



तेजपुर विश्वविद्यालय / TEZPUR UNIVERSITY

(केंद्रीय विश्वविद्यालय / A Central University)

कुल सचिव का कार्यालय / OFFICE OF THE REGISTRAR

तेजपुर-784028 :: असम / TEZPUR-784028 :: ASSAM

NOTICE RE-INVITING QUOTATION (NIQ)

ET-NIQ-533-DT-15.06.2020

Online Tenders in 02 Bid System (Technical and Financial) are invited from reputed manufacturers/authorized dealers/System Integrators for supply, installation, and commissioning etc. of Wireless Networking of the Type B and C residential apartments of Tezpur University. Those bidders who have submitted their bid in response to our earlier NIQ No. **ET-NIQ-304-Dt-26.05.2020 [CPPP eProcurement Tender ID: 2020_TEZU_561255_1]** are asked to submit their Bid again without paying the requisite fees if already paid.

Please read the NIQ document carefully before participating. It shall be deemed that submission of bid by the bidder has been done after their careful study and examination of the NIQ terms with full understanding to its implications. Any lack of information shall not in any way relieve the bidder of its responsibility to fulfill its obligations under the Bid.

The University will reject a proposal for award if it determines that the bidder recommended for award has engaged in corrupt or fraudulent practices in competing for, or in executing, the Purchase Order. Fraudulent Practice means a misrepresentation of facts in order to influence a procurement process and includes collusive practice among bidders (prior to or after Bid submission) designed to establish Bid prices at artificial non-competitive levels and to deprive Tezpur University of the benefits of free and fair competition. Corrupt Practice means offering, giving, receiving or soliciting of anything of value, pressurizing to influence the action of a public official in the process of this purchase execution.

For any queries/doubt please contact the Stores & Purchase Section (e-mail: snp@tezu.ernet.in).

Items

Sl. No	Item	Approximate Unit Price in`
1	Supply, Installation and Commissioning etc. of Wireless Networking	39.0 lacs

(Detail Technical Specification/Compliance Sheet, Coverage Plan(Annexure-I), Bank Mandate Form (Annexure-II, Bidders Eligibility Criteria (Annexure-III) and BoQ are attached/uploaded separately)

General Information about the NIQ

Last date and time for submission of Bids: 06.07.2020 (2.00 PM)

Date and Time of opening of Bids: 07.07.2020 (2.00 PM)

Place of Opening of Bids: Tezpur University

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Special Terms & Conditions:

- 1) Since the proposed design of the Wi-Fi network is based on Map based approximation. Therefore, bidder must submit a Pre-Implementation design document before the start of project. There may be change in the proposed BoQ which may be finalized based on actual site survey.
- 2) Bidder is responsible for installation of the complete Active and Passive Components in the campus.
- 3) Bidder is responsible to Implement the complete solution and must integrate with the existing setup of Tezpur University Campus.
- 4) Installation and commissioning must be done by OEM Certified Personnel.
- 5) Access Points should be properly mounted in Buildings / Qtrs. with proper coverage area and min. Bandwidth of not less than 5 Mbps must be ensured to each user.
- 6) Optical Fiber Cable laying must be done after consultation/clearance from the authorised University official.
- 7) After complete installation bidder must submit Post Implementation Documentation like inventory with every details of configuration/map etc.
- 8) Bidder must conduct a Two (2) Days training session for Configuration, Management and Monitoring all the active equipment.
- 9) Bidder must provide direct OEM support in case of escalation, from Support Head, Product or Engineering Team.
- 10) Complete support escalation matrix from Bidder and OEM both must be provided after successful Implementation and Integration
- 11) All Active components must carry 3 Years OEM warranty with Remote Technical Support and onsite support and maintenance should be provided by the bidder. Passive components with 1 Years OEM warranty (Standard Terms and Condition) should be provided.
- 12) All proposed active devices must not be **End of Sale** or **Nearing End of Sale** or **End of Support** Products.
- 12) Bidder must deploy one onsite engineer in Tezpur University for wireless infrastructure for a period of one year and shall be renewed annually.
- 13) Passive components Laying and sign off must be provided by the bidder on actual after completion of the project

GENERAL TERMS & CONDITIONS:

1. No separate tender paper will be issued from the office; one should only download the specifications from the CPP Portal of Govt. of India or the Tezpur University website (www.tezu.ernet.in).
2. **GST: As per GoI Notification dated 14.11.2017 GST % for Public Funded Research Institution or a University has been reduced to 5% for certain goods and services. Hence, reduced rate of GST shall be paid if applicable on the tendered items. Exemption Certificate will be provided on request.**
3. **Rates:** Rates quoted should be on **FOR Tezpur University, Napam, Tezpur, Door Delivery Basis**, for indigenous items and **CIP Tezpur University, Napam, Tezpur or Delivered Duty Paid**, for imported item. Failure to comply with this term may lead to rejection of the quotation.
4. **Quotations should be accompanied by i) An EMD (in the form of Demand Draft/Banker Cheque) for ₹ 78,000.00 (Rupees Seventy Eight Thousand) only drawn in favor of Registrar, Tezpur**

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University, payable at Tezpur. **No request for consideration of earlier deposited EMD will be considered.** ii) A non-refundable application (quotation/participation) fee of ₹ 3000.00 (Rupees Three Thousand) only must be paid only by Demand Draft/Banker Cheque drawn in favour of Registrar, Tezpur University payable at Tezpur. iii) **The original copies of the EMD & Quotation/Participation Fee should be deposited/submitted/reach the office of the undersigned before opening of the Bids in an envelope superscribed as "Quotation/Participation Fee and EMD for ET-NIQ-533:.....DT-15.06.2020 addressed to the Assistant Registrar-GA, Tezpur University. Failure to do so may result in rejection of the bid.**

5. **Exemption: MSME registered Bidders may claim exemption from payment of EMD only subject to submission of valid documents in support of their claim. Bidders seeking exemption are asked to clearly mention the category under which exemption is claimed. The name/definition of services/activity mentioned in the exemption documents/certificates will be strictly adhered to. Payment of tender fee is a must and is not exempted. However, the University will make provision for the tender documents fee of cost in its website as well as in CPP Portal.**
6. The rates should be exclusive of taxes and applicable taxes should be shown separately in the BoQ, else it will be implied that the rate quoted is inclusive of all taxes.
7. **Validity of Quotation:** Quoted rates must be valid for at least **180 days** from the last date of submission of quotation.
8. Applicable levies, surcharge and discounts should be clearly indicated item wise.
9. The rates should be quoted along with supporting documents of specifications and technical features and list of users, wherever applicable.
10. The system must be installed at the laboratory wherever applicable, and after installation a basic training must also be provided by the supplier or their Indian counterpart without any additional costs.
11. **Literature a must:** All the quotations must be supported by technical leaflet/literature and the specifications mentioned in the quotation must be reflected/ supported by such technical leaflet/literature. The model and specifications quoted should **invariably be highlighted** in the leaflet/literature for easy reference.
12. **Technical Evaluation:** Technical bids will be evaluated and ranked by the award ACCEPT & REJECT. The price bids of ACCEPTED vendors would then be considered by the concerned Purchase Committee of the institute.
13. **After Sales Service Guidelines:** In case of imported goods, bidders should clearly state the detailed address, contact number and email ids of 'after sales service centre' preferably in Tezpur/Guwahati, India or any place in Assam without which their offers shall be liable for rejection. Service against any complaint must be provided within 24 hours.
14. **Dealership Certificate:** Dealers or Agents quoting on behalf of Manufacturer must upload valid dealership certificate.
15. **Quality Certificates:** Valid certificate to prove that the products are genuine and of International standard, as mentioned below, must be uploaded: (a) Manufacturer's certificate; (b) ISO/ISI certificate.
16. **Performance Bank Guarantee:** If PO value is above Rs.5 Lakhs, the successful bidder, to whom the PO is placed, shall furnish an unconditional Performance Bank Guarantee from a scheduled Bank of India, for 10% of the Purchase Order value, alongwith the Bill/Invoice. The format for PBG if required; will be provided on request. In case of foreign purchase, the local Agent shall submit the

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PBG. Where the PBG is to be necessarily given by a foreign bank it shall be endorsed by its counterpart in India. Validity of the PBG, which shall be effective from the date mentioned therein, shall be *warranty period + 2 months before and 3 months after the warranty period.*

- a. **By submitting the PBG, the vendor is understood to have guaranteed that,**
- The Purchase Order (PO) shall be executed as per terms and conditions mentioned therein.
 - The vendor shall at his/their own cost rectify/replace the defects, if any, during the guarantee period.
 - The guarantee is to the extent of 10% of the order value.
- b. **Condition for invoking PBG:** In case of failure to comply with the guarantees above, Tezpur University, Napam, Tezpur may terminate the contract / purchase order in whole or in part and forfeit the PBG. In addition, Tezpur University, Napam, Tezpur, at its discretion, procure upon such terms and in such manner as it deems appropriate, goods similar to the undelivered items/products and the defaulting supplier/vendor shall be liable to compensate Tezpur University, Napam, Tezpur for any extra expenditure involved."

