

學校檔號：T2025/26-008

掛號郵件

執事先生：

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承投提供「Wi-Fi network」
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(承投 Wi-Fi network 書面報價單/投標書)

學校檔號：T2025/26-008

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台安！

伊利沙伯中學舊生會湯國華中學

溫穎思校長

2026 年 3 月 3 日

附件一：Wi-Fi network_ Wi-Fi Requirements specification and Floor Plan

附件二：書面報價/投標附表 (一式兩份)

附件三：書面報價/投標表格

附件四：不擬提供書面報價/投標通知書

有關本校校董/職員收取利益的政策

PART A –Wi-Fi REQUIREMENTS SPECIFICATION

1. Introduction

The Contractor is invited to

- Build up a Wi-Fi network in **Queen Elizabeth School Old Students' Association Tong Kwok Wah Secondary School** (The School); and
- Provide and maintain a Wi-Fi service through subscription mode.
- The contractor can reuse existing cabling and/or trunking.

2. Background

The School will **enhance / top up** the IT infrastructure so as to set up the necessary Wi-Fi environment in the school premises (full Wi-Fi coverage in ALL classrooms) for supporting e-learning in class. Regarding the enhancement of Wi-Fi infrastructure, we would like to hire a contractor to design, build, operate and maintain the whole infrastructure; and to pay for the service by subscription thereafter, through a **subscription** model.

3. User Requirements

This section specifies the user requirements of the School of the Wi-Fi network. The Contractor shall be capable of supporting the requirements set out below.

3.1 Standard Provision

- **Wi-Fi Internet Connectivity** – use Wi-Fi 7 network or above in a standard classroom or special room. The minimum number of classrooms to be covered shall be at least equal to the number of approved classes for the 2025/26 school year, that is **24** classrooms.
- **Number of Concurrent Connection** – commensurate with the maximum number of students, say **40**, in a class with at least 5Mbps upload / download bandwidth per connection
- **Number of classrooms using Wi-Fi Concurrently: 5**
- **Authentication Method** – use 802.1x standard based authentication and Hong Kong Education City single sign-on services.
- **Guest Wi-Fi landing page** – The Wi-Fi rental service must include a customizable landing page that prominently displays the school logo and clearly identifies the school upon connection.
- **Session Control** –Hong Kong Education City authentication service can support one device or multiple devices to connect based on user group (student, teachers).
- **Internet Content Filtering Service** – Provide a Content delivery network topology (CDN) and Cloud based Internet Content filtering profile commonly adopted by most schools with ability to create black / White list filters and managed by vendors and school.
- **Existing Network Facilities** – rely on any existing network cabling of the School. The Wi-Fi network shall be physically separated from the school network.
- **Broadband Network** – use separate broadband for the Wi-Fi service where the bandwidth must be more than the sum of minimum concurrent users. State otherwise if the existing broadband can be utilized for the service.
- **Managed Service** – operate the Wi-Fi and its networking devices using managed

service model, provide end-to-end service with single point of contact including configuration, provisioning of service, proactive remote monitoring, maintenance and regular reporting.

- **Service Level Agreement** – ensure at least 99.7% availability of the Wi-Fi service, support four-hour response time and four-hour service recovery with active monitoring, helpdesk support with support hours from Mon to Sat 8:00 am to 6:00 pm, and provide monthly monitoring reports for the School.
- **Contract End Arrangement** – All provisions of trunks, conduits, cables, LAN ports, patch panel and power points shall be considered as fixture of the School and shall become the property of the School. The Contractor shall remove or keep those provisions according to the instruction of the School ^from this new contract onwards. Contractor can remove the network equipment such as switch, routers, and access points.
- **Lease-to-Own Option (Optional)** – The Contractor may also provide a lease-to-own option to the school, whereby the network equipment, such as switches, routers, and access points, will be considered fixtures of the school and shall become the property of the school from this new contract onwards.
- **Wi-Fi Industrial standard** – The manufacturer of the Wi-Fi should be positioned as a leader or visionaries in the “2024 Gartner Magic Quadrant for Enterprise Wired and Wireless Lan Infrastructure”
- **Network equipment and Wi-Fi equipment product position in enterprise grade and not acceptable in SME and home use and consumer retail product line.**
- **Internet Content Filtering Service Industrial standard** – The content filtering services should be positioned as a leader in the Gartner Magic Quadrant for web application in 2022 years.
- **Mobile APP Wi-Fi connection** – Support to present a school hotline number instead of a personal mobile number when away from the desk. Mobile app mainly is communication in between Hong Kong Exchange and Mobile App.
- **Network management portal** – A network management portal that allows school to monitor both the school network and Wi-Fi network in one place. The portal displays the Wi-Fi status, network switch status, and mobile device status.
- **Solution assurance and stability** – Accept only the brand’s enterprise grade solution and support up to 4 years hardware warranty and life cycle. Any SME or consumer grade solution will not be considered.

3.2 Add-on Service (to be aligned with Part Y)

- **Wi-Fi coverage** – to include special rooms and open areas
- **Broadband Service** – provide at least **2.5Gbps** Internet connection at school.
- **Authentication Method** – Authentication method shall includes WPA2 Enterprise, 802.1x and well as MAC address filtering and user account system being used by school and support Microsoft 2016 AD server authentication (Radius), etc.
- **Session Control** – Guest Landing page shall support session control where access time can be changed by school
- **WLAN system access control** – specific request on MAC address filtering.
- **MAC Address Monitoring** – The lists of filtering and filtered MAC addresses are to be monitored by **the School**.

- **Internet Content Filtering Service** – Cloud based Internet Content filtering profile in Hong Kong commonly adopted by most schools with ability to create black / White list filters and managed by vendors and school.
- **E-Mail Filtering Service** – can integrate with cloud base email filtering to protect client from email hazard.
- **Integration of networks** – system integration with existing network with secure design.
- **Voice Traffic Management** – wireless infrastructure is capable to support the Wi-Fi phone solution within the same network.
- **Internet addresses subscription & configuration** – for Internet access to school internal resources, via system integration
- **Monitoring of Wi-Fi network** – To be monitored by Service Provider through the managed Wi-Fi service, the Service Provider should also provide a way to locate connected tablets mobile devices and/or last position/s.
- **Redundancy** – increase the availability of the Wi-Fi service.
- **Support hours** – extended support hours and/or reduced time for recovery, the SLA must be 4 hours response and 4 hours onsite
- **Contract End Arrangement** – Other arrangements
- **Internet auto failover service by Mobile** – capable to support auto failover and failback when exiting broadband is down.
- **Mobile Internet Backup Services** - capable to support automatic failover and failback between fixed broadband circuit and mobile network to provide uninterrupted connectivity when the primary broadband connection is unavailable.
- **AI Features** – Supports AI-driven analytics for Wi-Fi signal tuning to optimize performance when interference occurs or stability is compromised.
- **Wi-Fi Singal** – Supports Wi-Fi signal tuning to optimize performance when interference occurs or stability is compromised.
- **Wi-Fi patch update** – Provides patch updates in response to worldwide security vulnerability announcements.

