hz ~ 18kHz, directivity 90° x 50°, TRANSDUCER COMPLEMENTS HF: 1 x 1" throat titanium dome compression driver, 1.35" dia voice coil, LF: 1 x 10" woofer, 2.5" dia glass-fiber former voice coil including wall mounting brackets.	4	21,209.00	Each	84,836.00
2.4	Supply, Installation, Testing, and Commissioning of Dual channel power amplifier, output power per channel: 8Ω: 600W, 4Ω: 900W, 8Ω BRIDGED: 1800W, Damping Factor: >300, Signal to Noise Ratio (20Hz ~ 20kHz): 103dB, Frequency Response: 20Hz~20kHz, ±0.5dB, Input Connectors Each Channel: XLR with link, Output Connectors Each Channel: Twist-lock connector and binding post, Input Power: As per BISIS616:2017 IEC60065:2014/IEC62368-1, Including all Interconnection cables and accessories, etc as	2	70,288.00	Each	1,40,576.00

Sl.No	Description of Item	Qty	Rate	Unit	Amount
	required.				
2.5	Supply, installation, testing and commissioning of digital audio mixer with the following specification. Mixer Type: Rack mountable digital mixer with web browser based remote control. Inputs: Minimum 16 input channels with XLR/TRS combination inputs. Outputs: Main and auxiliary output channels with balanced connectivity. Recording: USB audio recording and playback support. Processing: Built-in EQ, compressor, gate, feedback suppression and effects processing. Connectivity: Ethernet and Wi-Fi control support for computers, tablets and mobile devices. Phantom Power: +48V phantom power support for microphone inputs. Frequency Response: 20 Hz – 20 kHz. Mounting: Standard rack mount chassis. Accessories: Power cable and necessary connection accessories.	1	54,058.00	Each	54,058.00
2.6	Supply, installation, testing and commissioning of dual channel wireless handheld microphone system with the following specification. System Type: Dual channel wireless handheld microphone system suitable for speech and vocal applications. Microphone Type: Dynamic handheld microphones with cardioid pickup pattern. Frequency Response: 50 Hz – 15 kHz or better. Operating Range: Minimum	1	99,106.00	Each	99,106.00

Sl.No	Description of Item	Qty	Rate	Unit	Amount
	90 meters line of sight. Receiver: Dual channel wireless receiver with balanced XLR and unbalanced 6.35 mm audio outputs. Channel Selection: Automatic frequency selection and quick frequency matching facility. Battery Backup: Minimum 10 hours transmitter operation using AA batteries. Indicators: RF, audio and battery status indication. Power Supply: External DC adaptor powered receiver. Construction: Rugged professional grade construction. Accessories: Receiver unit, wireless handheld transmitters, batteries, power adaptor and required cables.				
2.7	Supplying and fixing 24U Rack with 4 inch Castor wheels and front brake Floor Standing Rack with Main Frame Pillar of 1.25mm Powder Coated CRCA Sheet with removable side panels, L- Shape adjustable Vertical Mounting Rail of 2mm with 'U' Marking completely knocked-down condition (CKD) Shape, fitted with 4 number cooling fans, minimum 5nos two line cable entry/exit provision at top and bottom with rubber protection, Front door 5mm Toughened Glass with MS frame or MS perforated with lock, ear MS vented or perforated door, Powder coated Color- RAL- 7035 or black, complied with UL & RoHS, 2 x 6 sockets 16A power distribution units, 3 numbers closed cable organizer, Hardware	1	28,547.15	Each	28,547.15

Sl.No	Description of Item	Qty	Rate	Unit	Amount
	mounting screws packet of 20 x 1 number, etc. complete as required.				
2.8	Supply and drawing of 2-core 2.5sq mm speaker cable in the existing surface / recessed steel / PVC conduit or UPVC trunking including connections and interconnections etc. as required.	230	144.00	Meter	33,120.00
2.9	Supply, installation, testing and commissioning of HDMI cable with the following specification. Cable Type: High speed HDMI cable suitable for audio and video transmission applications. Length: 15 meters. Supported Resolution: Support for Full HD, 4K UHD video transmission and multi-channel digital audio. Connectors: HDMI male connectors on both ends with gold plated contacts or equivalent. Bandwidth: High bandwidth digital signal transmission suitable for HDMI 2.0 or higher standards. Shielding: Triple shielded or equivalent construction for reduced signal interference and stable transmission over long distance. Jacket: Durable flexible outer jacket suitable for professional installation. Compatibility: Compatible with televisions, projectors, computers, media players and AV equipment with HDMI interface.	3	11,515.00	Each	34,545.00
2.10	Supply installation testing & commissioning of Pre-terminated HDMI socket 1 module including	2	1,417.00	Each	2,834.00

Sl.No	Description of Item	Qty	Rate	Unit	Amount
	face plate complete as required.				
2.11	Supply installation testing and commissioning of XLR Female to Male 1.5 Mtr Audio Patch cord complete as required.	20	677.00	Each	13,540.00
2.12	Supply and drawing of Shielded Copper conductor audio cable with 6.0mm OD in the existing surface / recessed steel / PVC conduit or UPVC trunking including connections and interconnections etc. as required.	60	121.00	Meter	7,260.00
2.13	Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required.				
2.13.1	20 mm	20	203.32	Metre	4,066.40
2.13.2	25 mm	20	226.21	Metre	4,524.20
				TOTAL	**60,20,018.90**
				Say Rs	**60,20,019.00**
(Rupees Sixty Lakhs Twenty Thousand and Nineteen Only)					

Assistant Engineer (E) (P)
O/o EE(E)-Kochi, CPWD, Kochi

Executive Engineer (E) – Kochi
CPWD, Kochi