17. **Genuine Pricing:** Vendor is to ensure that quoted price is not more than the price offered to any other customer in India to whom this particular item has been sold, particularly to Universities/IITs/Institutes and other Government Organization.
18. **Payment:** 100% payment after successful delivery, installation and commissioning and acceptance by the user. *Please note that as per University's norm advance payment is not allowed for indigenous purchase.*
19. **PENALTY FOR DELAYED DELIVERY:** The date of delivery should be strictly adhered to. In the event of delayed delivery, installation & commissioning, the vendor shall be liable for a penalty deduction as per prevailing rule
20. Demonstration may be sought from the vendors for authentication of quoted specification.
21. The University is exempted from paying Custom and Excise duty.
22. Warranty/Guarantee period should be specifically mentioned in the quotation.
23. No Advance payment will be made. However, for foreign supplies, advance payment will be made either by LoC. In such cases 10% Performance Bank Guarantee should be submitted before opening of the LoC.
24. Items of Foreign origin should have Insurance up to installation on site.
25. The University reserves the right to accept or reject any or all the quotations without assigning any reason.
26. Irresponsive/incomplete quote will be rejected.
27. **Award:** The Final Award will be given to the vendor, selected by the Purchase Committee on the lowest quote basis.
28. **Conditional tenders not acceptable:** All the terms and conditions mentioned herein must be strictly adhered to by all the vendors. Conditional tenders shall not be accepted on any ground and shall be rejected straightway. Printed conditions mentioned in the tender bids submitted by vendors will not be binding on Tezpur University.
29. **Enquiry during the course of evaluation not allowed:** No enquiry shall be made by the bidder(s) during the course of evaluation of the tender till final decision is conveyed to the successful bidder(s). However, the Purchase Committee or its authorized representative (Tezpur University) can make any enquiry/seek clarification from the bidders. In such a situation, the agency shall extend full co-operation. The bidders may also be asked to arrange demonstration of the offered items, in a short period notice, as such the bidders have to be ready for the same.

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30. Force Majeure:

If the performance of the obligation of either party is rendered commercially impossible by any of the events hereafter mentioned that party shall be under no obligation to perform the agreement under order after giving notice of 15 days from the date of such an event in writing to the other party, and the events referred to are as follows:

- I) any law, statute or ordinance, order action or regulations of the Government of India,
- II) Any kind of natural disaster, and
- III) Strikes acts of the Public enemy, war, insurrections, riots, lockouts, sabotage.

Termination for default: Default is said to have occurred

- a. If the equipment or any of its component is found having poor workmanship, faulty designs, poor performance and bad quality of materials used.
- b. If the supplier fails to deliver any or all of the services within the time period(s) specified in the purchase order or any extension thereof granted by Tezpur University.
- c. If the supplier fails to perform any other obligation(s) under the contract.
- d. Under the above circumstances Tezpur University may terminate the contract / purchase order in whole or in part and forfeit the EMD/PBG as applicable. In addition to above, Tezpur University may at its discretion also take the following actions: Tezpur University may procure, upon such terms and in such manner, as it deems appropriate, goods similar to the undelivered items/products and the defaulting supplier shall be liable to compensate Tezpur University for any extra expenditure involved towards goods and services obtained. Besides, the Vice-Chancellor, Tezpur University, reserves the right to impose any other form of penalty as deemed fit including blacklisting of the vendor.

31. Selection criteria:

i. Evaluation Criteria:

To ensure that each bidder has the necessary qualifications and resources to fulfil its obligations under the contract, the following criteria shall be evaluated. The Eligibility, Financial, Experience & Support criteria should be passed before the technical criteria. Technical criteria will be evaluated and ranked by the award of ACCEPT and/or REJECT. Only the ACCEPTED vendors will be considered for price bid. In case a joint venture makes a bid, any one of the members of the joint venture need to be qualified for each of the criteria mentioned below.

ii. Eligibility Criteria:

- a. The bidder or the OEM should not be blacklisted by Tezpur University or any other Educational /R&D/ PSU/ Govt organizations. A certificate or undertaking to this effect must be submitted.

Note: The bidders should provide sufficient documentary evidence to support the eligibility criteria.

iii. Support Criteria:

The Bidder must have experience of supply and maintenance facilities and must have qualified support staff and resident engineers that can provide maintenance support for the hardware and software items concerned and all the items quoted must be covered by these facilities. List of spare items should be mentioned in the quotation. Similarly, all partnerships for maintenance shown as part of the above qualifying criteria must be in existence before the publication of this tender. Documentary proof of this must be provided. The purchaser reserves the right to reject a bid as non-responsive if not satisfied with the level of support as detailed above.

iv. Manufacturer's Authorization Certificate:



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तेजपुर-784028 :: असम / TEZPUR-784028 :: ASSAM

The OEM should authorize the bidder to participate in the quote. Original copy of the MAF specific to the NIQ has to be submitted along with the tender.

v. Technical Criteria

Technical bids will be evaluated and ranked by the award Accepted & Rejected. The price bids of Accepted vendors would then be considered by the concerned Purchase Committee of the institute.

32. ADDITIONAL TERMS FOR IMPORTED GOODS:

Following additional terms will be applicable in case of foreign supply:

- a) **Rates:** Rates quoted should be on **DELIVERED DUTY PAID basis**, with break-ups as per details given in the BOQ,
- b) **Exchange rate:** Rate of foreign exchange shall be the rate prevailing on the date of Purchase Committee Meeting.
- c) While transshipment will be allowed, **part shipment will not be allowed.**
- d) **Payment:** By an irrevocable Letter of Credit at CIF/CIP Kolkata value negotiable through any overseas branch of State Bank of India with unrestricted provision. 90% of payment will be released on receipt of the shipping document and balance 10% after receipt of consignment. LoC will be established on receipt of Order acknowledgment, Proforma Invoice and Performance Bank Guarantee (PBG).
- e) **Agency Commission:** The percentage of ex-works value to be paid to Indian agent in equivalent Indian currency as agency commission as applicable if any will have to be clearly stated in the quotation.
- f) **Country of Origin:** While Country of Origin will have to be stated in the Original Invoice for payment through LoC.
- g) **LoC Amendment:** LoC amendment charges due to mistake on the part of the supplier, if any, will have to be borne by the supplier.
- h) Any query related to Technical Specifications, Instruction to Bidders and Terms & Conditions must be made before 7 working days of last date of submission of bids to Stores & Purchase Section, Tezpur University.

33. Applications for release of EMD should be submitted to the Registrar/ Joint Registrar-GA/Assistant Registrar-GA, Tezpur University. A copy of the Bank Mandate/Bank Details as per **Annexure-II** shall have to be enclosed with the letter enabling to release/refund the EMD amount.

34. Apart from the above terms and conditions the University has the right to include any other terms and conditions as and when felt necessary.