3.3. Deliverables

3.3.1 The Contractor is required to provide the following deliverables for the Wi-Fi network design:

- Master Activity Plan
- Network Configuration Report and Network Diagram
- Network Test Plan and Network Test Result Report
- Operation Manual for End User
- User Acceptance Test Plan
- Exit Plan

3.3.2 The Contractor is required to provide the monthly monitoring report with the following items:

- Network Health Report
- Network Usage Report
- Reporting of security incidents
- Reporting on trend and statistics of incident and their analysis
- Reporting of the failure rate for all equipment with detailed fault analysis

- Problem log and incident log for critical failure of the network
- Statistical report on the type and no. of calls
- Summary of the outstanding enquiry for the month-to-date

4. Technical Specification (Standard Provision)

4.1 Wi-Fi Network

- 4.1.1 The Wireless LAN (WLAN) System of the Wi-Fi network shall support Cloud-based WLAN Controller in Managed model. Thus local Controller in school is not acceptable. The Cloud-based WLAN Controller is capable of fully centralized provisioning, configuration and monitoring all APs functionalities; a backup of the Cloud-based WLAN Controller shall be available in Hong Kong.
- 4.1.2 The thin client WLAN Access Point (AP) shall be a high performance wireless network access device, which shall be connected with the Power over Ethernet (PoE) Access Switches via Structured Cabling System. Appropriate type of connection cables between WLAN APs and the antenna shall be provided.
- 4.1.3a The WLAN access points (APs) must be compatible with Wi-Fi 6 and conform to the IEEE 802.11a/b/g/n/ac Wave 2/ax standard or higher. They should support dual-band operation with a minimum configuration of 2x2:2 for the 2.4GHz and 5GHz bands, and include features such as OFDMA, MU-MIMO, and built-in smart antennas.
- 4.1.3b For Wi-Fi 7 environment, The WLAN access points (APs) must be compatible with IEEE 802.11a/b/g/n/ac Wave 2/ax/be standard or higher. They should support tri-band operation with a minimum configuration of 2x2:2 for the 2.4GHz, 5GHz, and 6GHz bands, and include features such as OFDMA, MU-MIMO, built-in smart antennas, Multi-Link Operation (MLO), and higher modulation (4096-QAM). Additionally, Wi-Fi 7 must be compatible with the same Wi-Fi 6 management platform for unified single portal management.
- 4.1.4 The Contractor shall design the WLAN System to provide the coverage for the required wireless coverage place. The received signal strength measurement from the Wi-Fi Service at the Wi-Fi client device (such as tablet PC or notebook computer) is no worse than -68 dBm. The Contractor shall provide certificate or test report to illustrate that the Wi-Fi client device for testing satisfies the power emission requirement.
- 4.1.5 The WLAN AP shall support PoE, DHCP, WPA2, WPA3, IEEE 802.1x and certificate authentication.
- 4.1.6 The WLAN System shall support automatic channel selection, protocol filtering, multicast/broadcast storm filtering and load balancing.
- 4.1.7 The WLAN system shall allow single or multiple devices per user account to be authenticated using 802.1x and Hong Kong Education City single sign-on service.
- 4.1.8 Each WLAN AP shall be able to support at least concurrent 40 users connecting to the network simultaneously. In no circumstance shall the speed of data transmission symmetrically fall below the data rate requirement at any place or any corner or any highly congested area within the areas being covered. In case the transmission speed is below the said data rates, the Contractor shall be responsible for all remedial measures to rectify or configure fine-tuning of antenna or even increase the quantity

of the WLAN AP at Contractor's own costs in order to meet the data rate requirement as mentioned in the Specification. A complete set of catalogues with brand and model shall be submitted and highlighted for reference. The catalogues shall show all the features and technical specifications of the products and systems.

- 4.1.9 The system shall provide bandwidth control per connection.
- 4.1.10 The WLAN shall allow different authentications by using Service Set Identifiers (SSIDs).
- 4.1.11 Individual APs shall be allowed to be assigned by more than one SSID and up-to four SSIDs. And support a separate VLAN for EMSD Wi-Fi device connection.
- 4.1.12 The SSIDs shall be able to be set hidden from searching by Wi-Fi devices. The devices have to manually set SSID to make connection.
- 4.1.13 Antennas of APs shall be capable of detecting user locations in real time for direction switching while devices in motion, beam forming.
- 4.1.14 The DHCP server shall support at least 30 queries/sec.
- 4.1.15 The WLAN system shall suspend the session of the user once the session control is expired and the suspension time shall be configured by the school.
- 4.1.16 The Contractor shall in provision of the service comply with non-interference requirements of and shall not cause interference prohibited under the Telecommunication Ordinance (Cap 106) or any other laws or regulation of Hong Kong.
- 4.1.17 The WLAN System shall provide termination of idle sessions and control of the duration features.
- 4.1.18 The WLAN System shall support client roaming across Access Points.
- 4.1.19 The WLAN system shall cover all areas specified under this tender.
- 4.1.20 The quotation shall include the cost to provide sufficient quantity and its cabling work required, including but not limited to supply and install the Fibre optics, Cat 6 cable, Conduit, cable patch panel, cable faceplate, Cable patch cord.
- 4.1.21 The Contractor shall provide complete set of WLAN Systems which consist of Wireless Access Point, Connection Cable, Authentication System, Wireless LAN Controller, PoE Switch, horizontal UTP Cat 6 cable/OS2 Fiber, patch cable UTP Cat 6 / OS3 Fiber Optics, any required license and all associated accessories.
- 4.1.22 All access points (AP) shall be certified by OFCA and copy of certificates issued by OFCA shall be attached to the proposals.
- 4.1.23 The Contractor shall ensure that there is no interference between WLAN Access Points due to limited non-overlapping channels assignment when the WLAN AP is installed. The Contractor shall be responsible at his own costs for providing solution to eliminate the interferences including but not limited to reassignment of the non-overlapping channels, adding extra APs with lower transmission power and/or replacement of the WLAN AP.
- 4.1.24 The WLAN System shall support Web GUI management.
- 4.1.25 FTP service shall not be allowed in the Wi-Fi network (to avoid exchanging credential and files in plain text without any encryption).
- 4.1.26 Mobile 5G Router for Mobile Internet Backup
 - System Features:
 - Support fault alert

- Support single view for the Wi-Fi and 5G status
- Support auto failover between School Wi-Fi fixed broadband line and 5G network
- Mobile 5G Router:
 - Cellular: Standard compliant: 3GPP Release 15(both LTE and 5G)
 - LAN port: Support up to 2 x 1GE LAN Ports (RJ45)
- LED display:
 - Signal strength indicator
 - 5G network status
 - LAN Port status
- Peak data rate:
 - Sub-6 DL: 2.3Gbps
 - UL:1Gbps

4.2 Core Switch

- 4.2.1 The Core Switch would be responsible for connecting all PoE access switches in typical floors for WLAN AP.
- 4.2.2 The Core Switch shall be capable of providing DHCP Services for IP addresses distribution for mobile devices connecting to the network, and the required bandwidth, QoS, and policy-based routing to carry all sorts of information including video, voice, data, image, etc.
- 4.2.3 Each Core Switch shall provide a Gigabit Ethernet connection to each PoE Access Switch in typical floors.
- 4.2.4 The Core Switch shall support Layer 2 and Layer 3 switching and capable of providing the wired speed performance.
- 4.2.5 The Core Switch shall support basic IP unicast routing protocols, Static route, Routing Information Protocol (RIPv1, RIPv2), inter VLAN routing.
- 4.2.6 The Core Switch shall support Internet Group Management Protocol (IGMP) snooping and multicast and unicast storm control, Spanning-Tree Protocol.
- 4.2.7 The Core Switch shall support WebGUI Management for contractor's support, Access Control Lists (ACLs), DHCP Interface and SNMP.
- 4.2.8 The Core Switch shall support VLANs including support for IEEE 802.1Q and IEEE 802.1p.

