HIGH COURT OF MADHYA PRADESH: JABALPUR

NIT No.Reg(IT)(SA)/2019/689 Dated: 14-05-2019

Subject: - **Installation of Local Area Networking and other related work in the High Court and Subordinate Courts in the State of Madhya Pradesh.**

The Registrar General, on behalf of High Court of Madhya Pradesh invites online tenders for Installation of Local Area Networking work and other related work in the High Court of Madhya Pradesh and Subordinate Courts (District Courts and Tehsil Courts) in the State of Madhya Pradesh from Manufacturing Companies, reputed Bidders/Dealers, registered, bonafide, reputed, experienced and eligible firms who have executed similar nature of work in Court Premises/Government Ministries/Departments, Semi-government organizations including Public Sector Undertakings and reputed Private Organization with **05 years onsite support and warranty** on all active and passive components and satisfying all other terms and conditions of the tender document.

S. No.	Estimated project cost	EMD (In Lakh Rupees)	Cost of Tender Document (in Rs.)	Last Date / Time of online tender Submission	Last Date/ Time of tender submission in hardcopy	Date and Time of Opening of Technical Bid (online/ hardcopy)	Time for Completion of the entire work / project
1.	2 Crore	4 Lakh	10,000/-	08th July 2019 before 06:00 PM	09th July 2019 before 05:00 PM	10th July 2019 at 11:00 AM	60 days

- *Tender documents may be viewed or purchased online by interested and eligible bidders from the website www.mptenders.gov.in after paying Tender fee of Rs.10,000/- and Processing Fee, as applicable . The tender document is also available in website http://www.mphc.gov.in for reference.*
- *Bidders can submit its tender online at www.mptenders.gov.in on or before the key dates given above i.e.* ***08th July, 2019 before 06:00 P.M.*** *The Physical copy of the Technical Bids also is to be submitted at the address below latest by* ***09th July, 2019 at 5:00 P.M.***
- *All further notifications/amendments, if any shall be posted on www.mptenders.gov.in and www.mphc.gov.in only. No separate communication shall be made with individual Bidders.*
- **The financial bids are to be submitted only online and no hard copy to be submitted along with the bid**

All other terms and conditions for submission of tender are contained in this document. If the date of submitting/opening of the Bid is declared as holiday then the bids shall be submitted / opened on next working day.

The Registrar General, High Court of Madhya Pradesh, Jabalpur (M.P.) reserves the right to accept or reject any or all bids without assigning any reason thereof.

Address for communication: -Registrar General,
High Court of Madhya Pradesh,
Jabalpur (M.P.),
Email: mphc@nic.in, Landline: 0761-2623358

1. Instructions to the Tenderers /bidders:

1.1 DEFINITIONS:-

a) "**The Employer**" or **"The Purchaser"** means the "Registrar General, High Court of Madhya Pradesh, Jabalpur" and the "District Judge" of the District Courts.

b) **"The Bidder"** means a firm or Joint Venture or Consortium which participates in the tender and submits its proposal.

c) **"Successful Bidder"** means the Bidder, who, after the complete evaluation process, gets the Letter of Award. The Successful Bidder shall be deemed as "Contractor" appearing anywhere in the document.

d) "**The Letter of Award**" means the issue of a signed letter by the Purchaser of its intention to award the work mentioning the total Contract Value. The timeline for delivery of products and services will start from the date of issue of Letter of Award.

e) **"The Contract"** means the agreement entered into between the Employer and the Contractor, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.

f) **"The Contractor"** means the individual or firm or OEM supplying the Goods / items and Services under this Contract.

g) **"The Contract Price**" means the price payable to the Successful Bidder under the Letter of Award for the full and proper performance of its contractual obligations. The Contract Price shall be deemed as **"Contract Value"** appearing anywhere in the document.

h) **"Site Acceptance Test (SAT)"** is a process of testing the contracted services provided by the Bidder at the locations specified by the Registrar General, High Court of Madhya Pradesh. SAT comprises of Product Acceptance Tests with respect to Technical Specifications and Bill of Materials as

specified in this tender, checking the installation, commissioning and integration of sub-components and integration with High Court software and acceptance of the Training at the site.

i) **"Services"** means System Integration, Training and coordinating with the original equipment manufacturer (OEM) for installation, commissioning, system integration and maintenance for proper working of supplied equipments/items etc.

j) **"NIT"** is the Notice Inviting Tender. It is essentially the Press Notification of the Tender.

k) **"OEM"** - means Original Equipment Manufacturer and/or Original Software Developer.

l) This tender is subject to availability of funds / Budget from the State Government.

1.2 The technical bid of the tender shall be invited in sealed envelope consisting of EMD. The bid will be made and put in the sealed single envelope containing the title ***"Tender for Rate contract and Installation of Local Area Networking work in the High Court of Madhya Pradesh and Subordinate Courts (District Courts and Tehsil Courts) in the State of Madhya Pradesh"*** and addressed to "**The Registrar General, High Court of Madhya Pradesh, Jabalpur**" and the technical bid shall be submitted to the "**Receipt /Inward Section** of the High Court of M.P. **before 05:00 P.M. on 09th July, 2019** .

1.3 **The financial bids are to be submitted online and no hard copy to be submitted along with the bid.**

1.4 The date for the schedule of key events of this tender is given as under**:-**

Sl. No.	Events	Date
01	Date of Pre-Bid meeting	**18th June, 2019 at 11:30 A.M. in the Conference Hall, South Block, High Court of Madhya Pradesh, Jabalpur.**

02	**Last date and time of online tender submission.**	**08th July, 2019 before 06:00 P.M.**
03	**Last date and time of hardcopy tender submission.**	**09th July, 2019 before 05:00 P.M.**
04	**Date and time of opening of technical bids.**	**10th July, 2019 11:00 A.M.**
05	**Date and time of opening of the price bids.**	**Date and time shall be communicated to all the qualified bidders.**

1.5 All physical proposals have to be submitted ONLY in HARD BOUND **(Hard bound implies such binding between two covers through stitching or otherwise whereby it may not be possible to replace any paper without disturbing the document)** form with all pages sequentially numbered either at the top or at the bottom right corner of each page. It should also have an index giving page wise information of above documents. Incomplete proposal or those received without hard bound will summarily be rejected. ***All the Pages and Papers to be signed and sealed by the authorized signatory of the bidder.***

2. Scope of Work:-

i. The place of installation of Local Area Network and other related work will be the High Court of Madhya Pradesh and Subordinate Courts in the State of Madhya Pradesh. **The rates for the LAN work shall be valid for the period of one year from the date of contract. The contract may be extended further for the period of one by the High Court looking to the satisfactory services of the vendor**.

ii. It will be duty of the bidder to have the credentials of the Service Engineers/Technical Persons deputed for installation of Local Area Network work to be duly verified and certified.

iii. The bidder shall provide **Network Certified Engineer** to ensure proper maintenance and management of Local Area Networking work.

iv. The bidder shall install network by laying the cables CAT-6 level as per specifications and terms of the tender.

v. The bidder shall install network switches with uninterrupted power supply equipments and other peripherals necessary to make the network functional.

vi. All the Network nodes shall be connected to Network Switches by appropriate casing covered cables.

vii. All the hardware and the material used for installation of Local Area Networking shall be of good quality and of reputed make and brand as mentioned in the tender document.

viii. It shall be the responsibility of the bidder to ensure connectivity of every Node with the Server installed in the Computer Room of the High Court / District Courts.

ix. Each Network switch shall have sufficient provision of additional Nodes for future requirement.

x. The bidder shall ensure that no damage is caused to the Building / Court premises and proper repairs and finishing is to be done after installation of the Network.

3. Section – III

3. Terms and Conditions for e-Tendering:-

3.1 For participation in e-tendering module, it is mandatory for prospective bidders to get registration on website **www.mptenders.gov.in**. Therefore, it is advised to all prospective bidders to get registration by making on line registration fees payment at the earliest.

3.2 Tender documents can be purchased *only online* on payment of tender fees and downloaded from website **www.mptenders.gov.in** by making online payment for the tender document fee.

3.3 Service and gateway charges shall be borne by the bidders.

3.4 Since the bidders are required to sign their bids online using class–III Digital Signature Certificate, they are advised to obtain the same at the earliest.