INSTRUCTIONS TO BIDDERS FOR ONLINE BID SUBMISSION

Instructions to the Bidders to submit the bids online through the Central Public Procurement Portal for e Procurement at <http://eprocure.gov.in/eprocure/app>

1. Possession of valid Digital Signature Certificate (DSC) and enrollment/registration of the agencies/bidders on the e-Procurement/e-tender portal is a prerequisite for e-tendering.
2. Bidder should do the enrollment in the e-Procurement site using the "Online Bidder Enrollment" option available on the home page. Portal enrollment is generally free of charge. During enrollment/registration, the bidders should

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- provide the correct/true information including valid email id. All the correspondence shall be made directly with the agency/bidder through email id provided.
3. Bidder need to login to the site through their user ID/ password chosen during enrollment/registration.
 4. Then the Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by SIFY/TCS/nCode/eMudra or any Certifying Authority recognized by CCA India on eToken/SmartCard, should be registered.
 5. The DSC that is registered only should be used by the bidder and should ensure safety of the same.
 6. Agency/Bidder may go through the tenders published on the site and download the required tender documents/schedules for the tenders he/she is interested.
 7. After downloading / getting the tender document/schedules, the Bidder should go through them carefully and then submit the documents as asked, otherwise bid will be rejected.
 8. If there are any clarifications, this may be obtained online through the tender site, or through the contact details. Bidder should take into account the corrigendum published before submitting the bids online.
 9. Bidder then logs in to the site through the secured log in by giving the user id/ password chosen during enrolment/registration and then by giving the password of e-Token/Smartcard to access DSC.
 10. Bidder selects the tender which he/she is interested in by using the search option & then moves it to the 'my tenders' folder.
 11. From my tender folder, he selects the tender to view all the details indicated.
 12. It is construed that the bidder has read all the terms and conditions before submitting their offer. Bidder should go through the tender schedules carefully and upload the documents as asked; otherwise, the bid will be rejected.
 13. Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender documents/schedule and generally, they can be in PDF/xls/rar/jpg/dwf formats. If there is more than one document, they can be clubbed together and can be provided in the requested format. Bidders Bid documents may be scanned with 100 dpi with black and white option. It is advisable that each document to be uploaded through online for the tenders should be less than 2 MB. If any document is more than 2MB, it can be reduced through rar and the same can be uploaded, if permitted. However, if the file size is less than 1 MB the transaction uploading time will be very fast.
 14. If there are any clarifications, this may be obtained through the site. Bidder should take into account the corrigendum published from time to time before submitting the online bids.
 15. The Bidders can update well in advance, the documents such as certificates, annual report details etc., under My Space option and these can be selected as per tender requirements and then send along with bid documents during bid submission. This will facilitate the bid submission process faster by reducing upload time of bids.
 16. Bidder should submit the Tender Fee/EMD as specified in the tender. The original should be posted/couriered/given in person to the Tender Inviting Authority, within the bid submission due date & time for the tender or as indicated in the tender. Scanned copy of the instrument should be uploaded as part of the offer.
 17. While submitting the bids online, the bidder reads the terms & conditions and accepts the same to proceed further to submit the bid packets.
 18. The bidder has to select the payment option as offline to pay the Tender Fee/EMD as applicable and enter details of the instruments.
 19. The details of the DD/ any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise submitted bid will not be acceptable or liable for rejection.
 20. The bidder has to digitally sign and upload the required bid documents one by one as indicated. Bidders to note that the very act of using DSC for downloading the bids and uploading their offers shall be deemed to be a confirmation they have read all sections and pages of the bid document including General conditions of contract without any exception and have understood the entire document and are clear about the requirements of the tender requirements.
 21. The bidder has to upload the relevant files required as indicated in the cover content. In case of any irrelevant files, the bid will be rejected.
 22. If the price bid format is provided in a spread sheet file like BoQ_xxxx.xls, the rates offered should be entered in the allotted space only and uploaded after filling the relevant columns. The Price-bid BOQ template must not be

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तेजपुर-784028 :: असम / TEZPUR-784028 :: ASSAM

- modified/replaced by the bidder; else the bid submitted is liable to be rejected for this tender.
23. The bidders are requested to submit the bids through online e-tendering system to the Tender Inviting Authority (TIA) well before the bid submission end date & time (as per Server System Clock). The TIA will not be held responsible for any sort of delay or the difficulties faced during the submission of bid online by the bidders at the eleventh hour.
 24. After the bid submission (i.e. after Clicking "Freeze Bid Submission" in the portal), the acknowledgement number, given by the system should be printed by the bidder and kept as a record of evidence for online submission of bid for the particular tender and will also act as an entry pass to participate in the bid opening date.
 25. The time settings fixed in the server side & displayed at the top of the tender site, will be valid for all actions of requesting, bid submission, bid opening etc., in the e-tender system. The bidders should follow this time during bid submission.
 26. All the data being entered by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered will not be viewable by unauthorized persons during bid submission & not be viewable by any one until the time of bid opening.
 27. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid openers' public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.
 28. The confidentiality of the bids is maintained since the secured Socket Layer 128-bit encryption technology is used. Data storage encryption of sensitive fields is done.
 29. The bidder should logout of the tendering system using the normal logout option available at the top right-hand corner and not by selecting the (X) exit option in the browser.
 30. For any queries regarding e-tendering process, the bidders are requested to contact as provided in the tender document. Parallely for any further queries, the bidders are asked to contact over phone: 180030702232 or send a mail over to cppp-nic@nic.in.

[Handwritten Signature]
15/06/xx
Assistant Registrar-GA
Tezpur University

Annexure-III
Bidders Eligibility Criteria

S/N	Criteria	Compliance (Yes/No)	Documentary evidence page no(s).
1	Bidder must be a registered Company/Firm incorporated under the Indian Companies Act 1956.		
2	Bidder should be in the business of Information Technology / System Integration for the last 5 years in India.		
3	The Bidder must have valid ISO Certification for IT Service support in India (Copies of valid ISO certificates to be enclosed).		
4	The bidder must have valid GST Registration and PAN.		
5	The bidder should be financially sound to undertake the project and provide efficient after sales support. Average Annual turnover of the bidder from IT Sales & services, should be not less than Rs. 1 Crores (each year) during last three financial years ending March 2020. (Certificate from Chartered Accountant to be furnished)		
6	It is essential that the bidder is well acquainted with the working condition of Assam and should be able to provide after sales support for next 5 years as per requirement of Tezpur University. (The bidder must submit an affidavit confirming that the bidder will provide support during the warranty and AMC period)		
7	The bidder should have its own IT Service Office in Assam for at least last 5 years. (relevant valid Govt. documentary evidence like Trade license, Service Tax Registration etc from respective Govt. agency should be submitted). The bidder should clearly mention Land Line Telephone Nos of their Service office(s) in Assam.		
8	The bidder must have its own technical manpower posted in their Services Centre(s) / Office(s) in Assam. The technical staff posted in North East India must be under bidder's payroll for the last 03(three) years. (List must be provided)		
9	The bidder should not have been blacklisted or debarred by any organization in India or abroad for any reason. The bidder has to submit an affidavit / notary that the bidder has not been blacklisted or debarred by any organization in India or abroad.		
10	The bidder should possess good understanding of the functions of reputed Government Educational Institute like Govt Universities / IITs / IIMs / Central University / NIT. Any experience of establishing of network in such institute of national repute in North-East India will be preferred. Work completion certificates from such Institutes should be provided.		
11	<p>Bidder should have previous experience of executing wireless networking projects in Govt. Educational / Govt. R&D Institute / Govt. Organization in Assam for last 3 years. Bidders should have successfully completed or substantially completed similar works during last three years ending last day of month previous to the one in which applications are invited should be either of the following: -</p> <p>(a) Three similar completed works costing not less than the amount equal to 40(forty) percent of the estimated cost; or</p> <p>(b) Two similar completed works costing not less than the amount equal to 50 (fifty) percent of the estimated cost; or</p> <p>(c) One similar completed work costing not less than the amount equal to 80 (eighty) percent of the estimated cost.</p>		



Annexure-III
Bidders Eligibility Criteria

12	Authorization Letter from the Manufacturer (OEM) for quoted products mentioning the Tender No & Date should be submitted.		
13	Bidder should have Min. 2 OEM certified Engineer in their payroll for smooth implementation of the Projects.		