4.3 PoE Access Switch

- 4.3.1 The Access Switches shall be deployed to provide high performance interconnectivity between the Core Switches and the WLAN APs on typical floor and support Cloud-based management.
- 4.3.2 The Access Switch shall consist of 8/12/24/48 x 10/100/1000Base-T Ethernet ports, with minimum of 1 x 1000Base-T / 1000Base-SX SFP Gigabit Ethernet uplink ports connected with the Core Switch.
- 4.3.3 The Access Switch shall be used for connecting the WLAN APs. The Contractor shall determine the Maximum power loading of the devices to be connected with the PoE Access Switches. The Contractor shall provide additional PoE Access Switch(es) if the total power loading summed up from the PoE devices exceeds the maximum power loading capacity of the PoE Access Switch.
- 4.3.4 The Access Switches shall support VLAN configuration.

- 4.3.5 The Access Switches shall be at wired speed.
- 4.3.6 The Access Switches shall be provided sufficient port density to meet all the required links.
- 4.3.7 The Access Switches shall support PoE and shall conform to IEEE 802.af / IEEE 802.3af standard, which delivers power over single copper UTP cable for WLAN AP.
- 4.3.8 The Access Switches shall support Internet Group Management Protocol (IGMP) snooping and multicast and unicast storm control, IEEE 802.1D Spanning-Tree Protocol.
- 4.3.9 The Access Switches shall support Virtual local area network (VLANs) including support for IEEE 802.1Q and IEEE 802.1p.
- 4.3.10 The Access Switches shall support WebGUI Management, Access Control Lists (ACLs), DHCP Relay and SNMP.

4.4 Firewall

- 4.4.1 The performance of the Firewall shall not be degraded with 100% Internet bandwidth utilization.
- 4.4.2 Network Address Translation (NAT) is required.
- 4.4.3 Access Control Policy, Content Filtering and Anti-Malware services are required.
- 4.4.4 The configuration settings of the appliance shall be allowed to export to files for backup and restore for rapid recovery and shall control all incoming and outgoing Internet traffic, serving as the sole entry and exit point between the Internet and the WLANs in all locations.
- 4.4.5 The configuration settings of the appliance shall support blocking specific network ports, including ports of Transmission Control Protocol (TCP) and User Datagram Protocol (UDP). Blocking denial of service (DoS) attacks and malformed packet attacks shall also be configured.
- 4.4.6 The firewall policy should be applied to control network traffic such that public users should be prohibited to access the internal network segments of the School.

4.5 Service Requirements

- 4.5.1 The Contractor shall be responsible for the total project management and shall assign a person to act as the single contact point to the School regarding all related activities of the contract. This single contact point cannot be transferred to a sub-contractor unless explicitly agreed by the School. Contractor should formally inform the School in writing if there is a change of contact point.
- 4.5.2 The Contractor shall provide rack/cabinet or use existing school rack if there is available rack space. All switches/firewall shall be properly installed into wall mounted cabinet or rack.
- 4.5.3 Cables shall be labelled with connected port and its device id.
- 4.5.4 All the equipment shall be labelled with an identifiable id.
- 4.5.5 The placement of cables, cabinets, racks and appliances shall be shown on the network diagram.
- 4.5.6 Switches and/or other appliances shall be properly installed into cabinet/rack with appropriate ventilation.
- 4.5.7 13A power cord(s) shall be bundled with appliance(s).
- 4.5.8 Cable shall be properly set up onto appropriate cable management guide.
- 4.5.9 Contractor should make sure that the actual environment is suitable for the

installation and operation of equipment with School agreement in advance, and make necessary suggestions, if any.

4.6 Service Level Requirements

- 4.6.1 The Contractor shall provide incident/problem report to the School within 5 working days after each incident and the resolution taken.
- 4.6.2 The Contractor shall derive mechanism, including forms and reference tables for measuring and recording the Service Level Measures, to ease the administration and monitoring by the School.
- 4.6.3 Advance notice by at least 2 weeks shall be given to the School prior to all scheduled maintenance. At most 4 scheduled maintenances per year are excluded from the calculation of Service Levels. No more than 1 hour service interruption or an agreed time slot is accepted for each scheduled maintenance.
- 4.6.4 Service Level, expressed in percentage, is the ratio of actual available time to the scheduled available time for the Wi-Fi network of the School and is calculated according to the following formula:
Service Availability Level = (Schedule Uptime within the month– Unscheduled Downtime within the month) / Scheduled Uptime within the month, where
Scheduled Uptime: The duration, in unit of minutes, for the Wi-Fi network of the School is scheduled to be available for the month. The duration will exclude the scheduled downtime, which is defined as duration agreed between the School and the Contractor during which the service may be deliberately made unavailable to users.
Unscheduled Downtime: The amount of time, in unit of minute that the services are unavailable due to equipment failure or other reasons under the responsibility of the Contractor.
- 4.6.5 In case of any network failure caused by a subscribed network device, including but not limited to the access points, switches, routers or firewalls, the Contractor should be able to replace the failed device by 5pm on the next business day after receiving the failure report from the school.

4.7 Service Level Rebates

- 4.7.1 The Service Rebates to the School operate as liquidated damages for the performance fallen short of the target service levels over a period of one month. The service measures stipulated in 4.6 will be used to determine the Service Rebates in Service Availability (S1) and Service Resumption Time (S2).
- 4.7.2 The application of the Service Level Rebates adjustment to the monthly charge will commence with effective from the acceptance of the reliability test.
- 4.7.3 For each month, the Service Rebates for different service measures (S1, S2) will be calculated as below if the Contractor cannot meet the target Service Levels for the Wi-Fi network of the School under the availability agreed:
Failure Hour x [(Yearly Subscription Fees) / (365 x 24)] x 2, where
Failure Hour: The unscheduled downtime or the time to resume the network due to the failure of hardware or software which is provided by the Contractor. Failure Hour is calculated in the increment of 0.5 Hour.
- 4.7.4 The Service Rebates of the Wi-Fi network of the School, if any, will be paid by crediting the invoice of the following month.