3.5 For further information regarding issue of Digital Signature Certificate, the bidders are requested to visit website www.mptenders.gov.in . Please note that it may take upto 7 to 10 working days for issue of Digital Signature Certificate. Department will not be responsible for delay in issue of Digital Signature Certificate.

3.6 If bidder is going first time for e-tendering, then it is obligatory on the part of bidder to fulfill all formalities such as registration, obtaining Digital Signature Certificate etc. well in advance.

3.7 Bidders are requested to visit our e-tendering website regularly for any clarification and / or due date extension.

3.8 Bidder must positively complete online e-tendering procedure at **www.mptenders.gov.in**

3.9 Department shall not be responsible in any way for delay /difficulties /inaccessibility of the downloading facility from the website for any reason whatever.

3.10 For any type of clarification bidders can / visit www.mptenders.gov.in. For any technical related queries please call at 24 x 7 Help Desk Number 0120-4001 002 ; 0120-4200 462 ; 0120-4001 005 ; 0120-6277 787 ; Technical - support-eproc@nic.in. Support timings: Monday to Saturday from 10:00 AM to 7:00 PM.

3.11 Interested bidders may attend the free training programme in Bhopal at their own cost. For further query please contact help desk.

3.12 The bidder who so ever is submitting the tender by his Digital Signature Certificate shall invariably upload the scanned copy of the authority letter as well as submit the copy of same in physical form with the offer of particular tender.

The firms registered under NSIC are exempted for submission of tender fees and EMD. But they have to enclose valid documents in this regard.

4. <u>Other terms and conditions</u>:-

i. The Bidder shall complete the installation of Local Area Network or other related work within **<u>two month,</u>** after the receipt of Work Order failing which the penalty of Rs 500/- per day per work order shall be imposed.

ii. The installation work shall be undertaken only by the Operator(s) duly authorized by the Registrar General to maintain the security of the High Court. The Bidder shall provide the list of technical persons in advance with their credentials to the Registrar General.

iii. Tender document shall be available with the official website of the High Court i.e. **<u>www.mphc.gov.in</u> and Government e-procurement portal <u>www.mptenders.gov.in</u>**

iv. The technical bid of the tender shall be opened in the High Court of Madhya Pradesh, Jabalpur on **<u>due and time</u>**. One authorized representative of the bidder may remain present at the time of opening of the bids. Tender will be finalized after considering the proposals. All tenderers or any of the tenderer may be called for further negotiations before considering his/their proposal.

v. The Registrar General shall have the absolute right to select/reject any tender for installation of Network on the basis of rate, quality and services proposed in the tender.

vi. The bidder is required to submit **<u>brochure(s) of the Hardware items that is proposed to be supplied and installed for Local Area Network and other related work.</u>**

vii. The Registrar General has the right of accepting or rejecting any or all tenders without specifying any reason(s) thereof. The Registrar General is under no obligation to accept the lowest tender.

viii. There is no obligation on the part of the Registrar General to inform the unsuccessful Tenderer of the outcome of the Tender process and reasons for rejection of the tender.

ix. The successful bidder shall forthwith engage/depute qualified Service Engineers/Operators to install the Local Area Network in the High Court of Madhya Pradesh and Subordinate Courts in the State of Madhya Pradesh.

x. In case of pecuniary loss suffered by any of the users/beneficiaries of the High Court of Madhya Pradesh or Subordinate Courts attributed to the Contractor, the Registrar General will have the right to forfeit the Security Deposit and in case the Security Deposit falls short to match the pecuniary loss being insufficient, such balance will be recovered from the payments due to the Contractor.

xi. Rates offered in the tender will not be enhanced after acceptance of the Tender. No upward revision will be allowed under any circumstances whatsoever.

xii. Under no circumstances, shall the bidder appoint any sub-contractor or sub-lease the contract. If it is found that the contractor has violated these conditions, the contract will be terminated forthwith without any notice, by the authority who has approved the award of the contract.

xiii. The successful tenderer will be required to furnish security deposit of **10%** of the work order value within 15 days from the date of issue of Work Order. The security deposit shall be in the form of FDR through any nationalized bank in favour of Registrar General or unconditional Bank Guarantee of any Nationalized Bank of equal amount. The security deposit money will be refundable only after successful installation of Local Area Network. The security deposit will be forfeited if during the period of installation services of the bidder are found to be unsatisfactory in any respect.

xiv. The work order can be terminated by the Registrar General at any point of time without assigning any reason if the work of the contractor is found unsatisfactory. In this respect, the decision of the Registrar General will be final and binding on the contractor. The Registrar General reserves the right to accept or reject any bid in whole or in part without assigning any reasons thereof.

xv. The bills in triplicate for the work completed on the basis of approved rates shall have to be submitted in favour of the Registrar General / District and Sessions Judge, Jabalpur for effecting payment. No advance payment shall be made for the Job/Work done.

xvi. The bidder shall submit the report of successful installation of Local Area Network or other Network related work, which shall be verified by the Officers

nominated by the Registrar General after checking connectivity of every Node with the Server / Network Switch. With regard to successful installation of local area network, the decision of Registrar General shall be final and binding.

xvii. The job carried out shall be to the satisfaction of the Registrar General after getting certification from the In-Charge, Computer Section of the District Courts failing which deductions upto 10% of the total bill shall be made. Depending upon the severity of negligence, the Registrar General reserves the right to blacklist the agency for a suitable period or from further participation in any of the jobs to be done for the High Court of Madhya Pradesh, Jabalpur. The decision of the Registrar General shall be final and binding on the Firm.

xviii. Premature withdrawal of the tender by the tenderer shall make him liable for forfeiture of the earnest money deposit.

xix. **All the pages of the tender document should be serially numbered and duly stamped and signed by the bidder.**

xx. The Registrar General reserves the right to review the performance whenever so desires, and also to terminate the Work Order at any point of time during the installation in case the performance and the service rendered by the Bidder is found to be unsatisfactory. The decision of the Registrar General shall be binding on the Bidder. The Word Order can also be terminated at any point of time if the above mentioned work is no more required.

xxi. The Registrar General reserves the right to vary, amend or alter any terms and conditions of the Tender Document at the time of placement of work order and before executing the contract.

5. Eligibility Criteria :-

i. The Agency / Firm applying should possess valid Income Tax PAN No. , GST registration No. The Agency should have a minimum experience of 05 years in Local Area Networking installation work at Government Organization, Public Sector Companies and other reputed Private Organizations.

ii. Copies of the following documents should be submitted along with the Bid.

a. GST registration

b. Latest GST return of the Company.

c. Income Tax PAN card.

d. Income Tax Return for the last three years i.e. 2016-17 , 2017-18 and 2018-19.

e. Valid ISO / ISI Certificate of the products to be installed.

f. Documents showing the experience of Five years in providing similar work i.e. Local Area Networking work.

g. The online **Earnest Money Deposit (EMD) of Rs.4,00,000/-** (Rupees Four Lakh Only) through a Demand Draft/Pay Order/ unconditional Bank Guarantee drawn in favor of Registrar General , High Court of Madhya Pradesh, Jabalpur. The Government organizations are exempted for submission of EMD.

h. Non-refundable **online tender fees of Rs.10,000/-** (Rupees Ten Thousand only) drawn in favor of Registrar General, High Court of Madhya Pradesh. The Government organizations are exempted for submission of EMD.

i. List of existing LAN installations being maintained as per details following:

Name of the Company/Type of LAN being maintained/No. of nodes/Last year's turn over.

j. Escalation matrix for lodging the complaint during the execution of warranty period

k. Brochures of the product with detailed specifications and MAF.

l. The valid ISO 9001 certificate of the bidder in the field of LAN and other Network work. The

Government Organization are exempted for submission of ISO certificate of the organization as per the tender document.

m. The ***Annual*** average turnover during last three financial years to be at least **Rupees 02 crore.**

6. Evaluation of Bids:

6.1 The Techno-Commercial Bid and price Bid will be evaluated as a package simultaneously. It must satisfy all the terms and conditions mentioned in this document and must be accompanied by all the requisite documents.

