GovTech/ACCESS/PMU/2026-27/1565 **November 14, 2026**

To: All Prospective bidders

Subject: Response to **Clarifications-02** on Supply, Installation, and Commissioning of Last-Mile Connectivity Infrastructure and Local Area Network (LAN).

Ref: *Accelerating Transport and Trade Connectivity in Eastern South Asia Phase 2 – Bhutan Project* (Ref No: ACCESS/GOVTECH/GD-2)

The following **Clarification-02** is issued for the Supply, Installation, and Commissioning of Last-Mile Connectivity Infrastructure and Local Area Network (LAN) is issued by GovTech Agency.

Clarification-02 to the Queries of the Bidders

Sl. No	RFB Reference/RFB Page No	Queries/Request made by the potential Bidders	Clarification/ Responses of the Project
1	Vol I, Section VII – Technical Specifications, Lot-2 Item 5, Cat6A Patch Panel, pp.203–204	*RFB provision: "Category: Cat6 A … Bandwidth: 500 MHz … Data Support: 10Gbps up to 100m … Compliance: UL / ETL / CE certified"* Item 5 states the category and bandwidth of the patch panel but no performance standard against which compliance will be evaluated. We request the Purchaser to confirm that the patch panel shall be compliant with ANSI/TIA-568.2-D Category 6A and ISO/IEC 11801 Class EA component requirements, shall support IEEE 802.3bt (Type 4) PoE, and shall be third-party (ETL or equivalent) verified. Please also confirm whether a rear cable manager is to be included in the unit price.	Clarification Response - 01, wherein the PoE requirement was amended to IEEE 802.3at (PoE+). Accordingly, the amended requirement shall prevail. The patch panel shall comply with the applicable Category 6A component performance requirements of ANSI/TIA-568.2-D or equivalent internationally recognized standards and support 10Gbps transmission over a channel length of up to 100 metres at 500 MHz.

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2	Vol I, Section VII – Technical Specifications, Lot-2 Item 9, Structured Cabling I/O points (Cable type), p.205	*RFB provision: "Cable type: Category 6 (Cat6) or Category 6A (Cat6A) UTP/FTP"* Further to our query at Sl. No. 70, Item 9 does not give any specification for the horizontal cable. As the patch panels (Item 5) and patch cords (Items 12 and 13) are Cat6A, we request the Purchaser to confirm that the horizontal cable shall be Cat6A U/UTP, 23 AWG solid copper conductor, 500 MHz, compliant with ANSI/TIA-568.2-D and ISO/IEC 11801 Class EA, with a low-smoke zero-halogen (LSZH) jacket to IEC 60332-1, IEC 61034 and IEC 60754.	Clarification Response - 01 (Sl. 94), wherein it was confirmed that Category 6A (Cat6A) cable is required. The horizontal cable shall comply with the applicable Cat6A performance requirements and shall support 10 Gbps transmission up to 100 metres at 500 MHz, in accordance with the RFB specifications. The cable shall be UTP/FTP, as permitted under the original RFB. No additional LSZH jacket or IEC fire-performance requirements are introduced through this clarification.
3	Vol I, Section VII – Technical Specifications, Lot-2 Item 9, Structured Cabling I/O points (Connector), pp.205–206	*RFB provision: "Connector type: 8P8C modular jack (commonly referred to as RJ45) … Compatibility: Keystone modular system"* No performance specification is given for the outlet jack, which is part of every installed link. We request the Purchaser to confirm that the jack shall be a Cat6A RJ45 keystone jack compliant with ANSI/TIA-568.2-D Category 6A, IEC 60603-7, and IEC 60512-99-002 (connection and disconnection under PoE load).	The outlet jack shall be a Category 6A (Cat6A) RJ45 8P8C keystone modular jack, compatible with the specified keystone modular system, and shall comply with the applicable Category 6A component performance requirements of ANSI/TIA-568.2-D or equivalent internationally recognized standards. The jack shall be suitable for IEEE 802.3at (PoE+) applications, in accordance with the amended RFB requirements. The bidder shall provide the manufacturer's datasheet demonstrating compliance with the specified requirements. IEC 60512-99-002 shall not be a mandatory requirement under this procurement.