4.8 Helpdesk Service

- 4.8.1 The Helpdesk Service shall maintain dedicated hotline, including phone, email and fax, for enquiries and complaints through a toll free number.
- 4.8.2 The Helpdesk Service shall answer enquiries and complaints originated from the School not only concerning the Service, as well as remote re-configuration of existing firewall, switches, virtual machines, active directory and PC/files management.
- 4.8.3 The Helpdesk Service shall operate 24hours from Mon to Sat, and 8am to 6pm with operators providing tier 1 remote re-configuration services as stated in 4.8.2.
- 4.8.4 The Helpdesk Service shall maintain call logs on enquiries and complaints. The information shall be included but not be limited to date, time, description of issues, contact information, and follow-up actions. The Contractor shall observe and comply with Personal Data (Privacy) Ordinance in handling all information relating to these enquiries and complaints.
- 4.8.5 The Contractor shall provide the following information concerning the Helpdesk service related to the implementation of the Service:
- Detailed information of the helpdesk office, such as address, phone number, fax number; and
 - Facilities, computer systems and equipment provided in the helpdesk office, such as private branch exchange (PBX), keyline telephone system (KTS), interactive voice response system (IVRS) and voice recording system.
- 4.8.6 The Contractor shall provide helpdesk staff with the necessary tools, including but not limited to hardware and software, related training for supporting the Service.
- 4.8.7 The Contractor shall not make use of the Helpdesk Service to transmit any message or conduct any activity to the School, which is not connected with the provision of the Service. The School shall have the full discretion to determine whether any such message or activity is in breach of this provision. The Contractor shall forthwith stop transmitting such message or conducting such activity and refrain from doing it further once the School has notified the Contractor in writing or verbally of its determination.

4.9 User Acceptance Test

- 4.9.1 The Contractor shall conduct tests with the School before the service is officially accepted and subscription started. Tests shall include User Acceptance Test for reliability and performance of the hardware and software, and also the monitoring, operation support and all other aspects related to the Service Level Agreement of the Service. At least 14 school working days of trial period is expected for service monitoring after testing.
- 4.9.2 The contractor will be required to perform test making reference to the User Acceptance Test and System Test documents at www.edb.gov.hk/ited/Wi-Fi900. They include the types of testing to be performed, the requirements to be tested, the testing environment, testing tools and pass/fail criteria as reference to the Contractor.
- 4.9.3 The Contractor shall upon request by the School arrange briefings to the School and/or Responsible Parties of the School, with briefing materials, prior to the User Acceptance Test when required.
- 4.9.4 The Contractor shall provide detailed acceptance test plan and a step by step testing procedure with expected results against the requirements set out in this specification.

- 4.9.5 The Contractor shall provide, configure and set up the proper software and hardware for the School to carry out the User Acceptance Test.
- 4.9.6 The Contractor shall be required to carry out tests to demonstrate that the equipment and system meet the specification and other contractual requirements. The Contractor shall also be responsible for the timely preparation and compilation of all test schedules, test procedures and test reports.
- 4.9.7 The Contractor shall follow the agreed standards as laid down in this specification for the testing methods and procedures.
- 4.9.8 The Contractor shall submit a schedule of site performance and commissioning tests at least 3 working days prior to the commencement of the scheduled commissioning date.
- 4.9.9 Special tools, test equipment, test objects and simulators required for the demonstration of either bench or commissioning tests shall be made available by the Contractor at no extra charge to the School.
- 4.9.10 All test equipment used by the Contractor shall be properly and periodically calibrated. Measuring standards used in calibration shall be traceable to international or national measurement standards, or to an industry recognized manufacturer's reference, subject to approval of the School.
- 4.9.11 Calibration procedures and results shall be documented and signed by certifying body where applicable. The Contractor may be requested to show evidence of calibration of test equipment by submission of copies of these calibration records prior to conduction of any tests.
- 4.9.12 The Contractor shall submit the User Acceptance Test report within 3 working days. The acceptance of the installation will only be granted after receiving a satisfactorily UAT report from the Contractor.
- 4.9.13 All equipment to be installed may be subject to inspection and bench testing. The Contractor shall meet the cost of deliveries for bench test. Notwithstanding, the Contractor shall have carried out the tests in accordance with the requirements and procedures stipulated in this specification and submitted the associated test reports for inspection.

4.10 Termination of Service

- 4.10.1 The School reserves the right to terminate all or part of the Service at any time with written notice of 10 working days in advance if:
 - The Contractor fails to meet the target service levels under Service Level Requirements for two consecutive months, or three months in total within the committed subscription period;
 - The School suspects that unauthorized activity has occurred or is occurring in relation to the Service;
 - The provision of the Service will cause the School to be in breach of any applicable law;
- 4.10.2 The Contractor shall provide to the School and implement the Exit Plan in accordance with:
 - The Contractor shall provide to the School an Exit Plan with feasible arrangements before the committed subscription contract date;
 - If the School considers the Exit Plan as not satisfactory, it will notify the

Contractor with comments. The Contractor shall revise the Exit Plan by taking into consideration of the School's comments and provide to the School with five (5) working days after the date of receiving the School's comments. If the Exit Plan has been considered as not satisfactory for three or more times, the School shall have the right to terminate this Contract by giving 10 days' notice in writing;

- Detailed exit procedures, disengagement timetable and actions to be taken by both the Contractor and the School for smooth termination of all or any part of the Service;
- The Exit Plan shall aim at enabling the School or its authorized parties to perform in substitution for the Contractor and to eliminate or minimize any disruption or deterioration of the Service. The Exit Plan shall contain, but not limited to the following information:
 - Detailed exit procedures, disengagement timetable and actions to be taken by both the Contractor and the School for smooth termination of all or any part of the Service;
 - Any information that is necessary for the School or a new service provider to continue the provision of the Service;
 - Details of the Contractor's personnel and other resources that will assist the School or the School's authorized parties during the handover;
 - All provisions of facilities such as trunks, conduits, cables, LAN ports, patch panel, and power points, shall be considered as fixture of the School venues and shall become the property of the School. The Contractor shall remove or keep those provisions according to the instruction of the School. Contractor can remove the network equipment such as switch, routers, and access points.
- The Contractor shall be responsible for the implementation and execution of the Exit Plan and shall ensure that the exit plan is carried out in a timely and orderly manner.

4.11 Wi-Fi Project Reference

- 4.11.1 The Contractor shall list out Wi-Fi 100, Wi-Fi 200 or Wi-Fi 900 reference cases with compliment letters. The compliment letters shall be provided during the tender submission
- 4.11.2 To prove that the Contractor has the capability on Wi-Fi system design and maintenance, The Contractor shall list out reference cases in non-subscription model which uses the same wireless solution vendor as the proposed brand in last 3 years while the cases in a single year shall not be less than 5.
- 4.11.3 The project references shall be provided during tender submission.