6.2 Filling up of all the columns in Techno-Commercial Bid and Price Bid is compulsory.

7. Earnest Money Deposit:

The proposal should be submitted along with **online** application fee of Rs.10,000/- (Rs. Ten Thousand only) and Earnest Money Deposit (EMD) of Rs.4,00,000/- (Rs. Four Lakh only) in the form of a demand draft / pay order / FDR / unconditional Bank Guarantee drawn in favour of "***Registrar General, High Court of Madhya Pradesh, Jabalpur***" of any Nationalized / Scheduled bank payable at **Jabalpur.** The Bid submitted without EMD and/or the application fee shall be summarily rejected. The earnest money will be returned to all the unsuccessful Tenderer after finalization of the Tender. No interest shall be paid on the Earnest Money Deposit for delay in return for any reason, whatsoever may be.

8 SPECIFICATIONS :-

8.1: Items with details (Bill of material)

S.No.	Item Description	OEM Make/Part No.	Proposed make/brand by the bidder	Technically Complied Yes/No
1	UTP CAT 6 cable (Box of 305 m)	D-link/ Legrand or equivalent brand of repute		
2	24 port Patch Panel CAT 6 (each)	D-link/ Legrand or equivalent brand of		

		repute		
3	Information Outlet CAT 6 (each)	D-link/ Legrand or equivalent brand of repute		
3 a	1-port	D-link/ Legrand or equivalent brand of repute		
3 b	2-port	D-link/ Legrand or equivalent brand of repute		
3 c	4-port	D-link/Legrand or equivalent brand of repute		
4	Patch Cords CAT 6 (each)	D-link/Legrand or equivalent brand of repute		
4 a	3 feet	D-link/Legrand or equivalent brand of repute		
4 b	7 feet	D-link/Legrand or equivalent brand of repute		
4 c	10 feet	D-link/Legrand or equivalent brand of repute		
	FIBER COMPONENTS			
5	Fiber Optic indoor/outdoor tight buffered cable Multi mode (MM) (Per Meter) (Distance shall be within the parameter of 2 kilometer, therefore, MM shall be required as per tender.)	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
5 a	6 core	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
5 b	12 core	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
6	Fiber Optic outdoor armoured cable Multi mode (SM) (Per Meter) (Distance shall be within the parameter of 2 kilometer, therefore, MM shall be required as per tender.)	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
6 a	6 core	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent		

		brand of repute		
6 b	12 core	3M/ finolex /Fujitsu/ D-link/Legrand		
7	**Optical Fiber Connector SC Type, Epoxyless (each)**	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
7 a	MM	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
7 b	SM	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
8	**Optical Fiber Connectors LC Type, Epoxyless (each)**	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
8 a	MM	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
8 b	SM	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
9	**Optical Fiber pigtail SC Type, 1 meter (each)**	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
9 a	MM	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
9 b	SM	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
10	**Optical Fiber pigtail LC Type, 1 meter (each)**	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
10 a	MM	3M/ finolex /Fujitsu/ D-		

		link/Legrand or equivalent brand of repute		
10 b	SM	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
10 c	20 meters	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
11	**Optical Fiber Patch Cord, MM SC to SC (each)**	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
11 a	3 meters	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
11 b	10 meters	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
11 c	20 meters	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
12	**Optical Fiber Patch Cord, SM, SC to MTRJ (each) MTRJ is required for old networks (at the time of maintenance work as per tender).**	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
12 a	3 meters	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
12 b	10 meters	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
12 c	20 meters	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
13	**Optical Fiber Patch Cord, MM, SC to LC (each)**	3M/ finolex /Fujitsu/ D-link/Legrand		

		or equivalent brand of repute		
13 a	3 meters	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
13 b	10 meters	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
13 c	20 meters	3M/ finolex /Fujitsu/ D-link/Legrand		
14	**Optical Fiber**	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
14 a	3 meters	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
14 b	10 meters	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
14 c	20 meters	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
15	**Optical Fiber Patch Cord, MM, OM-3+SC to LC (each)**	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
15 a	3 meters	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
15 b	10 meters	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
15 c	20 meters	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		

16	**LIU, 24 fiber, Wall mount enclosure, lockable & fitted with SC/LC couplers & all accessories (each)**	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
16 a	LIU WITH SC MM COUPLER	3M/ finolex /Fujitsu/ D-link/Legrand		
16 b	LIU WITH SC SM COUPLER	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
16 c	LIU WITH LC MM COUPLER	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
16 d	LIU WITH LC SM COUPLER	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
17	**LIU, 12 fiber, 1U/ 2U drawer style 19 " Rack mount enclosure & fitted with SC/LC couplers & all accessories (each)**	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
17 a	LIU WITH SC MM COUPLER	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
17 b	LIU WITH SC SM COUPLER	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
17 c	LIU WITH LC MM COUPLER	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
17 d	LIU WITH LC SM COUPLER	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute		
	Installation & Termination, Documentation & Site Certification of UTP and Fiber Cabling			
18	In-building laying of UTP CAT 6A / CAT 6 Cable (Per Meter)	As per actual		
19	Installation & Termination or Information outlets (including termination of CAT 6/ CAT 6 Cable on I/O	As per actual		

20	Installation & Termination of UTP Cables on Patch Panel CAT 6/ CAT 6A with wire manager	As per actual		
21	Performance testing of the laid UTP CAT 6/ CAT 6 A (Penta Scanner reports & documentation) (Per Node)	As per actual		
22	**Site Certification for UTP CAT6/CAT 6A & Fiber cabling with 15 years Performance warranty (Per site)**	As per actual		
22 a	Site up to 100 Nodes	As per actual		
22 b	Site up to 500 Nodes	As per actual		
22 c	Site up to 1000 Nodes	As per actual		
23	Supply & fixing of ISI/ISO marked PVC duct of Size (Per Meter)	ISI / ISO (OEM)		
23 a	15 x 15 mm	ISI / ISO (OEM)		
23 b	30 x 25 mm	ISI / ISO (OEM)		
23 c	40 x 25 mm	ISI / ISO (OEM)		
24	Supply and fixing of PVC Conduit of OD Size (Per Meter)	ISI / ISO (OEM)		
24 a	20 mm	ISI / ISO (OEM)		
24 b	32 mm	ISI / ISO (OEM)		
24 c	40 mm	ISI / ISO (OEM)		
25	Supply & Fixing of Metal MS Cable Tray/ raceway with covers for mounting on ceiling / floor/ wall, with all connecting fittings and sections for hanging, T- Cross, L, Vertical routing/branching of cables etc, size as follows with required fitting kit & accessories for above (per running meter)	As per actual		
25 a	50 mm Height x 100 mm width Thickness 1.6mm			
25 b	50 mm Height x 200 mm width Thickness 1.6mm			
25 c	100 mm Height x 300 mm width Thickness 1.6mm			
26	Supply & Fixing of High Grade PVC cable tray/ race way with covers for mounting on ceiling / floor/ wall, with all connecting fittings & sections for hanging, T, Cross, L, vertical up/down routing. Branching of cables etc, size as follows with required fitting kit accessories for above (per running meter)			
26 a	50 mm Height x 150 mm width Thickness 2.5 mm to 3 mm			
26 b	100 mm Height x 100 mm width 2.5 mm to 3 mm			
26 c	100 mm Height x 300 mm			

	width 2.5 mm to 3 mm			
27	Removal of Old UTP/ Fiber / coaxial RS 232/telephone cables (per Meter)			
28	In building laying of fiber in duct/ conduit (per meter)			
29	Outdoor laying of fiber cable (per Meter)			
29 a	Excavation and resurfacing of the Soft soil (depth 1 meter)			
29 b	Excavation and resurfacing of the concreter (depth 1 meter)			
30	Supply and Installation / Fixing of GI Pipe underground and on surface			
30 a	1 inch diameter			
30 b	1.5 inch diameter			
31	Supply and Installation / Fixing of 2" (Inches) diameter HDPE PVC Jacket Underground or on surface (Per Meter)			
32	Supply and installation/ Fixing of 4 Inch HUME pipe underground (Per Meter)			
33	SC/LC connector termination on fiber optic cable			
34	Fusion/ Mechanical splicing of SC / LC type			
35	Supply and installation of buffer tubing kit			
36	**Fiber optics cable route marker (Proper marking should be there in the form of pipe as per the directions of the High Court.)**			
37	cable pulling pit made of reinforced concrete and brick walls with removable covers			
38	Performance testing of laid fiber Optic cable for continuity length & DB loss as per EIA/TIA - 455-60 document for FO test procedures & documentation of the results.			
	19" equipment mounting Racks			
39	19" Rack, wall Mount 530 mm depth, 9 U Height, (lockable) with all accessories(At least 2 cooling fan,1 cable manager, 15A 6port spike guard)	Rittal/D-link,Valrack or equivalent brand of repute		
40	19" Rack, wall Mount 530 mm depth, 12 U Height, (lockable) with all accessories	Rittal/D-link,Valrack or equivalent brand of repute		
41	19" Rack, wall Mount 800 mm depth, 24 U Height, (lockable) with all accessories(At least 2 cooling fan,1 cable manager, 15A 6port spike guard)	Rittal/D-link,Valrack or equivalent brand of repute		
42	19" Rack, wall Mount 1000 mm depth, 32 U Height, (lockable) with all accessories	Rittal/D-link,Valrack or equivalent brand of repute		