Technical Specifications cum Compliance Report (Ver. 2)
(To be submitted on Company's/Firm's Letterhead Signed and Sealed)

S/N	Technical Specifications	Compliance (Y/N)	Remarks if any;
1.0	ACTIVE COMPONENTS		
1.1	Wireless Controller		
1	Controller should be Hardware controller or software controller. If software controller then Enterprise grade Desktop/Server Computer with adequate configuration must be provided as detailed below as optional item*.		
2	Controller shall have 1000 no. Access points Perpetual licenses from day 1		
3	Controller should have capability to Control, Configure, Manage and Monitor both Indoor and Outdoor Access Points		
4	Controller shall come with lifetime no Recurring or renewal cost		
5	Shall Support multiple captive portal authentications mechanism including simple password, radius, voucher, custom based, etc.		
6	Controller shall manage Multiple Sites with the Centralized Controller in a Single Location		
7	Controller shall have Intuitive Real Time Monitoring and data usage		
8	Controller shall support remote upgrade and access control features		
9	Shall support L3 management using standard SNMP/SSH/TELNET protocols		
10	Access Control and Rogue AP Detection protect the network from threats		
11	Rate Limit and Load Balance ensure the network stability and efficiency		
12	Configure and automatically synchronize unified wireless settings to all EAPs in the network		
13	Support for visual Wi-Fi network deployment and optimization.		
14	View the real-time traffic status of each EAP, including the number of clients and volume of data usage		
15	Software controller shall have 3 years Remote support.		
1.2	* Optional Desktop/Server Computer for Software Wireless Controller		
1	Form Factor Desktop Micro Tower / Tower / SFF / Rack		
2	Its Processor should be Intel / AMD with Min. 6 Core, 6 Threads @ 3.00 Ghz Base Frequency with 9 MB Cache and 4.00 Ghz Turbo Boost Frequency and Memory Type DDR4-2666		
3	It should support 8 GB DDR4-2666 RAM with Memory Expandability up to 32 GB		
4	1TB 7200 RPM SATA Hard Disk Drive 6Gb/s HDDs		
5	1 no. 10/100/1000M GbE LAN RJ 45 Port		
6	USB Business Slim Wired Keyboard USB Wired Keyboard of same make of Desktop		
7	It should have Security management Integrated accessories cable lock, Lock slot, Trusted Platform Module (TPM) 2.0		
8	It should have Power 180 W internal power supply, up to 90% efficiency, active PFC		
9	It should have PCIe Expansion slots 1 full-height PCI, 1 PCIe x1, 1 PCIe x16		
10	For Safety it should have Energy efficiency compliance CCC; CE; CECP; CEL; ENERGY STAR certified; EPEAT 2019 registered where applicable; FCC; RoHS; SEPA; UL		
11	It should be provided with a 19.5-inch HD monitor with Anti-glare, LED backlights with HDMI and VGA Ports		

Technical Specifications cum Compliance Report (Ver. 2)
 (To be submitted on Company's/Firm's Letterhead Signed and Sealed)

12	It should have 1 headphone/microphone combo; 3 USB 3.1 Gen 1 Rear: 1 HDMI; 1 line in; 1 line out; 1 power connector; 1 RJ-45; 1 VGA; 3 USB 2.0 Internal: 1 parallel; 1 PS/2		
13	It should have onsite Warranty for 3 Years		
1.3	Indoor Access Point		
1	AP shall have hardened enclosures for indoor deployment and shall have a robust design for durability		
2	It shall have dual radios for concurrent dual band (5 GHz / 2.4 GHz) operation		
3	It shall have Simultaneous 450 Mbps on 2.4GHz and 1300 Mbps on 5GHz totals 1750Mbps Wi-Fi speeds		
4	Minimum 2 number of 1 Gbps Ethernet port RJ-45.		
5	AP shall support Multiuser MIMO		
6	AP shall support Outfitted with the latest 802.11ac Wave 2 technology		
7	The AP shall comply with IEEE 802.11ac at a minimum and be backwards compatible to IEEE 802.11a/b/g/n standards.		
8	AP shall operate at least in full 3X3:3 MIMO or more mode without any loss of features or capabilities		
9	AP shall Support PoE 802.3af and passive PoE for convenient and affordable installation		
10	AP must support 20 MHz, 40 MHz and 80 MHz channels.		
11	Each AP must support minimum 80 concurrent clients in total (including both 2.4GHz and 5GHz radios).		
12	The AP shall provide a minimum of 20 dBm EIRP for both 2.4 GHz and 23 dBm for 5 GHz frequencies. Field deployment shall be with EIRP as per regulatory guidelines.		
13	AP shall support QoS and WMM latest technology		
14	AP shall support Multiple operating modes including managed AP and standalone AP mode		
15	AP shall support Band Steering, Beamforming, Airtime Fairness and Load Balance features		
16	AP shall support rogue access point detection		
17	AP shall have dual-Band Omni-directional Antenna, either internal or external. Field deployment shall be with EIRP as per the WPC guideline.		
18	AP should be compatible for Simple mounting on any wall or ceiling surface		
19	AP should support management VLAN for ease of remote configuration and management (this is required feature but not mandatory)		
20	AP should support Captive portal and Rate limit feature		
21	AP shall support Reboot Schedule, Wireless Schedule and Wireless Statistics based on SSID/AP/Client		
22	Intelligent RF control plane for self-healing, and self-optimization		
23	AP Shall support Wireless MAC Address Filtering, Wireless Isolation Between Clients and SSID to VLAN Mapping		
24	AP shall support 802.1X authentication and external radius server		
25	AP shall be able to assign end User the IP address as received from backend core DHCP Server.		
26	AP shall support Hardware controller or software controller		
27	Warranty should be for 3 Years		

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Technical Specifications cum Compliance Report (Ver. 2)
 (To be submitted on Company's/Firm's Letterhead Signed and Sealed)

1.4	24 Port PoE+ Switch		
1	Rack mountable with 24 Nos. 10/100/1000 Base-T ports with 4 no. 1 Gig SFP Ports		
2	Minimum 56 Gbps Switching Fabric.		
3	Minimum packet forwarding rate of 41 million packets per second at 64-byte packet length.		
4	Support PoE Budget of 384W		
5	Support 802.3af & 802.3at PoE Standard		
6	Minimum 16K MAC addresses.		
7	1000 IGMP groups.		
8	The switch shall be able to work on both IPv4 and IPv6 (dual stack) from day one.		
9	All ports in the switch shall operate at wire-speed / line-rate.		
10	Capable of working with AC Power Supply with a voltage varying from 170-240Volts at 50 +/-2 Hz.		
11	Support 19" rack mounting.		
12	Support IEEE 802.1Q VLAN encapsulation. Maximum 4K VLAN Groups.		
13	Support for Automatic Negotiation of Trunking Protocol, to help minimize the configuration & errors.		
14	Support centralized VLAN Management. VLANs created on the Core Switches shall be propagated to all the other switches automatically, thus reducing the overhead of creating / modifying / deleting VLANs in all the switches in turn eliminating the configuration errors & troubleshooting.		
15	Support 802.1d, 802.1p, 802.1Q, 802.1s, 802.1w, 802.1x, 802.1ab, 802.3ad.		
16	Support Spanning-Tree root guard or any other industry standard protocol to prevent other edge switches becoming the root bridge.		
17	Support IGMP snooping v1, v2 and v3.		
18	Support Link Aggregation Protocol (LACP).		
19	Support 802.3ah Ethernet Link OAM for Detection of Unidirectional links and to disable them to avoid problems such as spanning tree loops and support Unidirectional Link Detection (UDLD) or equivalent.		
20	It shall be able to discover the neighbouring device of the same vendor giving the details about the platform, IP Address, Link connected through etc, thus helping in troubleshooting connectivity problems.		
21	Support for Switch port auto recovery to automatically re- enable a link that is disabled because of a network error.		
22	Support Multicast VLAN registration.		
23	Support LLDP / LLDP-MED including client location information. It shall exchange link and device information in multi-vendor networks.		
24	It shall support configuration rollback to replace current configuration with any saved configuration file.		
25	Support link state tracking which provides layer 2 redundancy in the network when used in conjunction with server teaming.		
26	Support configurable maximum transmission unit (MTU) of up to 9000 bytes, with a maximum Ethernet frame size of 9018 bytes (Jumbo frames) for bridging on Gigabit Ethernet ports.		
27	Support auto sensing speed on 10/100/1000 ports, auto negotiating half/full-duplex on all ports and Auto-MDIX.		
28	Shall have per-port broadcast, multicast, and unicast storm control.		