5. Sub-Contracts

- 5.1 The Tenderer shall be the prime Contractor for all the services specified in Part X and Part Y of this contract. The Tenderer shall be the single point of contact for all contractual matters.
- 5.2 The Tenderer shall be liable for the performance or breach of any provisions of the contract by Sub-Contractors.
- 5.3 The Tenderer shall provide details of the sub-contract service for the Wi-Fi operation and maintenance of the Sub-Contractors in the format listed on Section 5 of Part Y. The hierarchy

of the sub-contracting shall also be clearly stated below. If there are no Sub-Contractors, please enter nil.

- 5.4 No Sub-Contractor(s) specified in Section 5 of Part Y shall be replaced unless prior written consent has been given by the School.
- 5.5 The Tenderer shall ensure that the quality of the service rendered by the Tenderer shall not be affected due to any change of Sub-Contractors;
- 5.6 The Tenderer shall not be relieved from any of its obligations hereunder by entering into any sub-contract for the performance of any part of this contract. If request by the School, the Tenderer shall describe which part of the service shall be performed by the Sub-Contractor(s) in the sub-contract(s) between the tenderer and its Sub-Contractor(s).

6. Schedule of Work

6.1 The Contractor shall provide the service according to the following schedule.

Phase	Items	Starting Date	Ending Date	Service fee
I	Build up of Wi-Fi network	On or before July 2026	31 Aug 2026	0
II	Subscription of service	1 Sep 2026	31 Aug 2029	Quoted price

7. Delay of Schedule

- 7.1 If the Contractor fails to provide any part of the Wi-Fi service which shall be ready for use in the School within 60 days after the target Ending Date specified in Section 8 of Schedule of Work then notwithstanding anything else contained in this Contract the School shall be entitled to terminate this Contract with forthwith by giving written notice to the Contractor and to recover from the Contractor the amount of all damages and loss suffered by the School resulting from such failure, including without limitation to any damages and loss resulting from the termination of related service orders.
- 7.2 Within one (1) week of the termination of this Contract, the Contractor shall collect its own Hardware and Software at his own cost after the contractor has removed the School Data in the Hardware.
- 7.3 The Contractor shall reinstate and make good the concerned area of the School to the satisfaction of the School after removal of the hardware.

8. Terms of Payment

- 8.1 Payment shall be made in arrears, specifically Net 60 days from the date of service delivery or receipt of invoice.

9. Price Proposal

- 9.1 The Service Provider is required to provide a breakdown on the service charges for each of the service items as set out in the Price Proposal at **PART Y - PRICE SCHEDULE**. Failure in complying with this requirement will render the quotation disqualified.
- 9.2 Please note that, the School has the absolute discretion to accept the whole of the Services or just part of the Services as listed out by items in the Price Proposal.
- 9.3 Set up cost will not be considered as a part of the cost in subscription mode.

10. Invitation for Quotations

10.1 Quotations are invited for the execution of the whole of the Services as described in this document. Quotations for part but not all of the Services will not be considered.

10.2 Please provide two sets of quotation documents for processing of the quotation.

11. Tender Preparation and Submission

11.1 The Service Provider is required to submit the following information and document.

- A Statement of Compliance to provide response that the quotation complies with all requirements stated in this Specification.
- Price Schedule
- No upfront cost or one off cost schools shall be paid throughout the entire subscription period.
- Proposed AP location mark on the Floor plan.
- Proposed Network infrastructure show on the Network Diagram.
- Implementation Plan.
- Wi-Fi Access Point certificates issued by OFCA.
- Product information including technical and descriptive literature and catalogues. Information provided by the manufacturer shall be able to substantiate that the products offered meet the mandatory Technical Specification.

12. Briefing Session/Site Visit

12.1 To facilitate the Service Provider to propose the quotation, a briefing session is arranged as follows. The Service Provider must attend the briefing session and carry out Wi-Fi survey with appropriate tools.

Date: **11-3-2026 / 12-3-2026**

Time: 15:00 to 16:30

Venue: The School

13. Selection and Payment

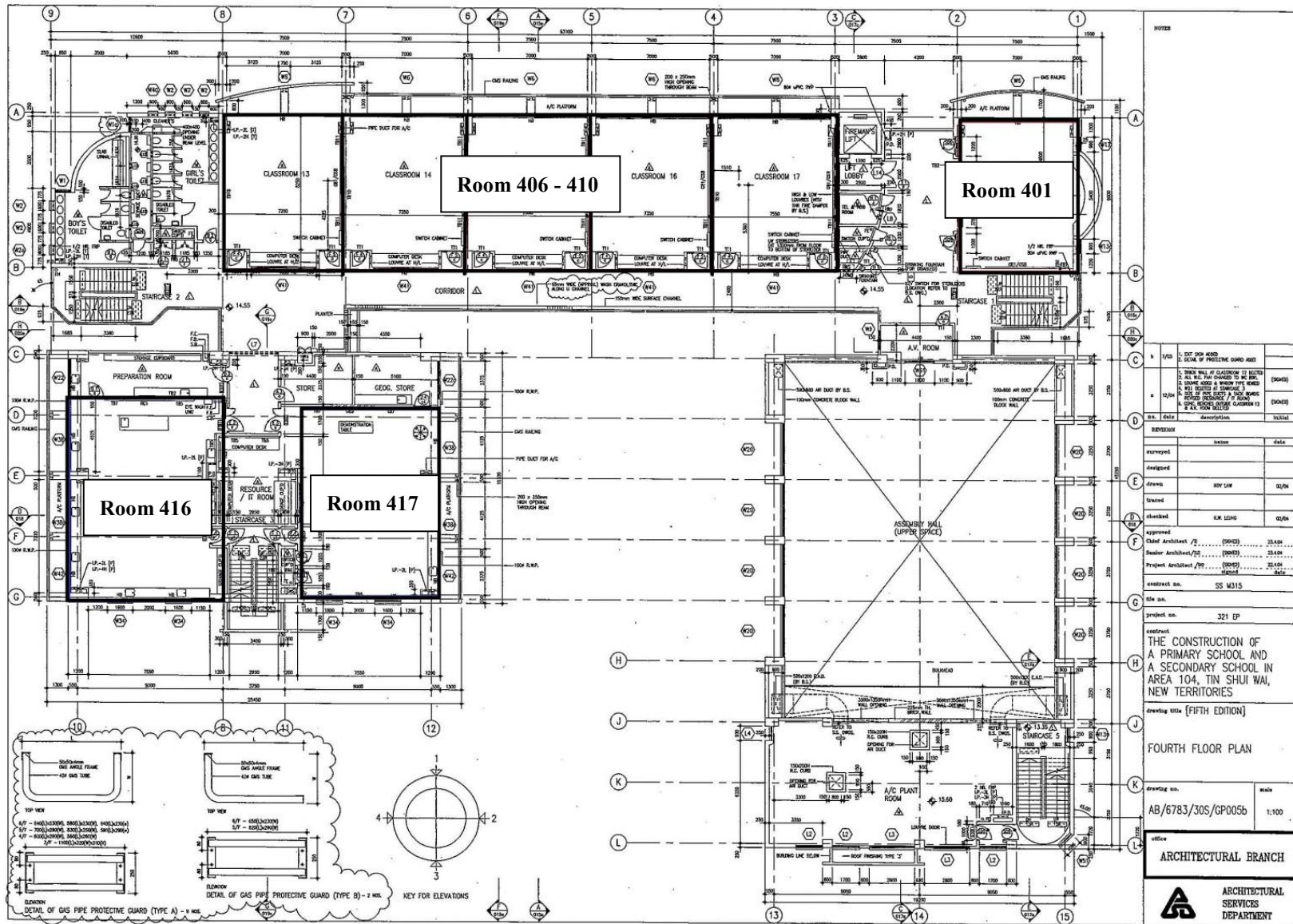
School is looking for a contractor based on the following criteria