43	19" Rack, wall Mount 1000 mm depth, 42 U Height, (lockable) with all accessories (Atleast 2 cooling fan,1 cable manager, 15A 6port spike guard)	Rittal/D-link,Valrack or equivalent brand of repute		
44	LAN Survey & Document Preparation			
44 a	for up to 100 network nodes, per node			
44 b	for up to 500 network nodes, per node			
44 c	for up to 1000 network nodes, per node			
44 d	for more than 1000 network nodes, per node			
45	Blower (D-link / Eureka Forbes)	(D-link / Eureka Forbes)		
46	Four pair wire LAN Crimping Tool	D-link / Krone		
47	LAN Punching Tool	D-link / Krone		
48	LAN Took Kit	D-link / Krone		
49	LAN Tester	D-link / Krone		
50	**8 port Network Switches (Non-manageable) The requirement is of controller based access points for wireless network with all required accessories as per Specification-"A".**	D-link / CISCO		
51	*24 port Ethernet managed enterprise series switch with all accessories and **Power over Ethernet (PoE) The requirement is of controller based access points for wireless network with all required accessories as per Specification-"B".**	CISCO / Dell / HP / Juniper		
52	***24 port Ethernet managed enterprise series switch with all accessories. (The requirement is of controller based access points for wireless network with all required accessories as per Specification-"C".)**	CISCO / Dell / HP / Juniper		
53	*24 port Ethernet managed enterprise series switch with all accessories. **(The requirement is of controller based access points for wireless network with all required accessories as per Specification-"D".)**	CISCO / Dell / HP / Juniper		
54	*24 port Ethernet managed enterprise series switch with all accessories. **(The requirement is of controller based access points for wireless network with all required accessories as per Specification-"E".)**	CISCO / Dell / HP / Juniper		
55	Indoor Access Point for Wireless Network With all required accessories.	D-link/ CISCO / Dell / HP / Juniper		

	(The requirement is of controller based access points for wireless network with all required accessories as per Specification-"F".)			
56	***SFP modules of SM **(The requirement is of controller based access points for wireless network with all required accessories.)** Should support both SM and MM fiber at minimum 1 GBPS. Should be same OEM as item no. 51 to 54	CISCO / Dell / HP / Juniper		
57	Media convertor SM **(Should support 10/100/1000 Ethernet to 10/100/1000 fiber Onsite support) (The requirement is of controller based access points for wireless network with all required accessories.)**	Reputed make		
58	Media convertor MM **(Should support 10/100/1000 Ethernet to 10/100/1000 fiber Onsite support) The requirement is of controller based access points for wireless network with all required accessories.**	Reputed make		

Specification –"A"

S.No.	Item Description	OEM Make/Part No.	Proposed make/brand by the bidder	Technically Complied Yes/No
50	**8 port Network Switches (Non-manageable) The requirement is of controller based access points for wireless network with all required accessories.**	D-link / CISCO		
50 a	No. Of 10/100/1000 Mbps Base T Ports 8			
50 b	Support Entries In The MAC Table 2000			
50 c	Minimum Switching Capacity 1.6Gbps			
50 d	Minimum Forwarding capacity 1.4 Mbps			
50 e	Should have QoS, Loop detection, Jumbo frame(9216),feature			
50 f	Operative temperature 0 to 40 degree C			
50 g	Should be under Metal housing			
50 h	Onsite warranty			

Specification –"B"

51	*24 port Ethernet managed enterprise series switch with all accessories and **Power over Ethernet (PoE)** **The requirement is of controller based access points for wireless network with all required accessories.**	CISCO / Dell / HP / Juniper		
51 a	Switch OEM should be in the Gartner's Leaders or Challengers or visionary quadrant for Wired and Wireless LAN Access Infrastructure published in 2017 or later			
51 b	Switch should be 1RU with minimum 24 nos. 10/100/1000 Base-T ports with PoE+ capability and minimum 370W of PoE Power and additional 4 nos. SFP uplinks ports.			
51 c	SFP modules asked in S/N no. 56 should be from same OEM			
51 d	Switch should support (excluding uplinks) for minimum 56 Gbps of stacking bandwidth with dedicated stacking ports and cables with minimum 8 switch in stack.			
51 e	Switch should have internal power supply. Should support external/internal redundant power supply.			
51 f	Switch shall have minimum 88 Gbps of switching fabric and 65 Mpps of forwarding rate.			
51 g	Shall have minimum 16 K MAC Addresses and 250 active Vlans.			
51 h	Should support IEEE Standards of Ethernet: IEEE 802.1D, 802.1s, 802.1w, 802.3az, 802.1x, 802.3ad, 802.3x, 802.1p, 802.1Q, 802.3, 802.3u, 802.3ab, 802.3z.			
51 i	Shall have 802.1p class of service, marking, classification, policing and shaping. Should support strict priority queuing.			
51 j	Switch should support management features like SSHv2, SNMPv2c, SNMPv3, NTP, RADIUS and TACACS+ .			
51 k	Switch should support port security, DHCP snooping, Dynamic ARP inspection, IP Source guard, BPDU Guard, Spanning tree root guard.			
51 l	Switch should support IPv6 Binding Integrity Guard, IPv6 Snooping, IPv6 RA Guard, IPv6 DHCP Guard, IPv6 Neighbor Discovery Inspection and IPv6 Source Guard.			
51 m	Should support 802.1x authentication and accounting, IPv4 and IPv6 ACLs and Dynamic VLAN assignment.			
51 n	Switch must have support for L3 functionality like static routing, RIP, PIM, OSPF and PBR from Day1			
51 o	Switch should support application visibility and traffic monitoring with minimum 12 K netFlow/sflow/jflow			

	entries.			
51 p	Switch shall conform to UL 60950 or IEC 60950 or CSA 60950 or EN 60950 Standards for Safety requirements of Information Technology Equipment.			
51 q	Switch shall conform to EN 55022 Class A/B or CISPR22 Class A/B or CE Class A/B or FCC Class A/B Standards for EMC (Electro Magnetic Compatibility) requirements.			
51 r	Switch should be tested and certified for EAL/NDPP or above under Common Criteria Certification.			
51 s	Switch should be IPv6 logo ready Certified.			

Specification –"C"

52	***24 port Ethernet managed enterprise series switch with all accessories. (The requirement is of controller based access points for wireless network with all required accessories.)**	CISCO / Dell / HP / Juniper		
52 a	Switch OEM should be in the Gartner's Leaders or Challengers or visionary quadrant for Wired and Wireless LAN Access Infrastructure published in 2017 or later			
52 b	Switch should be 1RU with minimum 24 nos. 10/100/1000 Base-T ports and additional 4 nos. SFP uplinks ports.			
52 c	SFP modules asked in S/N no. 56 should be from same OEM			
52 d	Switch should support (excluding uplinks) for minimum 56 Gbps of stacking bandwidth with dedicated stacking ports and cables with minimum 8 switch in stack .			
52 e	Switch should have internal power supply. Should support external/internal redundant power supply.			
52 f	Switch shall have minimum 88 Gbps of switching fabric and 65 Mpps of forwarding rate.			
52 g	Shall have minimum 16 K MAC Addresses and 250 active Vlans.			
52 h	Should support IEEE Standards of Ethernet: IEEE 802.1D, 802.1s, 802.1w, 802.3az, 802.1x, 802.3ad, 802.3x, 802.1p, 802.1Q, 802.3, 802.3u, 802.3ab, 802.3z.			
52 i	Shall have 802.1p class of service, marking, classification, policing and shaping. Should support strict priority queuing.			
52 j	Switch should support management features like SSHv2, SNMPv2c, SNMPv3, NTP, RADIUS and TACACS+ .			
52 k	Switch should support port security,			