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Technical Specifications cum Compliance Report (Ver. 2)
(To be submitted on Company's/Firm's Letterhead Signed and Sealed)

29	It shall have standard 802.1p CoS and DSCP classification using marking and reclassification on a per-packet basis by source and destination IP address, source and destination MAC address, or Layer 4 TCP or UDP port number.		
30	Eight egress queues per port to enable differentiated management of up to eight traffic types.		
31	There shall be weighted round robin (WRR) or any other industry standard protocol to provide congestion avoidance.		
32	Strict priority queuing mechanisms.		
33	Granular Rate Limiting functions to guarantee bandwidth in increments shall be as low as 64 Kbps.		
34	Rate limiting support 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 (IPv4 and IPv6) or MAC ACLs), class maps, and policy maps shall be available. ACL should be based on user defined packet content (Max. 6bytes length user defined).		
35	There shall be support for Asynchronous data flows upstream and downstream from the end station or on the uplink using ingress policing and egress shaping.		
36	There shall be support for Automatic Quality of Service for easy configuration of QoS features for critical applications.		
37	The LAN switch shall support IEEE 802.1x to allow dynamic, port-based security, providing user authentication.		
38	The LAN switch shall support for Admission Control features to improve the network's ability to automatically identify, prevent, and respond to security threats and also to enable the switches to collaborate with third-party solutions for security-policy compliance and enforcement before a host is permitted to access the network.		
39	Support port-based ACLs (PACLs) for Layer 2 interfaces to allow application of security policies on individual switch ports. It shall also support VLAN based filters.		
40	Support unicast MAC filtering to prevent the forwarding of any type of packet with a matching MAC address. It shall support Unicast and Multicast MAC addresses and associated VLANs.		
41	It shall support unknown unicast and multicast port blocking to allow tight control by filtering packets that the switch has not already learned how to forward.		
42	Support IGMP filtering which shall provide multicast authentication by filtering out no subscribers and limits the number of concurrent multicast streams available per port.		
43	Support for SSHv2, SNMPv3 to provide network security by encrypting administrator traffic during Telnet and SNMP sessions.		
44	Support 2 session of Port Mirroring based on port basis / VLAN basis to support intrusion prevention system deployment in different VLANs. It shall support bidirectional data on mirror port which allows IDS to take action when an intruder is detected.		
45	Support RADIUS authentication to enable centralized control of the switch and restrict unauthorized users from altering the configuration.		
46	Support MAC address notification to allow administrators to be notified of users added to or removed from the network / It shall support SNMP Trap for new MAC notification.		

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Technical Specifications cum Compliance Report (Ver. 2)
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47	Support DHCP snooping to allow administrators to ensure consistent mapping of IP to MAC addresses. This can be used to prevent attacks that attempt to poison the DHCP binding database, and to rate limit the amount of DHCP traffic that enters a switch port.		
48	Support DHCP Interface Tracker (Option 82) to augment a host IP address request with the switch port ID.		
49	Support port security to secure the access to an access or trunk port based on MAC address. After a specific timeframe, the aging feature should remove the MAC address from the switch to allow another device to connect to the same port.		
50	Support multilevel security on console access to prevent unauthorized users from altering the switch configuration.		
51	Support BPDU Guard feature, to shut down Spanning Tree Protocol Port Fast-enabled interfaces when BPDUs are received to avoid accidental topology loops.		
52	Support Spanning-Tree Root Guard (STRG) to prevent edge devices not in the network administrator's control from becoming Spanning Tree Protocol root nodes.		
53	Support for up to 512 access control entries (ACEs).		
54	CLI support to provide a common user interface and command set with all routers and switches of the same vendor.		
55	Remote Monitoring (RMON v1 and v2) software agent to support for enhanced traffic management, monitoring, and analysis.		
56	Support for RMON groups through the use of a mirrored port, which permits traffic monitoring of a single port, a group of ports, or the entire switch from a single network analyzer or RMON probe.		
57	It shall have Time-Domain Reflectometer (TDR) or equivalent technology to diagnose and resolve cabling problems on copper ports.		
58	It shall have layer 2 trace route to ease troubleshooting by identifying the physical path that a packet takes from source to destination or it shall support OAM 802.3ah.		
59	Support Trivial File Transfer Protocol (TFTP) and File Transfer Protocol (FTP) to reduce the cost of administering software upgrades by downloading from a centralized location.		
60	Support Simple Network Time Protocol/Network Timing Protocol (SNTP/NTP) to provide an accurate and consistent timestamp to all intranet switches.		
61	Support SNMPv1, SNMPv2, and SNMPv3 and Telnet interface to deliver comprehensive in-band management, and a CLI-based management console to provide detailed out-of-band management.		
62	Support IPV6 management. ACL and QoS and IPv6 Neighbour Discovery.		
63	Warranty Should be for 3 Years		
1.5	8 Port PoE+ Switch		
1	Device should support IEEE 802.1w, IEEE 802.1q, IEEE 802.1p, IEEE 802.1x, IEEE 802.3ad, IEEE 802.3x, IEEE 802.1d, IEEE 802.1s, IEEE 802.3i, IEEE 802.3u, IEEE 802.3ab Standards and Protocols		
2	Device must have at least 8 gigabit RJ45 Ports with 2 no. 1 Gig SFP Ports		
3	Device should support auto negotiation/auto MDI/MDIX		
4	Device must support POE 802.3af/at with Minimum PoE Budget of 120W		
5	Device should have Switching Capacity of 16 Gbps		

Technical Specifications cum Compliance Report (Ver. 2)
 (To be submitted on Company's/Firm's Letterhead Signed and Sealed)

6	Device should have Packet Forwarding Rate 14.9Mpps or more		
7	Device should have MAC address table of 8K or more		
8	Device should support jumbo frame of 9KB		
9	Device should Support QOS features like Port-based, 802.1p and DSCP priority		
10	Device should Support QOS features like 8 priority queues		
11	Device should Support QOS features Queue scheduling: SP, WRR, SP+WRR		
12	Device should Support QOS features Port/Flow- based Rate Limiting		
13	Device should Support Voice VLAN		
14	Device should Support Layer 2 features like IGMP Snooping V1/V2/V3		
15	Device should Support 802.3ad LACP and Up to 8 aggregation groups containing 8 ports per group		
16	Device should Support Spanning Tree features like STP/RSTP/MSTP		
17	Device should Support BPDU Filtering/Guard and TC/Root Protech		
18	Device should Support Loop back detection and 802.3x Flow Control		
19	Device should Supports 4K VLAN IDs		
20	Device should Supports up to 512 VLANs simultaneously of 4K VLAN IDs		
21	Device should support ACL features like L2 to L4 package filtering based on source and destination		
22	Device should support ACL features like MAC address, IP address, TCP/UDP ports, 802.1p, DSCP, protocol and VLAN ID Time Range Based		
23	Device should support security features like SSH v1/v2 and SSL v2/v3/TLSv1		
24	Device should support features like Broadcast/Multicast/Unknown unicast Storm Control		
25	Device should support security features like 802.1x and Radius Authentication, IP-Mac-Port-VID Binding, ARP Inspection, DHCP Snooping and DoS Defend		
26	Device should support AAA		
27	Device should support Web-based GUI and CLI management		
28	Device should support SNMP v1/v2c/v3, compatible with public MIBs		
29	Device should support RMON (1, 2, 3, 9 groups)		
30	Device should support CPU Monitoring and Port Mirroring		
31	Device should support Time Setting like SNTP		
32	Device should support TFTP & Web		
33	Device should support System Diagnose feature like VCT		
34	Device should support SYSLOG & Public MIBS		
35	Device should certified by FCC, CE, and RoHS		
36	Warranty Should be for 3 Years		
1.6	600 VA Offline UPS		
1	Type: Line-Interactive		
2	Capacity: 600 VA		
3	Input Voltage Range: 140 – 300 V AC		
4	Input Frequency: 50Hz +/- 10%		
5	Output Voltage: 190 -253V on Mains; 230V +/- 10 % on Battery mode		
6	Output Frequency: 50Hz +/- 10% Hz (under battery mode)		

Technical Specifications cum Compliance Report (Ver. 2)
(To be submitted on Company's/Firm's Letterhead Signed and Sealed)