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4	Vol I, Section VII – Technical Specifications, Lot-2 Item 9, Structured Cabling I/O points (Standard Compliance), p.206	*RFB provision: "Standard Compliance: ANSI/TIA-1152"* ANSI/TIA-1152 specifies field test instruments, not the cabling itself. We request the Purchaser to confirm that every installed link shall be tested and certified as a Cat6A permanent link to ANSI/TIA-568.2-D, using a field tester meeting ANSI/TIA-1152 accuracy Level IIIe or higher, and that the test reports shall form part of the acceptance documentation.	All the installed horizontal cabling links shall be tested and certified as Category 6A (Cat6A) permanent links in accordance with ANSI/TIA-568.2-D. Testing shall be carried out using a calibrated field certification tester meeting ANSI/TIA-1152 Level IIIe accuracy or higher, suitable for Category 6A testing. The Contractor shall conduct testing of 100% of the installed network points and submit individual test reports indicating the test results and pass/fail status for each link. All links shall pass the required tests, and the test reports shall form part of the project completion and acceptance documentation. Any failed links shall be rectified and retested at no additional cost to the Purchaser.
5	Vol I, Section VII – Technical Specifications, Lot-2 Items 5, 9, 12 and 13 (copper structured cabling), pp.203–210	*RFB provision: "Type: Modular Information Outlet (IO) / Faceplate … Compatibility: Keystone modular system"* The specification does not state whether the cable, jacks, patch panels and patch cords may be of different makes. To ensure end-to-end channel performance and a single point of responsibility, we request the Purchaser to consider requiring that all copper structured cabling components (Items 5, 9, 12 and 13) be from a single OEM, supported by an OEM channel/system performance warranty, and to state the minimum warranty period required.	The copper structured cabling components under Items 5, 9, 12 and 13 are not required to be from a single Original Equipment Manufacturer (OEM). However, all supplied components shall comply with the applicable Cat6A performance requirements specified in the RFB and shall be fully compatible and interoperable to ensure the required end-to-end cabling performance. The complete installed cabling links shall be tested and certified in accordance with the Purchaser's response to the relevant clarification on cabling testing and certification.

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			The warranty for the supplied components and completed installation shall be governed by the warranty provisions specified in the RFB and the Contract. A separate OEM channel/system performance warranty is not mandatory.
6	Vol I, Section VII – Technical Specifications, Lot-2 Items 12 and 13, Cat6A UTP patch cords, pp.209–210	*RFB provision: "Conductor Material: 24 AWG solid … Data Rate: 10 Gbps up to 100 meters … Compliance: ANSI/TIA-568-C.2, ISO/IEC 11801" and (Item 13) "Item Name: Cat6 UTP Patch Cord, Factory Crimped, 5 m"* Patch cords are normally made with stranded conductors for flexibility; solid conductors are used for horizontal cable. ANSI/TIA-568-C.2 has been superseded by ANSI/TIA-568.2-D, and the 100 m reach applies to a channel rather than to a patch cord. Item 13 is titled 'Cat6' but specified as Cat6A. We request the Purchaser to confirm that Items 12 and 13 are Cat6A U/UTP factory-terminated patch cords with stranded conductors, compliant with ANSI/TIA-568.2-D and ISO/IEC 11801, with an LSZH jacket.	Items 12 and 13 shall be Category 6A (Cat6A) U/UTP factory-terminated patch cords with stranded copper conductors, suitable for flexible patch cord applications. The patch cords shall comply with the applicable Cat6A performance requirements of ANSI/TIA-568.2-D and ISO/IEC 11801, or equivalent internationally recognized standards. The 10 Gbps transmission requirement up to 100 metres shall apply to the complete Cat6A channel, comprising compatible cabling components, and not to the individual patch cord.
7	Vol I, Section VII – Technical Specifications, Lot-2 Item 17, Outdoor UTP uplink (Cable Type and Environment), pp.212–213	*RFB provision: "Supply of outdoor-rated, double-jacketed Cat6A UTP cable suitable for exposed environments … Cable Type: Unshielded Twisted Pair (UTP) … Resistance to Environment: UV resistant, Moisture and weather resistant"* Further to our query at Sl. No. 74, we request the Purchaser to: (a) allow Cat6A U/UTP or F/UTP cable for these exposed outdoor runs, with shielded	a. The cable type shall remain Unshielded Twisted Pair (U/UTP), as specified in the RFB. Shielded F/UTP cable is not required. b. The cable shall be outdoor-rated, double-jacketed Cat6A U/UTP cable with suitable protection against UV exposure, moisture and weather conditions. The specific jacket construction and water-blocking method may