	DHCP snooping, Dynamic ARP inspection, IP Source guard, BPDU Guard, Spanning tree root guard.			
52 l	Switch should support IPv6 Binding Integrity Guard, IPv6 Snooping, IPv6 RA Guard, IPv6 DHCP Guard, IPv6 Neighbor Discovery Inspection and IPv6 Source Guard.			
52 m	Should support 802.1x authentication and accounting, IPv4 and IPv6 ACLs and Dynamic VLAN assignment.			
52 n	Switch must have support for L3 functionality like static routing, RIP, PIM, OSPF and PBR from Day1			
52 o	Switch should support application visibility and traffic monitoring with minimum 12 K netFlow/sflow/jflow entries.			
52 p	Switch shall conform to UL 60950 or IEC 60950 or CSA 60950 or EN 60950 Standards for Safety requirements of Information Technology Equipment.			
52 q	Switch shall conform to EN 55022 Class A/B or CISPR22 Class A/B or CE Class A/B or FCC Class A/B Standards for EMC (Electro Magnetic Compatibility) requirements.			
52 r	Switch should be tested and certified for EAL/NDPP or above under Common Criteria Certification.			
52 s	Switch should be IPv6 logo ready Certified.			
52 t	Switch OEM should be in the Gartner's Leaders or Challengers or visionary quadrant for Wired and Wireless LAN Access Infrastructure published in 2017 or later			

Specification –"D"

53	*24 port Ethernet managed enterprise series switch with all accessories. **(The requirement is of controller based access points for wireless network with all required accessories.)**	CISCO / Dell / HP / Juniper		
53 a	Switch OEM should be in the Gartner's Leaders or Challengers or visionary quadrant for Wired and Wireless LAN Access Infrastructure published in 2017 or later			
53 b	The switch should have minimum 24 x 10/100 Mbps Ethernet Ports and 2 dual-purpose port (10/100/1000 or SFP). Switch should have fans for proper cooling.			
53 c	SFP modules asked in S/N no. 56 should be from same OEM			
53 d	At least 16 Gbps Forwarding bandwidth and 6 Mpps forwarding rate			
53 e	DRAM : 128MB & Flash : 64MB			
53 f	Configurable up to 8000 MAC			

	addresses.			
53 g	IEEE 802.1Q VLAN encapsulation. Upto 250 VLANs should be supported. Support for 4000 VLAN IDs. Centralized VLAN Management. VLANs created on the Core Switches should be propagated automatically.			
53 h	IEEE 802.1d, 802.1s, 802.1w, 802.3ad. Link Aggregation Protocol (LACP)			
53 i	Spanning-tree feature to prevent other edge switches becoming the root bridge.			
53 j	IGMP snooping v3, Support for upto 250 IGMP Groups. IGMP filtering.			
53 k	Support for Detection of Unidirectional Links (in case of fiber cut) and to disable them to avoid problems such as spanning-tree loops.			
53 l	The Switch should be able to discover the neighboring device of the same vendor giving the details about the platform, IP Address, Link connected through etc, thus helping in troubleshooting connectivity problems.			
53 m	Per-port broadcast, multicast, and storm control to prevent faulty end stations from degrading overall systems performance.			
53 n	Local Proxy Address Resolution Protocol (ARP) to work in conjunction with Private VLAN Edge to minimize broadcasts and maximize available bandwidth.			
53 o	Multicast VLAN registration (MVR) to continuously send multicast streams in a multicast VLAN while isolating the streams from subscriber VLANs for bandwidth and security reasons.			
53 p	Support for RFC 1492 - TACACS+, RFC 2463 - ICMP IPv6, RFC 2373 - IPv6 Aggregatable Addrs, RFC 2461 - IPv6 Neighbor Discovery and RFC 2462 - IPv6 Autoconfiguration			
53 q	Min 500 ACL entries should be supported.			
53 r	Four egress queues per port to enable differentiated management.			
53 s	SNMP v1, v2c, and v3 and Telnet interface support delivers comprehensive in-band management, and a CLI-based management console provides detailed out-of-band management.			
53 t	Switch shall conform to EN 55022 Class A/B or CISPR22 Class A/B or CE Class A/B or FCC Class A/B Standards for EMC (Electro Magnetic Compatibility) requirements. Reduction of Hazardous Substances, CE Marking.			

Specification –"E"

54	*24 port Ethernet managed enterprise series switch with all accessories. **(The requirement is of controller based access points for wireless network with all required accessories.) as per specification – "A"**	CISCO / Dell / HP / Juniper		
54 a	Switch OEM should be in the Gartner's Leaders or Challengers or visionary quadrant for Wired and Wireless LAN Access Infrastructure published in 2017 or later			
54 b	The switch should have minimum 24 x 10/100 Mbps Ethernet IEEE 802.3af Ports and 2 dual-purpose port (10/100/1000 or SFP). Minimum 370W of PoE Power. Should have fans for proper cooling.			
54 c	SFP modules asked in S/N no. 56 should be from same OEM			
54 d	At least 16 Gbps Forwarding bandwidth and 6 Mpps forwarding rate			
54 e	DRAM : 128MB & Flash : 64MB			
54 f	Configurable up to 8000 MAC addresses.			
54 g	IEEE 802.1Q VLAN encapsulation. Upto 250 VLANs should be supported. Support for 4000 VLAN IDs. Centralized VLAN Management. VLANs created on the Core Switches should be propagated automatically.			
54 h	IEEE 802.1d, 802.1s, 802.1w, 802.3ad. Link Aggregation Protocol (LACP)			
54 i	Spanning-tree feature to prevent other edge switches becoming the root bridge.			
54 j	IGMP snooping v3, Support for upto 250 IGMP Groups. IGMP filtering.			
54 k	Support for Detection of Unidirectional Links (in case of fiber cut) and to disable them to avoid problems such as spanning-tree loops.			
54 l	The Switch should be able to discover the neighboring device of the same vendor giving the details about the platform, IP Address, Link connected through etc, thus helping in troubleshooting connectivity problems.			
54 m	Per-port broadcast, multicast, and storm control to prevent faulty end stations from degrading overall systems performance.			
54 n	Local Proxy Address Resolution Protocol (ARP) to work in conjunction with Private VLAN Edge to minimize broadcasts and maximize available bandwidth.			
54 o	Multicast VLAN registration (MVR) to continuously send multicast streams in a multicast VLAN while isolating			

	the streams from subscriber VLANs for bandwidth and security reasons.			
54 p	Support for RFC 1492 - TACACS+, RFC 2463 - ICMP IPv6, RFC 2373 - IPv6 Aggregatable Addrs, RFC 2461 - IPv6 Neighbor Discovery and RFC 2462 - IPv6 Auto configuration			
54 q	Min 500 ACL entries should be supported.			
54 r	Rate limiting should be provided based on source and destination IP address, source and destination MAC address, Layer 4 TCP and UDP information, or any combination of these fields, using QoS ACLs (IP ACLs or MAC ACLs), class maps, and policy maps.			
54 s	SNMP v1, v2c, and v3 and Telnet interface support delivers comprehensive in-band management, and a CLI-based management console provides detailed out-of-band management.			
54 t	Switch shall conform to EN 55022 Class A/B or CISPR22 Class A/B or CE Class A/B or FCC Class A/B Standards for EMC (Electro Magnetic Compatibility) requirements. Reduction of Hazardous Substances, CE Marking.			