7	Transfer Time: Min 4 MS		
8	Output Points: 3 Nos. Indian Sockets, Battery Backup. Min. 15 Minutes with 1 PC + Monitor Load		
9	Noise: < 40db at 1m		
10	Protection: Low Battery, Overcharge, Overvoltage		
11	AVR: Built in Automatic Voltage Regulator (AVR)		
12	Indicators: Mains ON, battery On and Fault		
13	Battery Details: Batteries shall be inbuilt Sealed Maintenance Free (SMF) type. 12V/7AH - 1 No		
14	Ambient Conditions: Temperature: 0 to 40 degree Celsius and Humidity: up to 90%		
15	OSHAS: BS OHSAS 18001:2007		
16	Certification: ISO 9001: 2008, ISO 14001		
17	Warranty: Onsite Warranty 3-years on UPS & 2 yrs. on Batteries		
1.7	1000 VA Offline UPS		
1	Type: Line-Interactive		
2	Capacity: 1000 VA		
3	Input Voltage Range: 140 – 290 V AC		
4	Input Frequency: 50Hz +/- 10%		
5	Output Voltage: 190 -253V on Mains; 230V +/- 10 % on Battery mode		
6	Output Frequency: 50Hz +/- 10% Hz (under battery mode)		
7	Transfer Time: Min 4 MS		
8	Output Points: 3 Nos. Indian Sockets, Battery Backup. Min 30 Minutes with 1 PC + Monitor Load		
9	Protection: Low Battery, Overcharge, Overvoltage		
10	AVR: Built in Automatic Voltage Regulator (AVR)		
11	Indicators: Mains ON, battery On and Fault		
12	Battery Details: Batteries shall be inbuilt Sealed Maintenance Free (SMF) type. 12V VAH168		
13	Ambient Conditions: Temperature: 0 to 40 degree Celsius		
14	Certification: ISO & BIS		
15	Warranty: Onsite Warranty 3-years on UPS & 2 yrs. on Batteries		
1.8	Optical SFP Transceiver Single Mode LX, LC Type		
1	Transceiver should be Enhanced Small Form-Pluggable (SFP) form factor and compatible with all the switches and from same the OEM of Switch		
2	Transceiver should be Hot pluggable and support 1G speed on Single Mode 9/125 um fiber		
3	Should be RoHS Compliant, letter should be provided with compliance.		
4	Should be Multi-Source Agreement (MSA) specification compliant.		
5	Transceiver should be compliant with IEEE802.3z standards.		
6	Transceiver distance capacity should be 10 KM.		
7	Transceiver interface should be Duplex LC connector.		
8	Optical Transceiver should be from same Switch OEM and warranty should be for 3 years		

Technical Specifications cum Compliance Report (Ver. 2)
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2.0	PASSIVE COMPONENTS		
2.1	Cat 6 UTP LSZH Cable		
1	4 Pair Cable with integral cross -member pair separator for uniform characteristic impedance.		
2	Category 6 Unshielded Twisted 4 Pair 100 Ω cable shall be compliant with ANSI/TIA/EIA-568-D-2018 Additional ISO/IEC 11801-1 and ISO/IEC 61156-5		
3	Suitable for 10 GBase-T applications in acc. with IEEE 802.3an up to 500 MHz and 55 m.		
4	Transmission Performance Specification for 4 Pair 100Ω an guaranteed up to 1G		
5	Category 6 Cabling		
6	Category 6 UTP cables shall extend between the work area location and its associated telecommunications closet and consist of 4 pair, UTP CM cable jacket.		
7	Conductor: Solid Copper		
8	Conductor Diameter: 0.555+-0.01mm (23AWG)		
9	Insulator HD Polyethylene solid		
10	Jacket: LSZH RoHS IEC 60332-3-22 complied, Colour- Grey/Blue		
11	Outer Diameter: 6.0 ± 0.2mm		
12	Max Temperature: -20°C to +70°C		
13	Should be ETL certified and 4 Channel ETL Verified as per TIA 568-D-2018		
14	Mechanical Test		
15	Should have Pulling force of 11.5Kg.		
16	Bend Radius: Installation: <4 X Cable Diameter at -20°C ±1°C, Operation: <4 X Cable Diameter at -20°C ±1°C		
17	Conductor Resistance: <9.38Ω /100m or better		
18	Resistance Unbalance 5% Max		
19	Mutual Capacitance: < 5.6nF/100m		
20	Capacitance Unbalance: 330pF/100m.		
21	Propagation Velocity: 69%		
22	ETL certified for 4 Channel should be submitted along with bid submission		
2.2	12 F OFC SM Cable		
1	Outdoor F/O Cable, Loose Tube, SM, 12 Fibers, Central Steel Wire + Corrugated Steel, PE		
2	The fiber should be optimized for operation at 1310 nm and at 1550 nm.		
3	Should fulfil the requirements of ISO.IEC 11801 - 2nd Edition, type OS2, ITU-T REC G 652D spec IEC 60794-1-2 F5		
4	Fibre Count: 12		
5	Loose tube count :2		
6	Fiber count per tube :6		
7	Filler Material: PP		
8	Max. Attenuation: At 1310 nm <= 0.36 dB/km, At 1550 nm <=0.22 dB/km		
9	Fibre/Tube Identification: Multi Tube		
10	Fibre protection (Tubes): Polybutylene Terephthalate (PBT)		

Technical Specifications cum Compliance Report (Ver. 2)
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11	Armouring: CST		
12	Thickness: 1.6 mm		
13	Outer Sheath: UV Stabilised PE or HDPE (preferred)		
14	Central Strength Member: Steel wire coated with PE		
15	Water Blocking: Thixotropic Gel (Tube);		
16	Petroleum Jelly (Interstices)		
17	Cable Diameter (D): 9.0 ± 0.5 mm		
18	Mass (Nominal): 91 kg/km		
19	Min. Bending Radius (during Installation): 20 D; D-Outer Diameter		
20	Max. Tensile Strength-Short Term: 1500N		
21	Max. Crush Resistance-Short Term: 2200N/100 mm		
22	Operating Temperature range: -40°C to +70°C		
23	All the cable and accessories are from the same OEM		
2.3	LC Type 9/125µm OS2 Fiber Optic Simplex Pigtail. 1 Mtr.		
1	Type: 1 Mtr. In Length and Single Mode 9/125micron fibre performance		
2	Jacket Material: LSZH complying to IEC 61034-1 & 2, IEC-60332-1, IEC-60754-1 & 2		
3	Operating Temperature: -40°C to +75°C		
4	Connector Insertion Loss: 0.30dB (Max)		
5	Attenuation: 1310/1550: 0.36/0.22 dB/KM		
2.4	Patch Cord, LC, Duplex, SM, G657A2, PC, LSZH		
1	Cable: 2 Mtr. LC-LC 9/125µm OS2 Single mode Duplex Patch Cord		
2	Connectors: The optical fiber patch leads shall comprise of Single mode 9/125µm fiber with 2XLC type fiber connectors terminated at each end of fiber patch cord.		
3	Insertion loss should be better than 0.35 dB		
4	Jacket Material: LSZH complying to IEC 61034-1 & 2, IEC-60332-1, IEC-60754-1 & 2		
5	Attenuation: 1310/1550: 0.36/0.22 dB/KM		
6	Connector Loss: 0.30dB(max)		
7	Operating Temperature: -40°C to +75°C		
2.5	Fiber Optic LIU Rack Mount LIU (12 F Ports)		
1	Fiber optic patch panel: Fiber optic patch panel FMS Termination Drawer should have sufficient slots to accommodate 3 of 12/16 Port LC Adaptor Plates.		
2	Should have Slide type drawer structure		
3	Height: 1 U, 1.75 inches (12 Ports)		
4	Material: Cold Rolled Steel in surface coated by electrostatic epoxy powder		
5	Slots: FMS should have sufficient slots to accommodate adaptor plates		
6	Empty Slots of FMS should be covered with blank plates.		
7	Splice Tray: Splice Tray of ABS, comply with UL 94V2 material should be supplied with LIU.		
8	The adaptor plate should be pre-loaded with LC-LC Type Single mode Duplex Adaptors.		
9	Port Density :12 LC-LC Single mode Ports		