- Proposed pricing
- Proposed solution
- Equipment and services level
- Case reference
- Other useful information

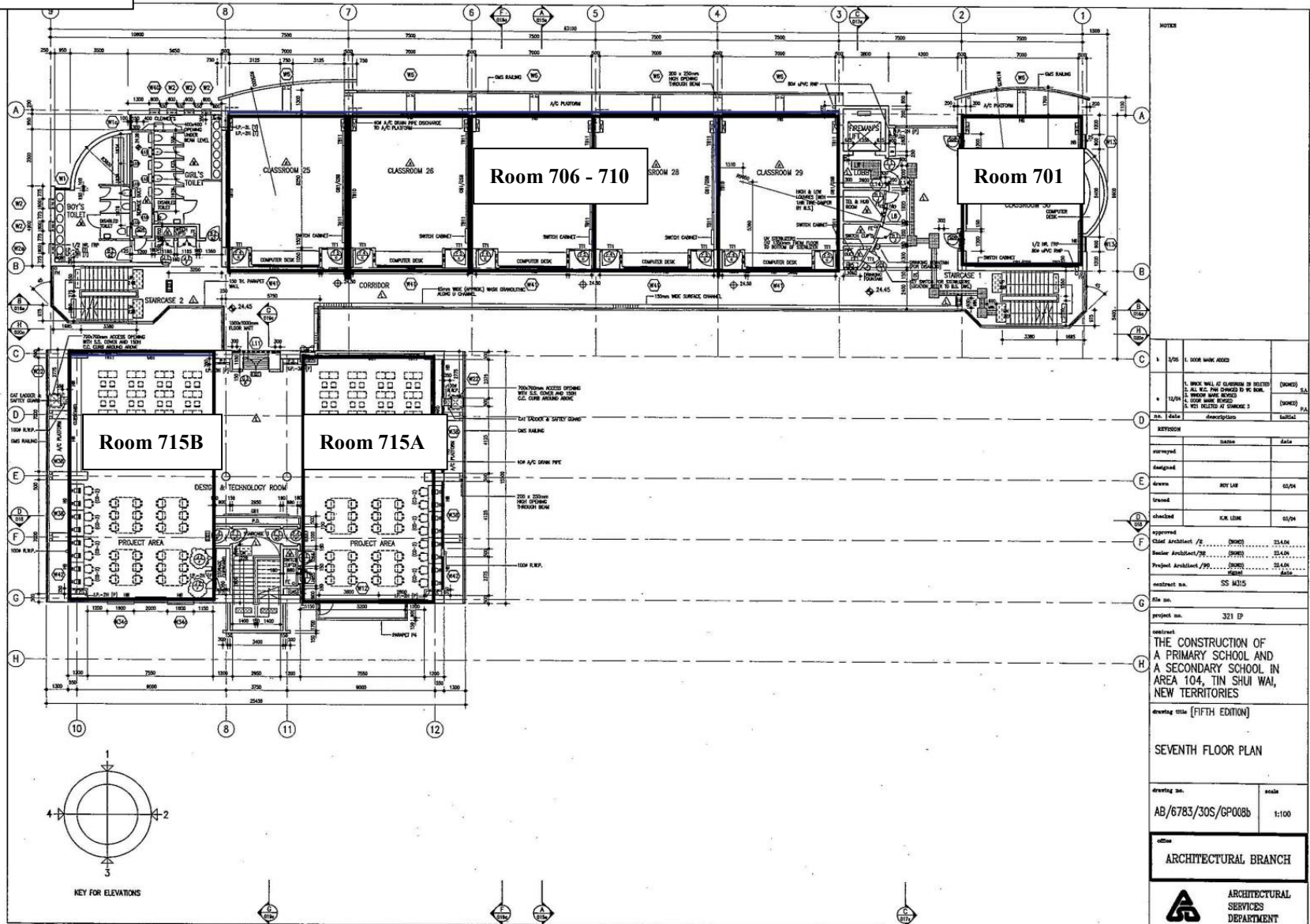
14. Enquiry

For enquiry, please contact Mr. **TONG Chi To** and Mr. **KO Man Hei** of the School at cttong@gts.edu.hk and mhko@gts.edu.hk or by phone at **2617 5000**.

4th Floor



7th Floor



NOTES

1. DOOR MARK ADDED
2. WORK WALL AT CORNER IS DELETED (DIMED)
3. ALL W.C. PAN COVERED BY W.C. BOWL (DIMED)
4. WINDOW MARK REMOVED (DIMED)
5. W.C. MARK REMOVED (DIMED)
6. W.C. MARK REMOVED AT STAIRCASE 2 (DIMED)

Rev. No.	Date	Description	By	Check

approved	Date	Date

designed	
drawn	ROY LAM 05/04
checked	K.W. LAM 05/04
approved	
Chief Architect / P.	(DIMED) 25.04.04
Senior Architect / P.	(DIMED) 25.04.04
Project Architect / P.	(DIMED) 25.04.04
	(DIMED) 25.04.04

contract no. SS M315

file no.

project no. 321 EP

contract
**THE CONSTRUCTION OF
 A PRIMARY SCHOOL AND
 A SECONDARY SCHOOL IN
 AREA 104, TIN SHUI WAI,
 NEW TERRITORIES**

drawing title (FIFTH EDITION)

SEVENTH FLOOR PLAN

drawing no.	scale
AB/6783/30S/GP008b	1:100

ARCHITECTURAL BRANCH

ARCHITECTURAL SERVICES DEPARTMENT

AT 041 x 004

Marking Scheme for Tender

The marking Scheme will involve two stages including:

Stage 1

The tender is assessed according to all the requirements stated in the Appendix I in this stage. The tender will not be assessed further in the case that the tender does not meet all the requirements stated in the Appendix I.

Stage II

The tender must meet all the requirements stated in the Appendix I in this stage. The service, the quality, the price and the credibility stated in the Appendix I provided by the Company will be assessed further.