Specification –"F"

55	Indoor Access Point for Wireless Network With all required accessories. **(The requirement is of controller based access points for wireless network with all required accessories.) B**	D-link/ CISCO / Dell / HP / Juniper		
55 a	Access Points proposed must include radios for 2.4 GHz and 5 GHz with 802.11ac Wave 2.			
55 b	Should have one RJ-45 auto-sensing 10/100/1000 Mbps LAN port and a RJ-45 console port			
55 c	An access point must include a standard OEM provided Mounting brackets for mounting on Ceiling or Roof top.			
55 d	Access Point shall support Console port that uses Standard Port (RJ-45) type connection			
55 e	Must have at least 3 dBi Antenna gain on each radios			
55 f	1.9 Gbps to 1 Gbps			
55 g	Must support 4x4:4 spatial streams for both 802.11ac and 802.11n client			
55 h	Must support minimum of 22dbm of transmit power in both 2.4Ghz and 5Ghz radios. And should follow the WPC norms.			
55 i	Must incorporate radio resource management for power, channel, coverage hole detection and performance optimization			

55 j	Must have -97 dB or better Receiver Sensitivity.			
55 k	Must support Proactive Key Caching and/or other methods for Fast Secure Roaming.			
55 l	Must support Management Frame Protection.			
55 m	Should support locally-significant certificates on the APs using a Public Key Infrastructure (PKI).			
55 n	Access Points must support Hardware-based encrypted user data and management traffic between controller and Access point for better security.			
55 o	Must support the ability to serve clients and monitor the RF environment concurrently.			
55 p	Same model AP that serves clients must be able to be dedicated to monitoring the RF environment.			
55 q	Must be plenum-rated (UL2043).			
55 r	Support at least 8 WLANs per AP for SSID deployment flexibility.			
55 s	The APs must support centralized wireless mode with the use of a controller, or have controller functionality to control minimum 15 access points on same LAN (without any license) but the APs must also support operation in autonomous mode without the presence of any controller, when needed			
55 t	Must support telnet and/or SSH login to APs directly for troubleshooting flexibility.			
55 u	Must support Power over Ethernet, local power(DC Power), and power injectors.			
55 v	802.11e and WMM			
55 w	Must support QoS and Video Call Admission Control capabilities.			

Note:-1.* The network switches to be compatible with the existing LAN infrastructure of the High Court and District Courts.

2. All the quoted products make and model shall be finalized by the committee of the High Court.

8.2 Structured Cabling

8.2.1 The Bidder is required to install and commission the structured cabling involving CAT - 6 Cables, Surface Mount I/Os, Jack Panel, PVC conduit / casing / capping with accessories, any other required components such as labels, ferrules etc., and all associated civil works in accordance with the following guidelines:-

i. Carrying out of the required surveys prior to installation work is the responsibility of the Successful Bidder, if deemed necessary.

ii. The cabling job should be carried out under the supervision of Network Certified Engineers.

iii. All the wiring should be fully concealed inside the conduit /casing and no cable (except patch cords) should be visible to the naked eye.

iv. The cabling shall be properly labeled and ferruled so as to facilitate easy identification and maintenance. The labeling and ferruling shall be documented.

v. All civil work like cutting, chasing, drilling, etc. shall be finished to ensure smooth leveled surfaces matching the existing aesthetics of the office to the extent possible.

vi. All waste material shall be properly disposed off from the Registrar General, High Court of Madhya Pradesh premises in an environment friendly manner and complaint to applicable civil /municipal guidelines.

8.2.2 Testing, in conformance to measurement procedures and test parameters for CAT 6 installation as defined in TIA/EIA-568-B standards, of each node using a penta scanner. The **certified test results** are to be submitted to High Court of M.P., Jabalpur in hard copy.

8.2.3 Certification of each site for minimum **15 years performance warranty** based on the above test results from the manufacturer of the structured network cabling components.

8.2.4 The cabling components and the system (cables, I/Os, Patch Cords and Jack Panel) shall.

(i) IEEE 802.3 compliant

(ii) Conform to the TIA/EIA 568 standard

(iii) UL listed

8.2.5 The PVC conduit / casing / capping / all accessories and other required components including labels, ferrules, and any other proposed components shall **be ISI /ISO certified**.

8.2.6 The Bidder shall provide the details (technical specifications, dimensions, brochures, make, model, photo catalogues) and conformance to standards mentioned in the tender document.

9. The bidder has to adopt following guidelines for Cabling & Networking:-

9.1 Twisted Pair cable guidelines:-

CONDITION	< 2KVA	2-5KVA	>5KVA
Unshielded power lines or electrical equipment in the proximity to open or non-metal pathways.	5 inches or 12.7 cm	12 inches or 30.5 cm	24 inches or 61 cm
Unshielded power lines or electrical equipment in the proximity to grounded metal conduit pathway.	2.5 inches or 6.4 cm	6 inches or 15.2 cm	12 inches or 30.5 cm
Power lines enclosed in a grounded metal conduit (equivalent shielding) in the proximity to grounded metal conduit pathway.		6 inches or 15.2 cm	12 inches or 30.5 cm
Fluorescent lighting.	12 inches or 30.5 cm		
Transformers & electric motors.	40 inches or 1.02 meter		

9.2 Minimum bending radius for a cable:-

a. According to EIA/TIA SP-2840A the minimum-bending radius for UTP is 4 x cable outside diameter, about 1 inch. For multi-pair cable the minimum-bending radius is 10 x outside diameter.

b. For fiber optic cables not in tension, the minimum bend radius is 10 x diameter; cables loaded in tension may not be bent at less than 20 x diameter. SP-2840A states that no fiber optic will be bent on a radius less than 3.0 cm (1.18 inches).

c. Minimum for pulling during installation is 8 x cable diameter; minimum installed radius is 6 x cable diameter for riser cable, 4 x cable diameter for horizontal cable.

9.3 Do's and Don'ts for the Bidder:-

Do's	***Don'ts***
Use connecting hardware that is compatible with the installed cable.	Do not use connecting hardware that is of a lower category than the cable being used.
Terminate each horizontal cable on a dedicated telecommunications outlet.	Do not tap a new line from the middle of another cable (called bridge taps), as it picks up more noise. Do not leave cables un-terminated.

Locate the main cross-connect near the center of the building to limit cable distances.	Do not locate cross-connects where cable distance will exceed the maximum allowed distance.
Maintain the twist of horizontal and backbone cable pairs up to the point of terminations.	Do not leave any wire pairs untwisted (Keep the twist until the closest possible places to the terminations).
Tie and dress horizontal cables neatly and with a minimum bend radius of 4 times the cable diameter.	Do not over-tighten cables ties. Never use staples or make sharp bends with cables.
Place cabling at a sufficient distance from equipment.	Do not place cable near equipment that may generate high levels of EMI (i.e., electricity wire (power line) and fluorescent light).

For running cable the bidder has to follow following rules:-

A. Always use more cable than you need. Leave plenty of slack.
B. Test every part of a network as the time of installation. Even if it is brand new, it may have problems that will be difficult to isolate later.
C. Stay at least 3 feet away from fluorescent light boxes and other sources of electrical interference.
D. If it is necessary to run cable across the floor, cover the cable with cable protectors.
E. Label both ends of each cable.
F. Use cable ties (not tape) to keep cables in the same location together.
G. The conduit or casing should not be filled completely with the cables. There should be room for future expansion.

9.4 UTP Cabling Installation:-

9.4.1 To avoid stretching, pulling tension should not exceed 110N or (25 lb *f*) for 4-pair cables.

9.4.2 Installed bend radii shall not exceed: - 4 times the cable diameter for horizontal UTP cables. –10 times the cable diameter for multi-pair backbone UTP cables.

9.4.3 Avoid cable stress, as caused by:- cable twist during pulling or installation – tension in suspended cable runs – tightly clinched cable ties or staples – tight bend radii.

9.4.4 Horizontal cables should be used with connecting hardware and patch cords (or jumpers) of the same performance category or higher.

9.4.5 Important Note: Installed UTP cabling shall be classified by the least performing component in the link.

9.5 General Guidelines to the Contractor / Bidder:-

9.5.1 Tagging each network terminal for easy identification by using Numeric Tags.

9.5.2 Unique tag code for uplink so that it is easily identified e.g. Numeric Tag 00.

9.5.3 Proper Termination of Fiber Optics Cable if any use or to be used.

9.5.4 Stands for switches should be provided so that the switch is rack mountable.

9.5.5 Port of the Patch Panel should be numbered so that the node can be tracked with Numeric Tag.

9.5.6 I/O port should be provided and numbered accordingly.

9.6 Documentation to be submitted by the contractor:-

9.6.1 Details Descriptive documentation of the Structural Cabling.

9.6.2 Test Report of the Network Cable with a comparison of test parameter with the specification parameter and variation.

9.6.3 Evaluation Report of the Built IT Infrastructure.

9.6.4 Drawings showing the location of cable runs, (preferably with individual cable lengths marked for any legacy thin Ethernet runs).

9.6.5 Size and occupancy of any existing cable ducts or conduits, which are available for use when expanding the network.