Technical Specifications cum Compliance Report (Ver. 2)
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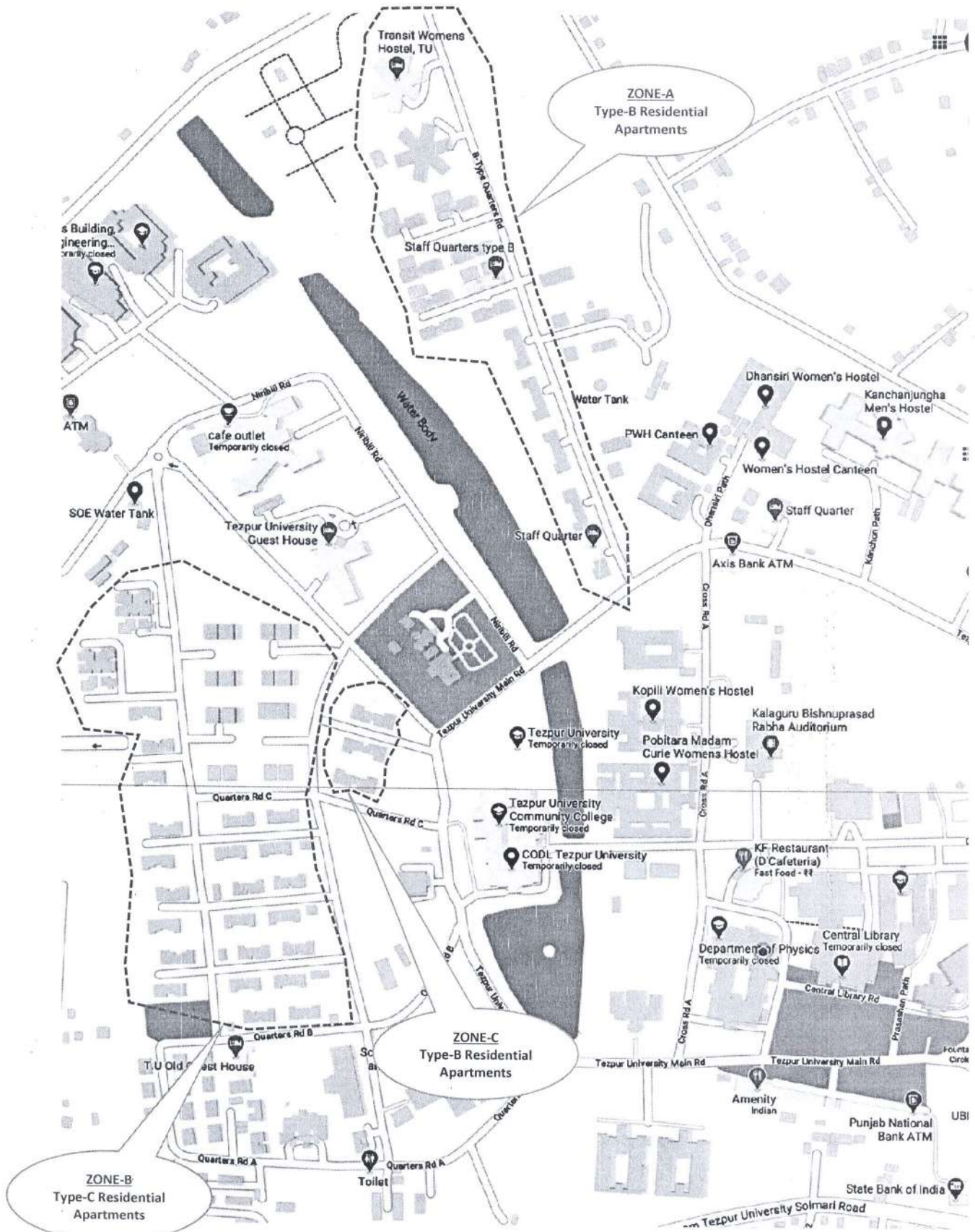
10	All LC adapters should be duplex type with shutter for protection. Adapters should be snap mount for easy insertion and removal.		
11	Insertion Loss: <0.2 to <0.1 dB		
12	Compliance: RoHS Compliant		
2.6	6 U Wall Mount Rack		
1	General Requirements 1) Racks should be 6 U Standard and manufactured out of steel sheet punched, formed, welded and powder coated 2) Rack should have 100% assured compatibility with all equipment's conforming to DIN 41494 (General Industrial Standard for equipment's) or Equivalent EIA /ISO / EN Standard 3) Rack should have 2 No Adjustable, 19" verticals with Punched 9mm Square Hole and Universal 12.7mm-15.875mm-15.875mm alternating hole pattern offering greater mounting flexibility and maximizes usable mounting space		
2	Physical Specifications 1) The Rack should have below dimension. Height x Width X Depth = 347 mm x 550 mm x 500 mm 2) Standard for Rack configuration should be welded frame integrated with side panel and vented top cover.		
3	Equipment Access & Installation 1) The front door should open to allow easy access. 2) Rack should have 1 Packet of mounting hardware, Pack of 20.		
4	Material Requirements 1) All weight bearing components should be made from steel with a thickness not less than 1mm 2) All sheet metal parts should be Pre-Treated and powder coated meeting ASTM Standard.		
5	Grounding Requirements 1) All enclosure components i.e. frame and door should be bonded together and to rack ground point. 2) OEM to provide rack ground point, Provision to further ground to Telecom Ground bus bar System. 3) Grounding and bonding as per UL Standards. 4) Manufacture should provide Horizontal OR vertical Ground bus bar for equipment Grounding as per Customer / Tender Requirement.		
6	Certifications, Environmental and Safety Requirements 1) Racks should be manufactured by ISO9001:2015, ISO14001:2004 & OHSAS18001:2007 Certified company and should have proper EHS Policy. 2) Products must be UL Certified 3) Manufacturer must certify that the products are RoHS Compliance 4) Manufacturer must certify that the products are Comply DIN41494 and Equivalent EIA/ISO/EN /CEA Standard. 5) The rack should comply minimum of IP 20 rating for protection against touch, ingress of foreign bodies and ingress of water. 6) The enclosure should both protect the user from mechanical hazards and generally meet the requirements for a mechanical enclosure (stability, mechanical strength, aperture sizes, etc.) as defined in IEC 60950 Third Edition.		
7	Ventilation and Thermal Management 1) The unit should have sufficient ventilation to provide adequate airflow required by the major Network manufacturers. 2) Provision to Fix Exhaust Fans / Fan Module on the top.		

Technical Specifications cum Compliance Report (Ver. 2)
 (To be submitted on Company's/Firm's Letterhead Signed and Sealed)

8	Rack Power Distribution Units & Environmental monitoring Rack should have 1 no. Power Distribution Units with 6 No 5/15A Indian Round Pin with PDU Rating 3 KVA		
9	Cable Management 1) Rack should have 1 no. Horizontal Cable Organizer with plastic loops. 2) Rack should have provision for cable Entry and Exit from both top and bottom.		
10	Accessories Rack should have 1 no. Cantilever Shelf for mounting NON-Rack mountable Equipment's		
11	Security Rack should have Front Toughened Glass Door with lock and key		
12	Delivery & Installation 1) The unit should be shipped fully assembled as one orderable Unit. 2) The manufacturer should offer an inside-delivery shipping option which includes reasonable delivery to the inside of the building and removal and disposal of shipping material and packaging.		
13	Warranty and Support 1) The Products manufactured should provide warranty for 1 year from date of invoice, the warranty does not cover wrong Usage, Damage, or miss-handling the products. 2) Electrical items such as Sockets, switches, fans etc. should have warranty for 1 year from date of installation. 3) For malfunction of any units/item in the rack, the support should be provided within the next business day.		
2.7	HDPE Pipe for underground laying for Fiber and UTP Cable		
1	Water resistant with ISI Mark		
2.8	PVC Cap-on-Casing for UTP Laying		
2	Ivory white, weather resistant PVC with ISI Mark		