Credibility	20%
Service and Quality	40%
Pricing	40%
Total Weight	100%

		Assessment Criteria	Weighting
Credibility (20%)	1.	Company background. IT project experiences. Contractor's Experience and Goodwill in building up WiFi network and infrastructure upgrade in schools over the past years	20%
Service and Quality (40%)	2.	System software and configuration (Technical architecture, security, resilience)	10%
	3.	Composition of On-Going Support/ Maintenance Services	20%
	4.	Manufacturer's brand name and goodwill, skill level, compatibility and stability	10%
Pricing (10%)	5.	Contractor's quoted price	40%
		Total Weight	100%

伊利沙伯中學舊生會湯國華中學
Wi-Fi network 書面報價/投標附表(須具一式兩份)

學校檔案：T2025/26-008

PART Y - PRICE SCHEDULE

1. Price details for Standard Provision

Standard Provision	3 years		School's choice on confirmation
	Monthly price	Annual price	
2/F: Classroom 201, 206 – 210 3/F: Classroom 301, 306 – 310 4/F: Classroom 401, 406 – 410 5/F: Classroom 501, 506 – 510 Total 24 Classrooms Wi-Fi Service Subscription (Requirement as stated in Part X)			
Total in HK\$			

2. Price details for Add-on Services (Offer will be considered on itemized basis)

Add-on Service		3 years		School's choice on confirmation
Item	Description	Additional monthly price	Additional annual price	
Wi-Fi coverage for other areas	<ul style="list-style-type: none"> Room 701, 706-710 The WiFi System shall support 40 concurrent connections per room at least 			
	<ul style="list-style-type: none"> Conference room The WiFi System shall support 40 concurrent connections at least 			
	<ul style="list-style-type: none"> General Office The WiFi System shall support 40 concurrent connections at least 			

Add-on Service		3 years		School's choice on confirmation
Item	Description	Additional monthly price	Additional annual price	
	<ul style="list-style-type: none"> ● Principal Room ● The WiFi System shall support 40 concurrent connections at least 			
	<ul style="list-style-type: none"> ● Vice Principal Room (New) ● The WiFi System shall support 40 concurrent connections at least ● Need to provide trunks, conduits, cables, LAN ports and other network facilities to the room 			
	<ul style="list-style-type: none"> ● Worker's Room (G05A) ● The WiFi System shall support 40 concurrent connections at least 			
Wi-Fi coverage for other areas	<ul style="list-style-type: none"> ● Canteen ● The WiFi System shall support over 80 concurrent connections at least (40 users × 2APs) 			
	<ul style="list-style-type: none"> ● Playground ● The WiFi System shall support over 40 concurrent connections at least ● The AP shall be able to work in outdoor area 			
	<ul style="list-style-type: none"> ● G21, G22 ● The WiFi System shall support 40 concurrent connections per room at least 			
	<ul style="list-style-type: none"> ● Room 101, 112, 113 ● The WiFi System shall support 40 concurrent connections per room at least 			
	<ul style="list-style-type: none"> ● Room 114 (New) ● The WiFi System shall support 40 concurrent connections per room at least ● May need to provide trunks, conduits, cables, LAN 			

Add-on Service		3 years		School's choice on confirmation
Item	Description	Additional monthly price	Additional annual price	
	ports and other network facilities to the room			
	<ul style="list-style-type: none"> ● Room 106 ● The WiFi System shall support 80 concurrent connections at least (40 users × 2APs) 			
	<ul style="list-style-type: none"> ● Room 111 ● The WiFi System shall support 80 concurrent connections at least (40 users × 2APs) 			
	<ul style="list-style-type: none"> ● Hall ● The WiFi System shall support 200 concurrent connections at least (40 users × 5APs) 			
Wi-Fi coverage for other areas	<ul style="list-style-type: none"> ● Room 216, 217, 315, 317, 416, 417, 516, 518, 609, 615, 617, 715A, 801 ● The WiFi System shall support 40 concurrent connections per room at least 			
	<ul style="list-style-type: none"> ● Room 601, 606, 608 ● The WiFi System shall support 40 concurrent connections per room at least 			
	<ul style="list-style-type: none"> ● Room 715B ● The WiFi System shall support 80 concurrent connections at least (40 users × 2APs) 			
Spare Access Point	<ul style="list-style-type: none"> ● No spare access point is required 			
Broadband service	<ul style="list-style-type: none"> ● Defined in Part X 			
Authentication Method	<ul style="list-style-type: none"> ● Defined in Part X 			
Session Control	<ul style="list-style-type: none"> ● Defined in Part X 			

Add-on Service		3 years		School's choice on confirmation
Item	Description	Additional monthly price	Additional annual price	
WLAN Access Control	<ul style="list-style-type: none"> ● Defined in Part X 			
Internet Content Filtering Service	<ul style="list-style-type: none"> ● Defined in Part X 			
Integration of networks	<ul style="list-style-type: none"> ● The WiFi System should include in Standard Provision and Add-on Service ● The WiFi system shall be integrate and connected to school existing network. The WiFi user shall be able access to school server and use existing broadband access to internet. ● The school has administrative right to configure all network equipment in the WiFi system, including but not limited to Wireless Controller, Access Point, and Switch. ● The School shall be able to monitor all network equipment in the WiFi system, including but not limited to Usage, System status, Activities logging, Alarm. ● The Contractor shall responsible to configure existing network equipment in the WLAN System Integration included but not limited to Firewall, Switch etc. 			
Monitoring of Wi-Fi network	<ul style="list-style-type: none"> ● Defined in Part X 			
Redundancy	<ul style="list-style-type: none"> ● Redundant Controller Based in Hong Kong 			
Wi-Fi Service	<ul style="list-style-type: none"> ● Defined in Part X 			

Add-on Service		3 years		School's choice on confirmation
Item	Description	Additional monthly price	Additional annual price	
Recovery				
Support hours	● Defined in Part X			
Reporting	● Defined in Part X			
Contract End Arrangements	● Defined in Part X			
Lease-to-own Option (Optional) (Y/N)	● Defined in Part X			

3. Wi-Fi.HK Service

Wi-Fi coverage area of Wi-Fi.HK :	The School will not join the plan
-----------------------------------	-----------------------------------

4. Details of equipment to be proposed in the Buildup of Wi-Fi network in the School

Items	Quantity	Model
Wi-Fi Controllars		
Access Points		
Router/Firewall		
Core Switch		
Access PoE Switches		
LAN Cables		
Others (please specify)		

5. The Tenderer to provide details of the sub-contract service involved in the proposal for the project implementation, service operation and maintenance in the format listed below

Name of Sub-Contractor	Sub-contract service	Roles and responsibility

Name of Sub-Contractor	Sub-contract service	Roles and responsibility

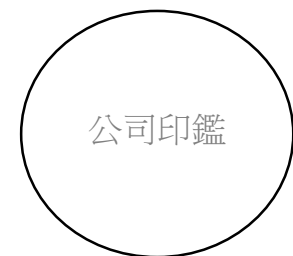
6. The Tenderer to provide case reference of past deployment in Wi-Fi100/Wi-Fi900 with Sub-Contractors details in the format listed below

Name of School	Name of Sub-Contractor	Sub-contract service	Roles and responsibility