9.6.6 Details of the capacity and type of cabling and connectors used.

9.6.7 Details of type of connectors or sockets at either end of each cable

9.6.8 Records of the designation and location of outlets.

9.6.9 Any certification carried out on the cabling (e.g. Cat 6 test results).

9.6.10 Diagrams showing the relationships of various workstations, file servers, printers and other devices on the network to one another.

8.6.11 Diagrams showing how any hubs, bridges, switches or routers are used to connect the network (may be shown on a network management system).

9.6.12 Records of software licenses and versions of software installed.

9.6.13 Configurations of Network Interface Cards.

9.7 <u>Site Certification of the Infrastructure</u>:-

Most important part of any infrastructure is its cabling structure on which the infrastructure would be running. There are standards to be followed by the contractor so that performance and quality assurance is guaranteed. This guarantee can also be termed as Site Certification.

There following rules to be followed by the contractor for Site Certification.

9.7.1 Site Certification is provided by the manufacturer against infrastructure build by the System Integrator using the standards.

9.7.2 Standards are typical methods that been have tested by the manufacturer according to the BISCI Standard for its quality performance.

9.7.3 The part products used in Structured cabling all should be of one manufacturer of certain specification throughout to have minimum tolerance.

9.7.4 Cable Selection should be such considering all future aspects.

9.7.5 Cable Selected should be used with appropriate connectors.

9.7.6 All cables should be concealed according to Pathways and Spaces Standards.

9.7.7 Test reports with the details of the loss of signal in terms of crosstalk and due to other factors affecting it.

Annexure-I
TECHNO-COMMERCIAL BID

Sl.No.	Description	Indicate page number where the documents are enclosed
1.	Name, address & telephone number of the Bidder.	
2.	Name, designation, address & telephone number of authorized person	
3.	Please specify as to whether Tenderer is sole Proprietor/Partnership Firm/Private or Limited Company.	
4.	Name, address & telephone number of Directors/Partners, Fax No., e-mail address.	
5.	Copy of PAN Card issued by Income Tax Department and Copy of previous 3 Financial Year's Income Tax Return 2016-17 , 2017-18 and 2018-19. The average turnover of the bidder during last three financial years should be minimum Rupees 02 crore.	
6.	Copy of Valid GST registration details	
7.	Copy of valid ISO certification of the bidder in the field of Local Area Networking (LAN) and / or Wide Area Networking (WAN) work	
8.	Valid ISO / ISI Certificate of the products to be supplied and installed **(Please attach copy)**	
9.	List of company service centers in M.P.	
10.	Latest GST Return.	
11.	Experience Certificate / details for last **5 years regarding installation of Local Area Networking**	
12	Authorization letter / MAF from OEM's to sale the product in order to have back-to-back warranty and support .	
13.	Details of Bid Security/Earnest Money Deposit: a) Amount: 4,00,000/- b) Demand Draft/Pay Order/Banker/Cheque No.: c) Date of issue: d) Name of issuing Bank:	
14	Details of tender fees	
15.	Furnish the list of **Service Engineers** and **Operators** to be deputed for installation of Network at High Court of Madhya Pradesh and Subordinate Courts in the State of Madhya Pradesh.	

Declaration by the Bidder:

This is to certify that I/We before signing this tender have read and fully understood all the terms and conditions contained in the tender document and undertake myself/ourselves to strictly abide by them.

Signature of the Tenderer with Seal

Note: **Please indicate the page numbers where documents are attached. The entire Tender documents should be serially page numbered including enclosures.**

It is certified that the particulars given above are true to the best of my/our knowledge/behalf and I/We have read terms/conditions and duties/responsibilities of the Technical Staff to be deputed for the purpose and have also understood the same and to hereby undertake to abide by the same without any reservations on any grounds whatsoever. In case of any breach of the said conditions. I/We shall be responsible for the consequences arising out of such situation(s).

Name & Signature of the
Authorized Signatory of the Agency
(with Seal of the Agency affixed)

Date:
Place:

Annexure-II
PRICE BID

Detail Break up of Cost*

Name of the Bidder:

S.No.	Item Description	OEM Make/Part No.	Proposed make/brand by the bidder	Unit rate per item / per work /job	GST Tax (%)	Any other duty / levy	Unit Price IN Rupees (All inclusive)
1	2	3	4	5	6	7	8= 7+6+5
1	UTP CAT 6 cable (Box of 305 m)	D-link/ Legrand or equivalent brand of repute					
2	24 port Patch Panel CAT 6 (each)	D-link/ Legrand or equivalent brand of repute					
3	Information Outlet CAT 6 (each)	D-link/ Legrand or equivalent brand of repute					
3 a	1-port	D-link/ Legrand or equivalent brand of repute					
3 b	2-port	D-link/ Legrand or equivalent brand of repute					
3 c	4-port	D-link/Legrand or equivalent brand of repute					
4	Patch Cords CAT 6 (each)	D-link/Legrand or equivalent brand of repute					
4 a	3 feet	D-link/Legrand or equivalent brand of repute					
4 b	7 feet	D-link/Legrand or equivalent brand of repute					
4 c	10 feet	D-link/Legrand or equivalent brand of repute					
	FIBER						

	COMPONENTS						
5	Fiber Optic indoor/outdoor tight buffered cable Multi mode (MM) (Per Meter) (Distance shall be within the parameter of 2 kilometer, therefore, MM shall be required as per tender.)	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
5 a	6 core	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
5 b	12 core	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
6	Fiber Optic outdoor armoured cable Multi mode (SM) (Per Meter) (Distance shall be within the parameter of 2 kilometer, therefore, MM shall be required as per tender.)	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
6 a	6 core	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
6 b	12 core	3M/ finolex /Fujitsu/ D-link/Legrand					
7	**Optical Fiber Connector SC Type, Epoxyless (each)**	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
7 a	MM	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
7 b	SM	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
8	**Optical Fiber Connectors LC Type, Epoxyless (each)**	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					

8 a	MM	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
8 b	SM	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
9	**Optical Fiber pigtail SC Type, 1 meter (each)**	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
9 a	MM	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
9 b	SM	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
10	**Optical Fiber pigtail LC Type, 1 meter (each)**	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
10 a	MM	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
10 b	SM	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
10 c	20 meters	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
11	**Optical Fiber Patch Cord, MM SC to SC (each)**	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
11 a	3 meters	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
11 b	10 meters	3M/ finolex					

		/Fujitsu/ D-link/Legrand or equivalent brand of repute					
11 c	20 meters	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
12	**Optical Fiber Patch Cord, SM, SC to MTRJ (each) MTRJ is required for old networks (at the time of maintenance work as per tender).**	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
12 a	3 meters	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
12 b	10 meters	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
12 c	20 meters	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
13	**Optical Fiber Patch Cord, MM, SC to LC (each)**	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
13 a	3 meters	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
13 b	10 meters	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
13 c	20 meters	3M/ finolex /Fujitsu/ D-link/Legrand					
14	**Optical Fiber**	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
14 a	3 meters	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent					

		brand of repute					
14 b	10 meters	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
14 c	20 meters	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
15	**Optical Fiber Patch Cord, MM, OM-3+SC to LC (each)**	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
15 a	3 meters	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
15 b	10 meters	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
15 c	20 meters	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
16	**LIU, 24 fiber, Wall mount enclosure, lockable & fitted with SC/LC couplers & all accessories (each)**	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
16 a	LIU WITH SC MM COUPLER	3M/ finolex /Fujitsu/ D-link/Legrand					
16 b	LIU WITH SC SM COUPLER	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
16 c	LIU WITH LC MM COUPLER	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
16 d	LIU WITH LC SM COUPLER	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					