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		connectors and bonding at both ends where F/UTP is offered; and (b) confirm the minimum jacket construction for the double-jacketed cable, for example an inner PE jacket and a UV-resistant black PE outer jacket, with gel-filled or dry water-blocking.	follow the manufacturer's standard outdoor cable design, provided that the cable meets the specified environmental protection and performance requirements. The cable shall be installed within the specified HDPE pipe/conduit for additional mechanical and environmental protection, as required under Item 17. The bidder shall submit the manufacturer's datasheet demonstrating compliance with the specified requirements.
8	Vol I, Section VII – Technical Specifications, Lot-2 Item 18, 24F Double Jacket Aerial Anti-Rodent ADSS, §3.1 (item 12), §3.2 and §3.3, pp.217–219	*RFB provision: "MINIMUM CABLE SPAN >150 M" (§3.1); "MAX. INSTALLATION TENSILE 12500 N" (§3.2); "SPAN LENGTH 300 Meters … WIND SPEED 100 Km/Hr … ICE LOAD 20 mm" (§3.3)* Further to our query at Sl. No. 52, §3.1 states a minimum cable span of more than 150 m, while §3.3 specifies a loading condition based on a 300 m span. The required tensile rating (§3.2) and the fittings depend on the governing span. We request the Purchaser to confirm the design span and loading condition to be used, to state the maximum actual span on the Lot-2 routes, and to confirm whether a cable designed for that span and loading condition is acceptable.	The cable shall be designed to withstand a maximum design span of 300 metres, under the specified environmental loading conditions of 100 km/h wind speed and 20 mm ice load, as stated in Section 3.3. The minimum cable span requirement of more than 150 metres under Section 3.1 shall be read in conjunction with the 300-metre design span requirement under Section 3.3. The maximum installation tensile load of 12,500 N specified in Section 3.2 shall also be maintained. Accordingly, the bidder shall offer the cable and associated fittings suitable for the specified design span and loading conditions and submit the manufacturer's technical datasheets and supporting documentation demonstrating compliance.

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9	Vol I, Section VII – Technical Specifications, Lot-2 Item 18, 24F ADSS, §2.2, §3.1 (item 13) and §3.4, pp.215–219	*RFB provision: "CENTRAL STRENGTH MEMBERS: FRP ROD & FLAT FRP" (§3.1) and "Peripheral Strength Members: High Strength Aramid Yarns; Peripheral Strength Members: Flat FRP" (§3.4)* Flat FRP is listed as a central strength member in §3.1 and as a peripheral strength member in §3.4. We request the Purchaser to confirm the intended construction: a central FRP rod, aramid yarn as the peripheral tensile member, and a flat FRP armour layer between the inner and outer jackets for rodent protection, as described in §2.2. Please also confirm that equivalent constructions meeting the specified mechanical and anti-rodent requirements are acceptable.	We confirm the requirement as per the RFB shared. The Purchaser shall reserve the right to decide on the acceptance of equivalent cables meeting the specified mechanical and anti-rodent requirements.
10	Vol I, Section VII – Technical Specifications, Lot-2 Item 18, 24F ADSS, §4 Test Requirements, pp.219–223	*RFB provision: "Should the supplier have the results of type tests done on products similar to those to be supplied, these results can be submitted instead of carrying out new type tests."* We request the Purchaser to confirm that existing type-test reports to IEC 60794-1-21 / IEC 60794-1-22 on an equivalent cable design are acceptable where the test parameters are equal to or more stringent than those in §4, and that new type tests are required only where materials or the manufacturing process have changed.	We would like to confirm that existing type-test reports as stated in the RFB shall be accepted as long as the IEC 60794-1-21 / IEC 60794-1-22 is carried out. However, all parameters shall be fulfilled by the test report.

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11	Vol I, Section VII – Technical Specifications, Lot-2 Item 19, Fiber Optic Patch Cable 2m SC-Duplex UPC to LC-Duplex UPC, p.225	*RFB provision: "Attenuation at 1310 nm: <=0.4dB/km, Attenuation at 1550 nm: <=0.3dB/km"* For a 2 m patch cable, attenuation per kilometre is not a meaningful acceptance parameter; performance is determined by the connectors. We request the Purchaser to consider specifying a maximum insertion loss per mated connector pair (for example ≤0.3 dB) and a minimum return loss (for example ≥50 dB for UPC), in line with IEC 61753-1 / ANSI/TIA-568.3-D.	The specified attenuation values at 1310 nm and 1550 nm relate to the optical fibre performance. For the 2-metre fibre patch cable, the bidder shall also ensure that the connector performance meets the following requirements: • Maximum insertion loss: ≤ 0.3 dB per mated connector pair. • Minimum return loss: ≥ 50 dB for UPC connectors. The patch cables shall be factory-terminated and tested, and the manufacturer shall provide relevant technical datasheets and test reports demonstrating compliance with the specified optical performance requirements.

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