7. A floor plan (provided by the School) is attached.

Annex: Floor Plan of the School

本公司/本人明白，如收到學校訂單後未能供應書面報價/投標書上所列物料或服務，本公司/本人須負責賠償學校從另處採購上述物料或服務的差價。



供應商名稱：_____

獲授權簽署書面報價單/投標書的代表的姓名及署名

姓名(請以中文正楷填寫)：_____ 簽署：_____

日期：_____

承辦服務書面報價/投標表格

承辦 Wi-Fi network 的書面報價/投標表格

學校名稱及地址： 伊利沙伯中學舊生會湯國華中學 新界元朗天水圍天華路 57 號

學校檔號： T2025/26-008

截止書面報價/截標日期和時間： 2026 年 3 月 24 日中午 12 時

第 I 部分

下方簽署人願意按照正式訂單上訂明的日期及所列的價格，包括勞工、材料及其他所有費用，以及校方所提出的細則，提供書面報價/投標附表上所列項目的服務。下方簽署人知悉，所有未經特別註明的項目，均須按照該細則的規定提供服務；書面報價/投標書由上述截止日期起計 90 天內仍屬有效；校方不一定採納索價最低的書面報價單/投標書或任何一份書面報價單/投標書，並有權在書面報價單/投標書的有效期內，採納某份書面報價單/投標書的全部或部分內容。下方簽署人亦保證其公司的商業登記及僱員補償保險均屬有效，而其公司所提供的服務不會損壞學校的校舍。

第 II 部分

再行確定書面報價單/投標書的有效期

有關本書面報價單/投標書的第 I 部分，現再確定本公司的書面報價單/投標書有效期由上述截止報價/截標日期起計為 90 天。

下方簽署人亦同意，書面報價單/投標書的有效期一經再行確定，其公司就該事項註明於書面報價/投標表格內的預印條文，即不再適用。

第 III 部分

維護國家安全

下方簽署人確認即使報價／招標文件中有任何相反的規定，學校保留以其公司曾經、正在或有理由相信其公司曾經或正在作出可能構成或導致發生危害國家安全罪行的行為或活動為由，取消其公司資格的權利，又或為維護國家安全，或為保障香港的公眾利益、公共道德、公共秩序或公共安全，而有必要剔除其公司。

下方簽署人確認若出現下列任何一種情況，學校可以立即終止合約：

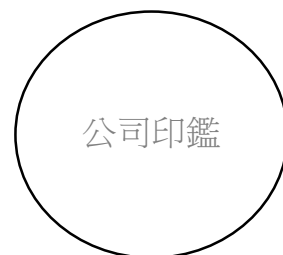
- (i) 其公司曾經或正在作出可能構成或導致發生危害國家安全罪行或不利於國家安全的行為或活動；
- (ii) 繼續僱用其公司或繼續履行合約不利於國家安全；或
- (iii) 學校合理地認為上述任何一種情況即將出現。

日期：_____ 年 _____ 月 _____ 日

姓名(請以正楷填寫)： _____

簽署人： _____

職銜： _____ (請註明職位，例如董事、經理、秘書等)



上方簽署人已獲授權，代表 –

_____ 公司簽署書面報價單/投標書，該公司

在香港註冊的辦事處地

電話號碼： _____

傳真號碼： _____

第 IV 部分

注意事項:

一. 提供利益

根據《防止賄賂條例》，供應商或承辦商不得且須禁止就是次採購的書面報價/投標及執行而提供、索取或接受（香港法例第201章）所定義的利益。伊利沙伯中學舊生會湯國華中學亦不容許其僱員向供應商或承辦商收取任何利益。如有違反，均屬違法。

二. 反圍標

在伊利沙伯中學舊生會湯國華中學（以下稱為本校）通知供應商或承辦商書面報價/投標書結果之前，不得

- 向本校以外的任何人士傳達任何書面報價單/投標書的金額的資料；
- 透過與任何其他人士的安排調整任何書面報價單/投標書金額；
- 與任何其他人士就供應商或該其他人士是否應或不應報價/投標訂立任何安排；或
- 在書面報價/投標過程中以任何方式與任何其他人士串通。

三. 分判合約

承辦商不得事先未獲伊利沙伯中學舊生會湯國華中學法團校董會（以下稱為本校法團校董會）書面同意，承辦商不得就履行合約的任何部分，與任何人訂立任何分判合約。如承辦商認為有需要分判部分工作或服務，承辦商必須提交建議的分判合約予本校法團校董會審批，本校法團校董會保留權利批准分判，以及決定分判合約的條款及條件。

下方簽署人明白及確認遵守第 IV 部分提出『注意事項』。若有違反或不遵守以上事項，將導致供應商或承辦商的書面報價單/投標書無效，供應商或承辦商仍須承擔該等缺失及行為的責任。

供應商或承辦商公司名稱：_____

姓名(請以中文正楷填寫)：_____ 職銜：_____

(請註明職位，例如董事、經理、秘書等)

簽署人：_____

日期：_____年_____月_____日

不擬提供書面報價/投標通知書

如 貴公司未能提供書面報價/承投產品/服務，請填妥此表格後，傳真至2617 5222 或寄回新界天水圍天華路五十七號。

致：伊利沙伯中學舊生會湯國華中學校長
提供書面報價/承投項目：Wi-Fi network 項目
學校檔案：T2025/26-008
截止日期：2026年3月24日中午12時

有關 貴校邀請本公司就以上項目提供書面報價/招標，現因以下理由未能提供報價/投標，特此回覆。

(請在適當的□內加上✓)

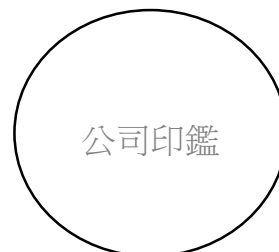
- 未能提供書面報價單/標書所示產品
- 未能達到書面報價單/標書所示要求規格
- 未能於指定日期送貨
- 未能於截止限期內遞交書面報價單/標書
- 暫時缺貨
- 貨品要求數量太少
- 其他(請註明) _____

簽署：_____

簽署人姓名：_____

公司：_____

日期：_____





伊利沙伯中學舊生會湯國華中學

Queen Elizabeth School Old Students' Association Tong Kwok Wah Secondary School

地址：新界元朗天水圍天華路 57 號

電話/Tel : 2617 5000 傳真/Fax : 26175222

Address : 57 Tin Wah Road, Tin Shui Wai, Yuen Long, NT

網址/ Website : <http://www.qts.edu.hk/>

附錄 3

學校致供應商／承辦商有關校董／職員收取利益的政策信件

敬啟者：

有關本校校董／職員收取利益的政策

本校已就校董／職員在執行校務時索取或接受利益制訂明確政策，特此通知。

根據本校政策，校董／職員如未獲得法團校董會或指定人員（視情況而定）的特別許可，不得在執行校務時索取或接受任何禮物、金錢或其他形式的利益，以維護本校的清廉形象。

本校校董／職員均須恪守此項政策，並明白如違反政策，將會遭受紀律處分。本校亦會將任何懷疑貪污事件向廉政公署舉報。

作為本校的主要持份者，本校竭誠希望貴公司支持本校的廉政方針。若遇有本校校董／職員向貴公司索取利益的情況，請盡速通知本人。

多謝合作。

伊利沙伯中學舊生會湯國華中學



Athena

溫穎思校長

二零二五年九月一日