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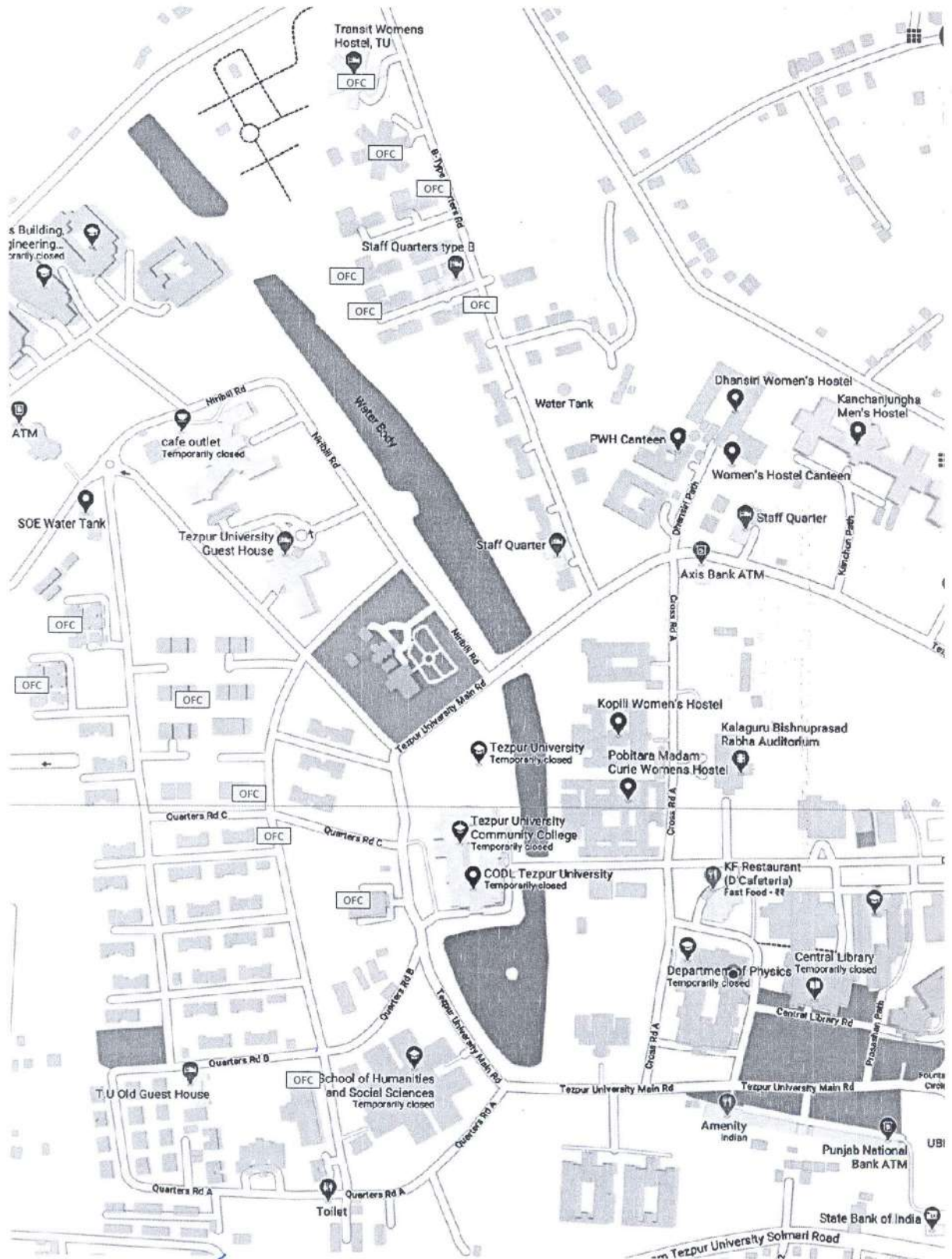
Annexure - I
Proposed Residential Wi-Fi Coverage Plan
Tezpur University
EXPECTED COVERAGE AREA



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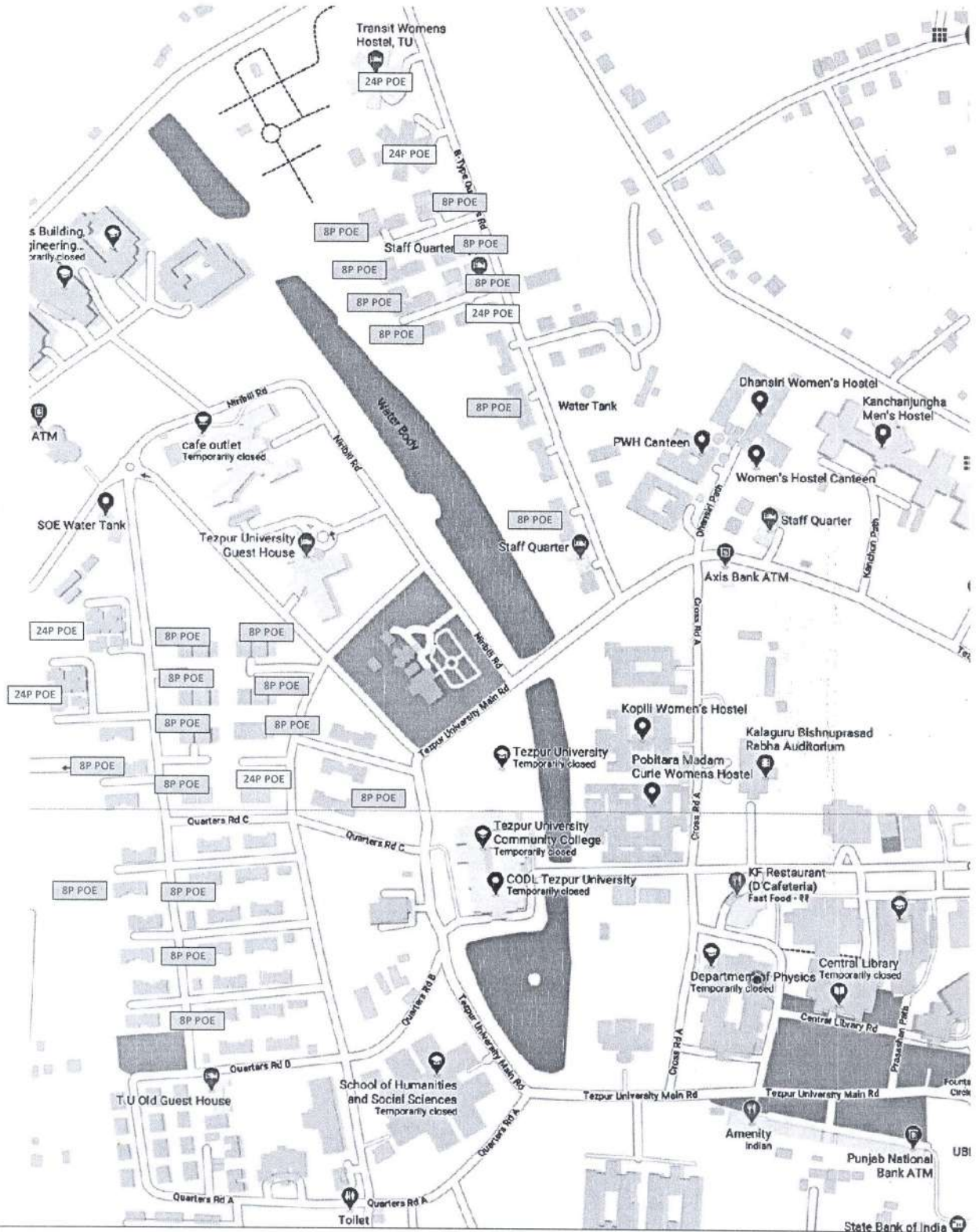
Annexure - I
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DARK OPTICAL FIBER AVAILABILITY POINTS



Annexure - I
Proposed Residential Wi-Fi Coverage Plan
Tezpur University

PROPOSED POE SWITCH LOCATIONS



Note:

- Access Points Present in the Assam Type Qtr. shall be connected to the adjacent Qtr.'s PoE+ Switch and UTP cable has to be laid through an HDPE pipe for UTP Uplinks as well as AP connection going out of the Qtr.

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Annexure – I
Proposed Residential Wi-Fi Coverage Plan
Tezpur University

ZONE-WISE RESIDENTIAL BUILDING DETAILS WITH APPROX. DEVICE COUNT

Zonewise Details	Building Type	Capacity/Units	Surveyed Quantity
Zone A	(a) B-Type[Star Block] = 2 Blocks	2 x 18 = 36	Total Access Points = 90 No.
	(b) B-Type [3 Storied RCC] = 8 Blocks	8 x 6 = 48	Total 24 PoE+ Switch = 3 No.
	(c) B-Type [Assam Type] = 5 Blocks	5 x 2 = 10	Total 8 Port PoE+ Switch = 10 No.
Zone B	(a) C-Type [3 Storied RCC] = 2 Blocks	2 x 18 = 36	Total Access Points = 107 No.
	(b) C-Type [3 Storied RCC] = 8 Blocks	8 x 6 = 48	Total 24 PoE+ Switch = 4 No.
	(c) C-Type [Assam Type] = 25 blocks (including old guest house)	25 x 2 = 50	Total 8 Port PoE+ Switch = 14 No.
Zone C	(a) B-Type [Assam Type] = 3 Blocks	3 x 2 = 6	Total Access Points = 3 No. Total 8 Port PoE+ Switch = 1 No.
			Total Access Points = 200 Nos. Total 24 Port PoE+ Switch = 7 Nos. Total 8 Port PoE+ Switch = 25 Nos.

DPR



FORMAT FOR BANK DETAILS OF VENDOR

Name (as appear in Bank records)	
Aadhar No. (if applicable)	
GST No. (if applicable)	
PAN (mandatory)	
Complete Address : (mandatory)	
Address	
City	
District	
State	
PIN Code	
Mobile No. (mandatory)	
Email (mandatory)	
Bank A/c No. (mandatory)	
Bank Name & Branch (mandatory)	
IFS Code (mandatory)	

(Signature of vendor)
With Seal

Bank details in the given format may be submitted along with a **Cancelled Cheque/photocopy of the Bank Passbook** (only for the first time) so as to process the payment electronically.