17	**LIU, 12 fiber, 1U/ 2U drawer style 19 " Rack mount enclosure & fitted with SC/LC couplers & all accessories (each)**	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
17 a	LIU WITH SC MM COUPLER	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
17 b	LIU WITH SC SM COUPLER	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
17 c	LIU WITH LC MM COUPLER	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
17 d	LIU WITH LC SM COUPLER	3M/ finolex /Fujitsu/ D-link/Legrand or equivalent brand of repute					
	Installation & Termination, Documentation & Site Certification of UTP and Fiber Cabling						
18	In-building laying of UTP CAT 6A/ CAT 6 Cable (Per Meter)	As per actual					
19	Installation & Termination or Information outlets (including termination of CAT 6/ CAT 6 Cable on I/O	As per actual					
20	Installation & Termination of UTP Cables on Patch Panel CAT 6/ CAT 6A with wire manager	As per actual					
21	Performance testing of the laid UTP CAT 6/ CAT 6 A (Penta Scanner reports & documentation) (Per Node)	As per actual					
22	**Site Certification for UTP CAT6/CAT 6A & Fiber cabling with 15 years Performance warranty (Per site)**	As per actual					
22 a	Site up to 100 Nodes	As per actual					
22 b	Site up to 500 Nodes	As per actual					
22 c	Site up to 1000 Nodes	As per					

		actual					
23	Supply & fixing of ISI/ISO marked PVC duct of Size (Per Meter)	ISI / ISO (OEM)					
23 a	15 x 15 mm	ISI / ISO (OEM)					
23 b	30 x 25 mm	ISI / ISO (OEM)					
23 c	40 x 25 mm	ISI / ISO (OEM)					
24	Supply and fixing of PVC Conduit of OD Size (Per Meter)	ISI / ISO (OEM)					
24 a	20 mm	ISI / ISO (OEM)					
24 b	32 mm	ISI / ISO (OEM)					
24 c	40 mm	ISI / ISO (OEM)					
25	Supply & Fixing of Metal MS Cable Tray/ raceway with covers for mounting on ceiling / floor/ wall, with all connecting fittings and sections for hanging, T- Cross, L, Vertical routing/branching of cables etc, size as follows with required fitting kit & accessories for above (per running meter)	As per actual					
25 a	50 mm Height x 100 mm width Thickness 1.6mm						
25 b	50 mm Height x 200 mm width Thickness 1.6mm						
25 c	100 mm Height x 300 mm width Thickness 1.6mm						
26	Supply & Fixing of High Grade PVC cable tray/ race way with covers for mounting on ceiling / floor/ wall, with all connecting fittings & sections for hanging, T, Cross, L, vertical up/down routing. Branching of cables etc, size as follows with required fitting kit accessories for above (per running meter)						
26 a	50 mm Height x 150 mm width Thickness 2.5 mm to 3 mm						
26 b	100 mm Height x 100 mm width 2.5 mm to 3 mm						
26 c	100 mm Height x 300 mm width 2.5 mm to 3						

	mm						
27	Removal of Old UTP/ Fiber / coaxial RS 232/telephone cables (per Meter)						
28	In building laying of fiber in duct/ conduit (per meter)						
29	Outdoor laying of fiber cable (per Meter)						
29 a	Excavation and resurfacing of the Soft soil (depth 1 meter)						
29 b	Excavation and resurfacing of the concreter (depth 1 meter)						
30	Supply and Installation / Fixing of GI Pipe underground and on surface						
30 a	1 inch diameter						
30 b	1.5 inch diameter						
31	Supply and Installation / Fixing of 2” (Inches) diameter HDPE PVC Jacket Underground or on surface (Per Meter)						
32	Supply and installation/ Fixing of 4 Inch HUME pipe underground (Per Meter)						
33	SC/LC connector termination on fiber optic cable						
34	Fusion/ Mechanical splicing of SC / LC type						
35	Supply and installation of buffer tubing kit						
36	**Fiber optics cable route marker (Proper marking should be there in the form of pipe as per the directions of the High Court.)**						
37	cable pulling pit made of reinforced concrete and brick walls with removable covers						
38	Performance testing of laid fiber Optic cable for continuity length & DB loss as per EIA/TIA - 455-60 document for FO test procedures & documentation of the results.						
	19" equipment mounting Racks						

39	19" Rack, wall Mount 530 mm depth, 9 U Height, (lockable) with all accessories(At least 2 cooling fan,1 cable manager, 15A 6port spike guard)	Rittal/D-link,Valrack or equivalent brand of repute					
40	19" Rack, wall Mount 530 mm depth, 12 U Height, (lockable) with all accessories	Rittal/D-link,Valrack or equivalent brand of repute					
41	19" Rack, wall Mount 800 mm depth, 24 U Height, (lockable) with all accessories(At least 2 cooling fan,1 cable manager, 15A 6port spike guard)	Rittal/D-link,Valrack or equivalent brand of repute					
42	19" Rack, wall Mount 1000 mm depth, 32 U Height, (lockable) with all accessories	Rittal/D-link,Valrack or equivalent brand of repute					
43	19" Rack, wall Mount 1000 mm depth, 42 U Height, (lockable) with all accessories (Atleast 2 cooling fan,1 cable manager, 15A 6port spike guard)	Rittal/D-link,Valrack or equivalent brand of repute					
44	LAN Survey & Document Preparation						
44 a	for up to 100 network nodes, per node						
44 b	for up to 500 network nodes, per node						
44 c	for up to 1000 network nodes, per node						
44 d	for more than 1000 network nodes, per node						
45	Blower (D-link / Eureka Forbes)	(D-link / Eureka Forbes)					
46	Four pair wire LAN Crimping Tool	D-link / Krone					
47	LAN Punching Tool	D-link / Krone					
48	LAN Took Kit	D-link / Krone					
49	LAN Tester	D-link / Krone					
50	**8 port Network Switches (Non-manageable) The requirement is of controller based access points for wireless network with all required accessories as per Specification – "A".**	D-link / CISCO					
51	*24 port Ethernet	CISCO / Dell					

	managed enterprise series switch with all accessories and **Power over Ethernet (PoE)** **As per Specification – "B".**	/ HP / Juniper					
52	***24 port Ethernet managed enterprise series switch with all accessories. (As per Specification – "C".)**	CISCO / Dell / HP / Juniper					
53	*24 port Ethernet managed enterprise series switch with all accessories. **(As per Specification – "D".)**	CISCO / Dell / HP / Juniper					
54	*24 port Ethernet managed enterprise series switch with all accessories. **(As per Specification – "E".)**	CISCO / Dell / HP / Juniper					
55	Indoor Access Point for Wireless Network With all required accessories. **(As per Specification – "F".)**	D-link/ CISCO / Dell / HP / Juniper					
56	***SFP modules of SM **(The requirement is of controller based access points for wireless network with all required accessories.)** Should support both SM and MM fiber at minimum 1 GBPS. Should be same OEM as 51 to 54	CISCO / Dell / HP / Juniper					
57	Media convertor SM **(Should support 10/100/1000 Ethernet to 10/100/1000 fiber Onsite support) (The requirement is of controller based access points for wireless network with all required accessories.)**	Reputed make					
58	Media convertor MM **(Should support 10/100/1000 Ethernet to 10/100/1000 fiber Onsite support) The requirement is of controller based access points for wireless network with all required accessories.**	Reputed make					

Total Bid Price (Rs) _____
In words _____
Signature of Bidder with seal _____
Name _____
Business address _____
_____
Tel. No. & Mobile No. _____
Email : _____
Place :
Date:

Note:-

1. **The quantities mentioned above are indicative only. The Registrar General reserves the right to change the quantities and the configuration of items mentioned above without assigning any reason thereof.**
2. **The payment to the vendor shall be made as per actual use of above items for the Installation of Local Area Networking and other related work.**
3. **All prospective bidders are requested to submit the bid and if there is any deviation in the specification, please mention the same in the deviation statement sheet.**
4. **The shortlisted vendor has to complete the LAN work within the fixed time frame.**
5. **The payment shall be made to successful bidder, only after submitting requisite document to the High Court as per the tender document.**
6. **The network switches to be compatible with the existing LAN infrastructure of the High Court and District Courts.**
7. **All the quoted products make and model shall be finalized by the committee of the High Court.**

C E R T I F I C A T E S

WE CERTIFY THAT:

1. We will not LEAK / DISCLOSE any information of High Court of Madhya Pradesh to any other institutions/organizations, bodies and also in the market on the rates less than the prices quoted by us to the High Court.

2. The rate of TAXES / DUTIES mentioned in the tender is in accordance with the provisions of the rules in all respects and the same is payable to the Government Authorities.

3. The material / items offered shall be of the **best quality** strictly in accordance with the specifications and particulars as detailed in the tender.

4. The information furnished by us in the tender are true and correct to the best of our knowledge and belief.

5. We have read and understood the rules, regulations, terms and conditions of tender as applicable from time to time and agree to abide by them.

Authorized Signatory
(Seal of the Company)